

A STUDY OF NEW DESIGN CONCEPTS IN STUDENT HOUSING APPLIED TO THE ITALIAN URBAN CONTEXT

*Chiarantoni Carla**

*Polytechnic of Bari, Street Orabona n. 4 , Bari, Italy, Email: c.chiarantoni@poliba.it

ABSTRACT: the paper consists of three parts. The first one deals with the origins of university and consequently with the attached structures such as the university residences. >From this premise we can clearly understand that university and student residences have always been linked to the urban centre by a symbiotic relationship. The second part is about the most important normative references and includes the illustration of the organizational models suggested by the regulations considering the contemporary building situation. Two examples of student housing are finally proposed: a reused building in Turin and a new structure in Pisa, through which we illustrate the same urban redevelopment problems.

KEYWORDS: Student housing, reusing existing building, reconfiguration of a part of city, design strategy

1 ORIGINS OF UNIVERSITY.

In Italy the university buildings are located especially in the urban centres. Such condition derives more from historical questions than from needs determined by an organic development plan of higher education. From Middle Ages to the XVI century, university did not have a permanent seat. The chosen seats were represented by several edifices made available to the professor. Sometimes they changed during the same period of study. The development of university in Italy, whose final result is its current arrangement, has been greatly influenced by the lack of structures, by the social and economic transformations and by the historical-geographical configurations.

The *universitas scholarium*, a student guild, was established during the age of the city-states. From then on, some urban areas gradually became rich in student housing. In such phase, indeed, the residences represented the first tangible sign of the *studium* within the city.

From a city-planning point of view, the Italian medieval university appears to be a major historical phenomenon since the lack of seats in the cities, the widespread placement of schools, houses and residences offered a morphologically undifferentiated structure which was superimposed on the urban fabric. The economical development of the city benefited from this phenomenon and the morphology of the city remained unaltered.

The Counter-Reformation period was characterized by the presence of the Jesuits, who, while imposing their cultural values, adopted a predetermined architectural model according to which the university buildings were still within the urban fabric but no longer organically related to the city. In fact, all the teaching facilities and the residences for students and academic staff were placed in the same complex.

Another crucial stage is represented by the post-unification period. The first Italian governments accepted the existing university situation. New university seats were built with a process which was nearly the same in the whole peninsula. The main trends for the realization of the university buildings were two: edification of new buildings in the areas indicated by the new urban planning regulations; reuse of monumental buildings, according to a consolidated tradition. Anyway, this period is characterized by an almost complete disinterest in the residential issues. The residences lost the value they had gained over time and they were considered as appendages to be built close to the universities.

With the rise of Fascism the debate about education and the need to systematize teaching opened again in Italy. With the Gentile Reform¹ and the introduction of the rule providing that only a fixed number of

¹ Giovanni Gentile was one of the most important Italian philosophers of '900. In 1922 he was appointed Senator and Mussolini invited him to serve in his Cabinet as Minister of Public Education. He developed a

students could enrol at secondary schools leading to the university faculties, studying became an élite matter. Such policy led to the transformation of all that was linked to university and the related facilities, especially the residences, into an important architectural issue within the urban setting of the city. The student, his/her education and his/her permanence in the city were dealt with as affairs of State.

In this period the *Case dello Studente* (Students' Houses) were built, all of them with similar characteristics: located near the city historic centre, architecturally characterized by the same façades which highlighted the different use of the floors and of the premises. This operation basically created actual architectural emergencies which have reached our days. However, this long period has been characterized by the superimposition of university and related facilities on the urban tissue, with the result of an ameliorative relation for the entire urban fabric.

After the destructions and devastation of World War II, the rebuilding began. The teaching facilities and the research centres underwent reconstruction but the student residences were completely disregarded. The result of such approach will be a chronic lack of student lodgings.

The cultural revolution of the Seventies of last century only led to the edification of new structures, as in the emblematic case of Urbino² or of Arcavacata³ [3] in Rende, and to the rebuilding of centres consolidated in time, without any organic development vision for the higher education of the whole Country.

