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The Social Housing Advanced through the Transformation of the Local Context

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Abstract;

Social and local context stand in the vital point of developing models for social housing projects to achieve the goals for the integration of the community which transform the habitat. The local conditions existing in the town of St. Giorgio, lead the design through the thinking of a new type of community housing. The ambigious relationship of the older settlement and the newer ones within the town, the expansion of the town and the ineffecient functionality of the public spaces are the key points in a larger scale taken as basic questions in the beginning of the design process. The urban concept provided by these questions showed the general layout while the analysis of the resindential in the town opened the way for morphology of the new housing units. The aim of this project is to create the specific type of social housing for the specific place, which provide many potentials and flexibility to reinforce the relationship of the project with the town by means of the urban concept established on the idea of connecting and defining public spaces by their enclosure and creating a small scaled network system providing sequential experiencing of the public path through the specific part of the town. In a more detailed part it is the design of housing units allow a compact social daily life by focusing on public-private thresholds, neighborhood, safety feeling and social communication.

Keywords: locality, enclosure, social thresholds, neighborhood

Introduction

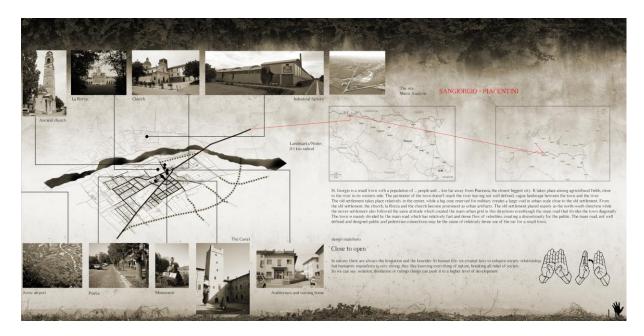
The low cost production of the habitable spaces have been still one of the most common must-be property of the social housing projects since they should be affordable. However, the history showed this aspect should not the only must-be property as long as the harmony of community habitating in

the settlement determine the success of the realization. Some examples from the past pointed out these settlements have a fragility as determining the health of social life in an urban scale. At this point, the social aspects have achieved a vital importance in the habitation process whereas it is the point that makes these kind of projects complicated to design for the collective living. The design for collective living should satisfy the living functions of individuals or the family which can be more likely defined in standards while the demands of communities have been more complicated resulting from the continous change, an outcome of the dynamics of the society and zeitgeist. As the different social profiles may exist together, the design solution should give the flexibility and possibilities of answering different demands of different groups living together. The contemporary approaches for the design solutions mark the low rise built-up space, well-designed public space and well defined cultural enclosure equipped with mixed functions unlike the functional zonning approach.

Chapters

I.Urban Context & Analysis in St. Giorgio

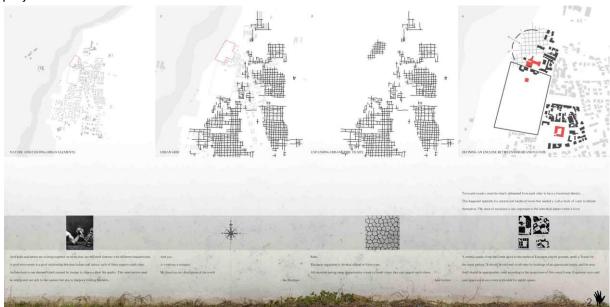
St. Giorgio is a small town with a population of 6000 inhabitants and a province of Piacenza. It takes place among agricultural fields, close to the Nure river in its western side. The perimeter of the town doesn't reach the river leaving not well defined, vague landscape between the town and the river. The old settlement takes place relatively in the center, while a big zone reserved for military creates a large void in urban scale close to the old settlement. From the old settlement, the church, la Rocca and the church become prominent as urban artifacts. The old settlement placed mainly as the north-south direction while the newer settlement also followed the same attitude which created the main urban grid in this directions eventhough the main road that divides the town diagonally.



The town is mainly divided by the main road which has relatively fast and dense flow of vehichles, creating a discontinuity for the public. The main road, not well defined and designed public and pedestrian connections may be the cause of relatively dense use of the car for a small town.

II.Synthesis – Outcome:

The studies of the analysis show the existence of the main urban grid in north-south direction which is originated from the old settlement. The grid taken as an important input for the layout of the project.