On the other hand, in the same period were laid the foundations of an important provision representing a key moment in the process for the transfer of competences from State to Regions. The Agencies for the Right to Study were established as bodies separated from the central government with the aim of organizing and managing a wide range of services for the students. Thus, the territorial planning was delegated to the Regions, but the tools to effect such task were not provided.

2 XX CENTURY AND THE SPECIAL PLANS

After the political and social events of the XIX century, the XX century opened with the politicians' desire to renovate the social housing. One of their initiatives is represented by the promulgation of the Law 390/91, with which, after twelve years, the Regions were finally provided with the tools to set up a long-term plan for student housing. Actually, the Provincial Administrations, the Municipalities, the Agencies for the Right to Study, the College Foundations, the housing cooperatives and the former IACPs were economically and legally equalized to allow the building of new structures or the use of existing buildings as university lodgings. Among these authorities, the ex-IACPs, in particular, after a reading of the social issues in the different territories, considered the students as part of the weak social group, the same of which young couples and elderly people are part.

Such multiplication of the players involved in the building of student lodgings was not accompanied by an adequate, organic urban planning. On the contrary, the fragmentation on the regional and national territory increased. The placement and the conformation itself of the building of the University Residence is more the result of makeshift policy agreements than of collective territorial planning. Besides, this regulatory vacuum forced the operators to make reference to the maximum costs set by the Regions for traditional public housing, both in case of new buildings or of reuse of existing structures, with the result of inadequate expenditures for types of building which cannot be simply assimilable to traditional housing.

Therefore, if in other times there was the ameliorative superimposition of the university buildings on the urban tissue, plans of expansion of the Italian universities and student lodgings according to which they are placed away from the urban centre and in many cases also from the university buildings themselves, have been recently carried out.

great reform of education that had been elaborated together with Benedetto Croce and which came into effect in 1924. R.D. (Royal Decree) n°2 102/23 of 30th September 1923 – Provisions concerning Higher Education.

² The residences of Urbino were realized by Giancarlo De Carlo. He worked for a long period, from 1968 to some time after 1994. For a complete coverage of the subject, see: L. Rossi, Giancarlo De Carlo *Architetture*. Milano, 1988.

³ The residences and the university centre of Arcavacata in Rende were built according to the Law of 12th March 1968 n°442 – Foundation of a State University in Calabria.

Apart from the regulatory, economic and entrepreneurial situation, we have to take into account also the changed social condition affecting the students as well as the building contractors.

The students require different kind of accommodation along their university life. The investors require buildings with greater flexibility and adaptability to be reconfigured easily and at a low cost according to the type of end users (students, young families, elderly people, etc.) during the lifetime of the building.

3 INTEGRATION OF THE UNIVERSITY RESIDENCE INTO THE URBAN FABRIC

As can be seen from the paragraphs above, the settlement models of the university residences are the result of the historical transformations which characterized the birth of the universities and of a more recent process which since the Seventies has favoured their diffusion on the national territory. From a preliminary analysis on about seventy Italian cases it is possible to notice that the traditional scheme according to which universities are within the historic centres is predominant. Anyway, we also have more recent buildings in central and in peripheral areas.

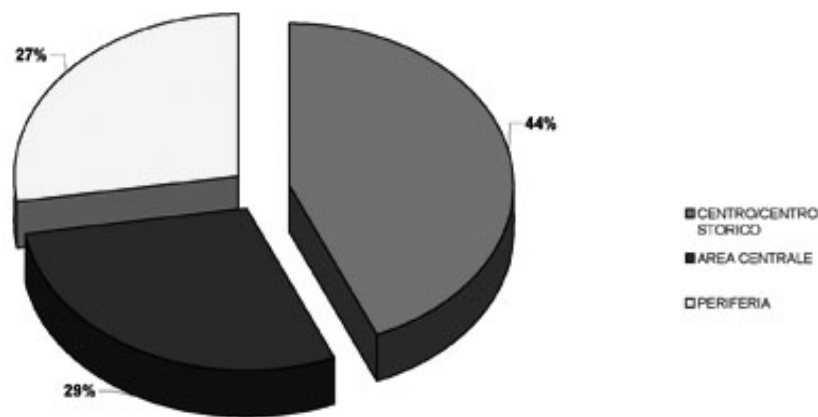


Figure 1 Percentage distribution of the university residences on the national territory

In the following lines, analysis of the features of the different settlement models.

3.1 Residences within the historic centre

The Residence within the historic centre is a complex of lodgings in the immediate surroundings of the university and is characterized by a close relationship with the university and the city life. Over the last few years, more general redevelopment policies of the historic centres have made this model come into use again. Thus, the process leading to the realization of student residences in existing buildings of the urban fabric began. Such functional characterization plays an important role in the widening of the student housing offer and promotes the socialization and meeting of the whole student community and, as a consequence, also of the urban community. Many are the examples of this model: the ex Nettuno Hotel in Pisa, the residences in Bologna (Irnerio and Morgani Residences), the Cappel Verde Residences 1 and 2 in Turin, the Frontebranda Residence in Siena, a few metres from Piazza del Campo.

3.2 Central area

The placement of the universities and student lodgings in the central areas of the city but outside the historic centres derives from the urban policy of the 1970s, according to which the newly built universities were placed in the expansion areas of the cities. The linchpin of the policy was the creation of a university citadel parallel and close to the city itself. The non built-up areas to be occupied by the university buildings would have allowed a further expansion of the whole complex in the future.

But through the urban development processes, many of these university centres and the residences have

been incorporated into the fabric over time. Such process has allowed, on the one hand, the development of a lively commercial area serving the residence (with supermarkets, pubs, restaurants, cinemas, sports halls, etc.), on the other hand, has prevented a possible expansion of these areas. Examples of residences of this kind are the R.U.M. and Allegretti Residences in Modena and the Einaudi Residences in Turin.

3.3 Peripheral area

A contemporary declination of this last model is the one according to which the universities and the student lodgings are placed close to one another in peripheral areas or within neighbourhoods characterized by the lack of services which turns them into dormitories. These policy choices often derive from the need to provide new impulse to the weaker areas of the city. In such areas, the decay, the deterioration, the delinquency, or the lack of services can be effectively fought through the placement within the fabric of “strong services” such as universities and lodgings for *youngsters*. Indeed, they can lend vitality to these neighbourhoods and, on the long run, they favour the birth of services and of cultural and leisure initiatives which are extremely important for the improvement of these urban areas. Immediate consequence of these choices, (especially in the initial phase) is the diffusion of neighbourhoods characterized by a great vitality during the daytime (when the lessons take place) and by a progressive desertion in the evening hours. That is what happens in the areas where we find the De Nicola I and II Residences, near the faculties of Medicine and Biology of Siena, as well as in the area of Piazzale Scuro Residence in Verona. An exception in the application of these criteria in the process of urban redevelopment is represented by the city of Reggio Calabria. The Municipality, in fact, has decided to boost the development of a peripheral zone through the transfer of the old university centre of the city in such zone. The area involved is so big that it appears as a new urban centre.

3.4 Semi-peripheral area moderately distant from the university premises

Rare are the cases in which the residences are moderately distant from the universities and from the urban centres. They can be new buildings, reused structures or buildings bought by the Agency for the Right to Study. Their building/restructuring is a result of the agreements with the Municipality or the ex-IACPs, as it happens as of the 1990s. Emblematic is the case of the Monte Cengio Residences in Padua. They have been included in a specific plan of Padua University which started in the 1970s. Such plan was aimed at decentralizing the university residences in order to let the students socialize with the locals. In the last few years, through the community centres which have been built on the ground and mezzanine floors after some redevelopment interventions on these buildings, the original goals of the plan were strengthened, since all the inhabitants of the neighbourhood benefit from these facilities. Other examples to be mentioned are the Gottardi Residence in Modena, the Area Paoli Residence in Turin and the Bepi Colombo Residence in Padua.