Three historical buildings come forefront as urban artifact of San Giorgio; the castle, the church and la rocca(villa). Looking from the urban scale; the castle is enclosed by relatively organic morphology, placing itself in the center of buildings, creating an urban enclosure. In other side la Rocca, between the church and the castle is enclosed by the walls, creating its own borders and precinct. However, the church, near to the project area, is relatively on the edge between the nature and the town, which doesn't have a well defined enclosure.



The intention is to consider and mark the sequential path and public links between these buildings whereas the project generates one edge of the path extending beyond church by creating a precinct including it.

III.The Layout Concept

By the idea of creating an enclosure including the church, the public spaces come prominent as reinforcing and redefining the existince of the church and the housing units related to each other in urban context. The placement of the units and the big piazza between are considered according to these aspects as well as expanding the piazza to the surrounding buildings as much as possible, leading to form a public space network. It is also intended to serve to the landscape near to the river and the planned new street. The units are inserted in an inclination of landscape that enhances the visual communication to the church, town and river while it also creates the space for parking underneath it. The other main consideration in creating the landscape in public space is desired walk paths of the pedestrians.



IV. The Design Concept of the Units

The morphology and typology of the units mainly shaped from the interpretations of the residentials from the old and new ones in the town with respect to the demands of the local. The new residentials are villa type houses; placed in the center of the lots surrounded by garden in a higher level than street which leave gaps between each other and the street, pointing a strong desire for privacy, negatively leading to the isolation of the living spaces from the public and urban space. The old ones are courtyard type buildings adjacent to the pavement which marks small scaled community living with a enclosed semi-public space. The courtyard enclosure and the certain need for privacy lead the design of the typology.

In the sense of enhancing the community, neighborhood and security feeling, one housing unit is shaped by an semi-public inner street dividing the unit at where all the entrances of the flats take place. In the other hand the public streets passing through between two housing units defines the social threshold between private and public more strictly. The design of the transparent elements of the flats and the placement of the flats related to each other are shaped by the needs of privacy and visual comfort.

The need of planning multiple lead to work with the specific module which gives the flexibility for deisgn and realization. The module of 3.6m x 3.6m used in the formation and combination of the flats which one may enclose a space or can expand by combining with the other ones. The formations regard for creation of the compact space by eleminating specific gaps and helping to bring the street inside with effective circulation. In vertical the modules are placed at different heights in a system of using half levels which provides a stronger private and visital comfort for the inhabitants.



V. Sustainable Strategy

Providing the community feeling is one of the main points of the project which can help to increase the unity and the positive awareness of the people to thier surroundings to have a sense of the sustainable local aspects. In this sense, the roof gardens are promoting the local production and strengthening the social and cultural bonds.

Another intention is to create a project that merges into its surrounding rather than an isolated indifferent project. This idea guides for the decision of choosing materials such as the use of brick for the west-east facades and the stucco for north-south facade, respond to the local visuality of the exisiting built up spaces.

The further steps are also taken for the passive strategies:

The grid creating orientation of the units provide north-south directed units. The south looking facades with sizable transparent areas are exposed to direct solar gain which helps for passive solar heating in winter while allows maximum daylight penetration into the space. The use of the operable blinds between the glasses in south facade and west facade of the inner street forms a barrier to undesired solar gain and lighting in summer as also provided in the west facade(looking to the public street) with the low ratio of transparency.

The beneficial use of natural air flow to minimize the cost is intended to be realized by installation of the roof windows where possible, the sizable windows on the facades inside the inner street and the floor to ceiling sized sliding windows on the south facade which can transform indoor space to a semi-open indoor room.

Addition to the transparent elements mentioned above, the metal panels with relativley high reflecting properties are the main elements for maximizing the daylight for indoor spaces in the inner street.

The roof gardens work for passive solar cooling by providing a strong insulation on the roof while they also work for the filter of rainwater harvest. The gray water system also helps to decrease the waste of water use for the public uses.



V.Bibliography

- i. Ando. Complete Works 1975–2012
- ii. S, M, L, XL Remkoolhas
- iii. The dialectic city, Vieth stefan
- iv. City metaphor, O.M.Ungers
- v. The Self-Sufficient City ,Vicente,Guallart
- vi. Frank Lloyd Wright by Robert McCarter (Aug 26, 1999)
- vii. Mies Van Der Rohe: 1886-1969 (Basic Architecture) by Claire Zimmerman (Oct 1, 2006)
- viii. Total Housing /Anglais: Efficient alternatives to sprawl di Sakamoto Tomoko