3.5 Peripheral area distant from the university premises

Finally, we can find residences completely decontextualized from the universities as well as from the urban centres. Such realities mostly derived from agreement of the Authority and other players. Such cases, probably determined by the economic conditions of the area, represent the weak point of the whole process of assistance to the student, to whom they guarantee a lodging but the excessive distance of the residence from the teaching facilities and from the city makes a series of expensive measures become necessary, to ensure quality transport facilities. Examples of this kind of realities are the Via Larga Residence in Bologna and the Via Paradisia Residence in Pisa. In both cases the distance is such that it is indispensable to take a mechanical mean of transport to reach the universities and the urban centre.

In this case, the economy of the area is not revitalized and the students go elsewhere to satisfy their nonmaterial needs.

4. REGULATIONS

The situation has remained basically the same until 2000, when the Government introduced a specific set of regulations about university student housing. The purpose of such provision was to free the subject on

the financial plan with respect to the funds for public housing and universities⁴. But the rule established that the funding, which can reach a percentage of 60% of the value of the intervention, is subject to some obligations among which size standards and preservation of use for not less than 25 years.

But it is through the implemental decrees⁵ that the key changes are introduced: the organization models of the building organism and the compulsory minimum size standards.

The possible organizational models (illustrated in the following pages) are: hotel-like model, mini-apartment model, integrated nucleus model, mixed model. In each one of these typologies we find functional areas arranged in different ways which represent the functional organization of the university residence.

The Functional Areas must be compulsorily present in the structure. They represent a group of specific functions carried out in one or more rooms used for activities which are connected to one another. They are:

- AF1 – Residence, with service functions to be carried out individually by the student or in group;

- AF2 – Cultural and teaching services, it includes the areas to study, to carry out researches, to find documentation, to read, meeting rooms, etc.

- AF3 – Entertaining services, it includes the leisure areas, sports halls, etc.

Other service areas for the students and the residence staff, the entrance halls, the reception areas and the zone of spatial distribution of the rooms complete such spaces.

The following chart, taken from the implemental decrees of the regulations⁶ compares the parameters of the various organizational models.

	SINGLE ROOM [L1]	DUBLE ROOM [L2]	BATHROOMS [WC]	TWO SINGLE ROOMS	COMMON SERVICE AREA	ACCESS AND DISTRIBUTION AREA
HOTEL-LIKE MODEL	≥ 11,00 mq	≥ 16,00 mq	≥ 3,00 mq	N.A.	[AF2+AF3+AF4] ≥ 6,00 mq divided into ✓ AF2 ≥ 2,50 mq/p.a. ✓ AF3 ≥ 2,50 mq/p.a. ✓ AF4 ≥ 2,50 mq/p.a.	≤ 30% of the gross area for residence and service
STUDIO FLAT	≥ 24,00 mq 20% of the floor area reserved for access and distribution spaces inside the unit	≥ 36,00 mq 20% of the floor area reserved for access and distribution spaces inside the unit divided into ✓ L2 ≥ 16,00 mq ✓ wc ≥ 3,00 mq ✓ K+P+S ≥ 12,00 mq ✓ entrance/distribution < 5,00 mq	included in the unit area	≥ 42,00 mq 20% of the floor area reserved for access and distribution spaces inside the unit divided into ✓ 2 x L1 ≥ 11,00 mq ✓ wc ≥ 3,00 mq ✓ K+P+S ≥ 12,00 mq ✓ entrance/distribution < 5,00 mq	≥ 1,00 mq	≤ 30% of the gross area for residence and service
RESIDENTIAL UNIT	≥ 11,00 mq	≥ 16,00 mq	≥ 3,00 mq	N.A.	INSIDE THE UNIT [AF2+AF3+AF4] ≥ 6,00 mq divided into ✓ AF2 ≥ 2,50 mq/p.a. ✓ AF3 ≥ 2,50 mq/p.a. ✓ AF4 ≥ 2,50 mq/p.a. external to the unit ≥ 1,00 mq	≤ 20% of the gross area for residence and service

Figure 2 Comparison of the parameters of the various organizational models. DM 22nd May 2007 n° 42 and n° 43

⁴ Law 14 november 2000 n. 338 – Disposizioni in materia di alloggi e residenze per studenti universitari. E successivi decreti attuativi: DM (Ministerial Decrees) 09nd May 2001 n° 116 e n° 118; DM 22nd May 2007 n° 42 and n° 43.

⁵ DM (Ministerial Decrees) 09nd May 2001 n° 116 e n° 118; DM 22nd May 2007 n° 42 and n° 43.

⁶ For a comparison of data see the DM (Ministerial Decrees) 22nd May 2007 n° 42 and n° 43.

5 AGGREGATION TYPOLOGIES.

5.1 Hotel-like model

The hotel-like typology is characterized by a corridor along which are the single or double rooms with bathrooms. According to the law, the bathroom can be used by a maximum of three persons. The corridor distribution pattern is typical of hotels, after which this typology has been named but it is also common in the residences in general. Such distribution pattern has been really predominant in modern times, until 2000. The greatest advantage offered is represented by the consecution of elements alternating with the collective services such as the kitchens and the areas to study. However, this kind of structure has shown its little versatility in time, since it is difficult to reuse it as for different purposes. Indeed, the building generally has a reduced depth with respect to the longitudinal development. Moreover, they are nearly always strongly limited in their vertical and horizontal distribution.

5.2 Studio-flat model

The first significant change has been undoubtedly represented by the institutionalization of the studio-flat and integrated nucleus models (residential unit).

The studio-flat, both due to its size (see chart 1) and to its functional organization, is a small apartment for one or two users. In the structure where the mini-apartments are, are compulsorily placed some functional areas for the collective life of students. Furthermore, the set of regulations, by being specific and indicating also the size of the various rooms of the structure, does not allow to disregard the given parameters. In a wider vision, then, a building organism with these size parameters and this functional organization can be easily used as residential units for young couples, singles or adapted for self-sufficient elderly people.

5.3 Integrated nucleus model (residential unit)

The integrated nucleus organizational model is undoubtedly the most innovative one. The residence, in this case, is represented by a group of apartments including single or double rooms with bathroom (usable by no more than three persons) and spaces reserved for some activities (such as the preparation and consumption of meals, the study, the relax, etc.) which can be considered as separate use nuclei.

The possibility to use spaces for small groups makes the overall size of the structure be perceived as larger but at the same time does not favour the alienation generally induced by wide common areas. This organizational model can be applied to variable modules of groups of three, five or more rooms (up to eight users per nucleus) and can originate less monotonous and more stimulating rooms, as far as the perception of the spaces is concerned. Basically, the integrated nucleus is a traditional lodging but is endowed of more areas reserved for socialization. From a building point of view, this typology, indeed, can be easily adapted to the existing building heritage, characterized by the need of flexible and different solutions. Finally, the fact that they consist in groups of apartments can encourage the private investors who can buy them paying a little price, considering that they can easily change the use of the structure.

In Italy there are not many examples of such typology but it is currently asserting itself. Very often we notice the hotel-like model coexisting with the integrated nucleus one. The following illustrations show some examples.

6 TWO EXAMPLES IN TURIN AND PISA.

The two cases presented in the following lines are quite emblematic of the care that the two cities of Turin and Pisa reserve to this theme. The Turin case represents an urban regeneration process undertaken by the Municipality. Indeed, Turin⁷, endowed of a high number of beds into the buildings of the different institutional organizations, has undertaken a policy of redevelopment of structures located in various areas to be used as residences. A similar policy has been undertaken by the city of Pisa. This last one, apart from restructuring and reusing historical buildings of a great architectural value, is building new university

⁷ For a close examination of the theme see *La residenza temporanea per studenti*. Atlante Italiano, C. Chiarantoni, Alinea Firenze, October 2008.

residences within the expansion areas of the city connected to the universities. Such choice, apart from ensuring a great composition freedom, allows to give a strong commercial impulse to these areas.

6.1 Via Verdi Student housing. Turin



Figure 3 Via Verdi Student Housing. Urban context in Turin

The student housing is located in Via Verdi, in the very heart of the historic centre, not far from the Mole Antonelliana and from the University of Palazzo Nuovo. Thanks to its central location, it is near every service students may require. In the immediate surroundings of the residence, a flourishing city economy has developed. It is based upon places to have lunch/dinner or to socialize and handicraft shops. Via Verdi Residence is the result of the restructuring, occurred in 1981, of an existing 1600-courtyard building and of the longitudinal one of the same epoch which is attached to the first one facing Via Verdi. In that same year a new structure was placed at the intersection of the two ancient ones.

The longitudinal body occupies only the ground floor and includes the main entrance, the reception/porter's lodge (heart of the distribution system of the floor), common halls for the students and shared bathrooms. The collective spaces of the residence are all on the basement and ground floors. The ground floor is completely reserved for common spaces for the whole student community. Most of the floor, indeed, is occupied by two rooms to study: the bigger one (with a surface of 290 sqm) is located in the recently built construction and has a zenithal lighting system; the smaller one (with a surface of 135 sqm) occupies a portion of the historical building. The remaining portion of the courtyard-building includes: a bar; shared bathrooms; a sports hall, whose use is reserved for students; the lobby/porter's lodge, to be also used as living room/newspaper library, which also serves as control and coordination room for the adjacent computer rooms, library and rooms to study.

The residence accommodates 59 people in units structured according to the hotel model and to the mini-apartment one. The units have a variable size and are structured so as to allow the access to a wide box room from the entrance. In such room are some wardrobes, a fridge, the accesses to the bathrooms and to the rooms. The lodgings in the hotel-like structures are complemented by a kitchen and a dining room for each floor and they are separate but communicating. The equipment and the surfaces of such facilities serve 36 students per floor on average. The studio-flat are on the mansard floor. Most of them accommodate two people. They have the same structure and size of the rooms downstairs but have a tiny kitchenette within the access room.

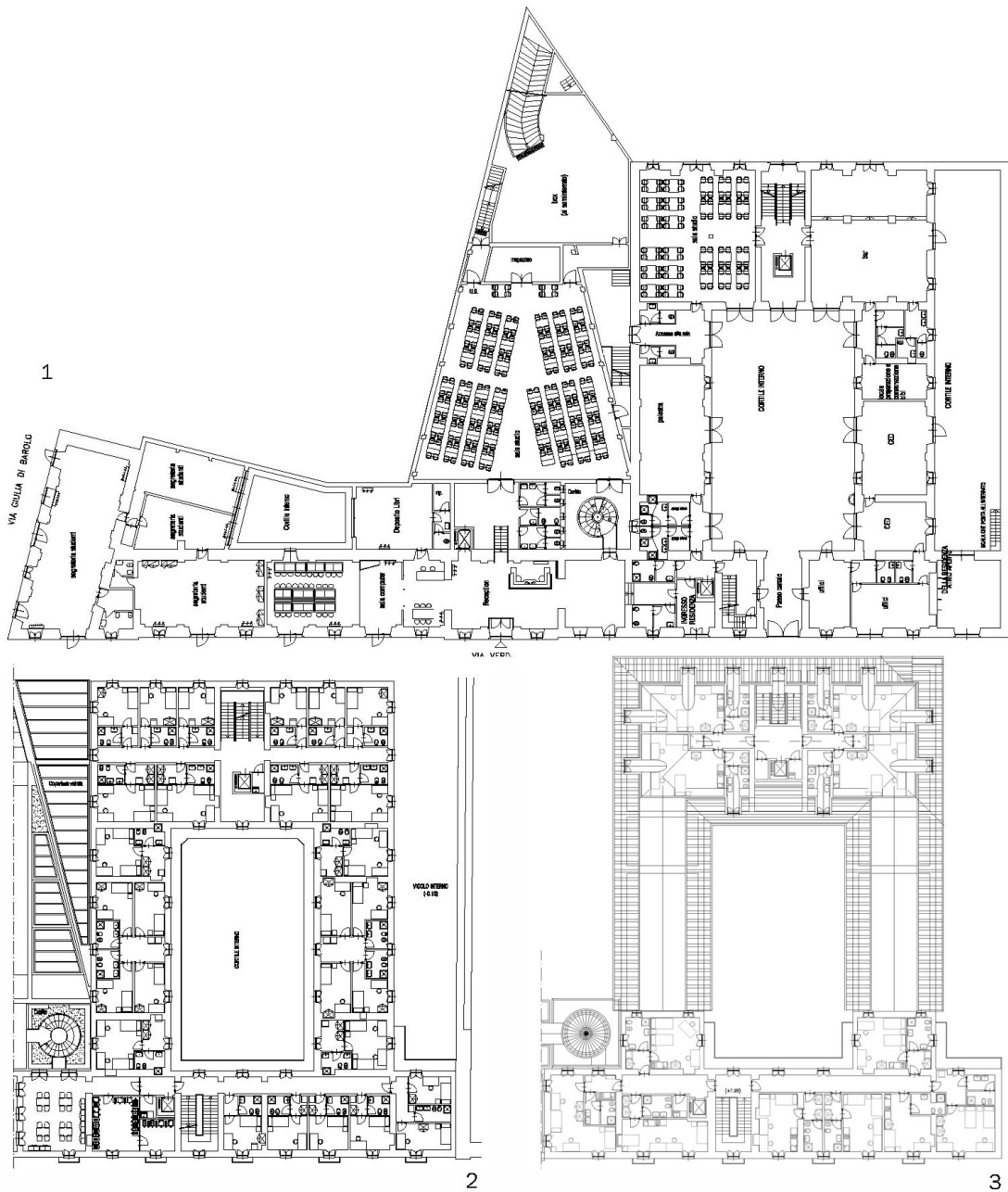


Figure 4 Via Verdi Student Housing. 1) Ground floor, with common spaces for the whole student community. 2) First floor, double rooms with bathroom. 3) Second floor, studio flat.

6.2 Le Piagne Student housing, Pisa

The Student housing is situated in the eastern expansion area of Pisa, between via Parigi and via Umbria. The rectangular plan-building, with the main front facing via Parigi, consists of two side bodies (north and south-oriented) of four floors plus the ground floor linked by a central body of the same height. The side bodies include the lodgings, some of them structured according to the mini-apartment model and some others according to the integrated nucleus model; the central body includes the main vertical connection and a series of meeting spaces. Particularly interesting is the horizontal distribution. It is reduced to the minimum: a balcony leading to the residential units of the first and fourth floors developing along one side only for the whole length of the bodies; a corridor, at the second floor only, extends along the whole

length of the wings and leads to the integrated nucleus lodgings on both sides. The external area is partly occupied by a parking lot and partly by green space.

The most interesting part of the development is the structuring of the residential areas. The housing units are of two typologies: simplex studio-flat for two students, on the first and fourth floors, and duplex integrated nucleus lodgings for four people on the first, second and third floors. The mini-lodgings are structured so as to directly access the dining/living room (20,4 sqm) from the balcony leading to the rooms. The dining/living room has a kitchenette niche, tables and chairs, sofas and a cupboard; in this area is a box room leading to the bathrooms (5,6 sqm) and a double room (24,5 sqm). The integrated nucleus develops along three floors according to the model of the Unité d'Habitation by Le Corbusier, in Marseilles. On the second floor is a corridor on whose sides are the accesses to all the living areas of the duplexes. Such living areas, equipped just like those of the mini-lodgings are, also include a single flight of stairs which is independent from the bearing structure. The stairs lead to the upper and to the lower sleeping area. The sleeping area occupies the whole surface of the first floor and of the third floor from a front to another. The double bedrooms face the outside and in the middle, in correspondence with the underlying corridor, is an access room reached by the stairs and two bathrooms. The lodgings for physically disabled people are four and are placed on the ground floor. They accommodate one person but it is possible to add a bed for a helper. The residence hosts 112 students in 58 units.

Common spaces are also situated in the central body connecting the two side bodies, where are socialization areas for the whole residence. From the ground floor entrance it is possible to enter a spacious hall making independent the vertical connections, two storage areas and the access to the balconies leading to the mini-lodgings. On the first floor we find a living room including a view of the lobby; on the second one are two rooms endowed with audiovisual equipment and the accesses to the corridors of the integrated nucleus; on the third floor is a big room to study and on the fourth and top floor two separate reading rooms and the access to the balcony leading to the lodgings.

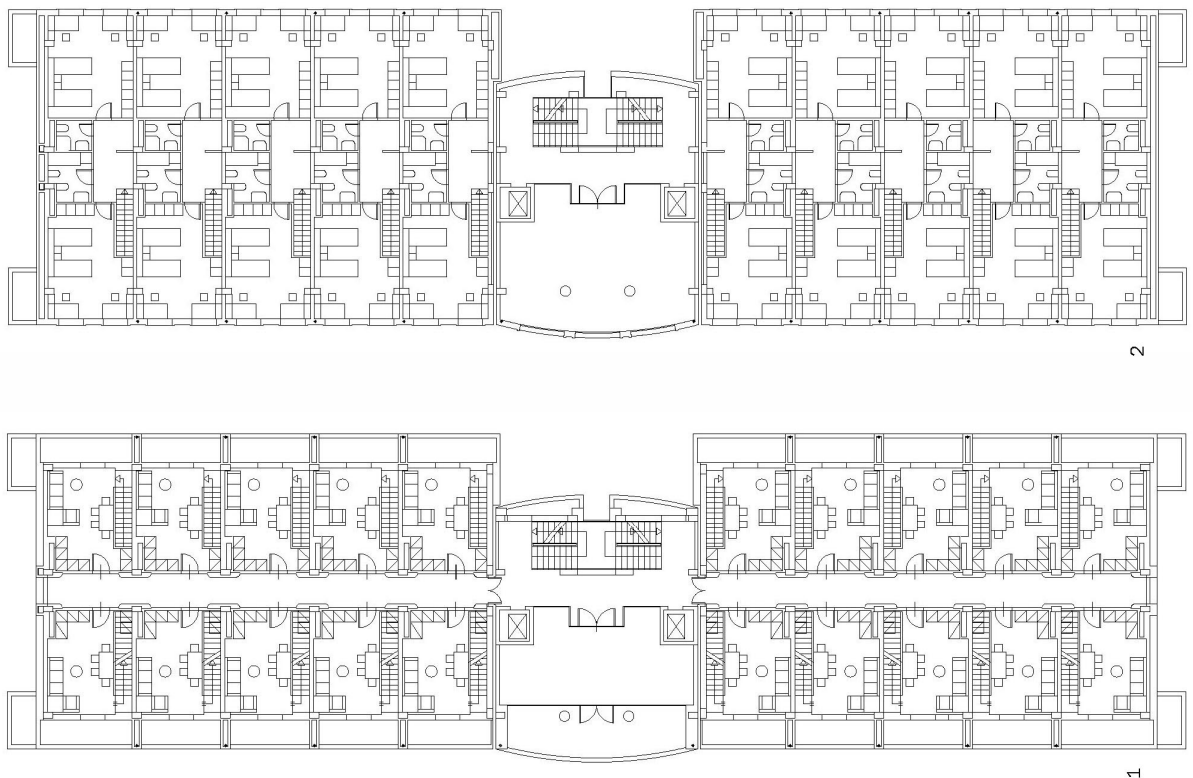


Figure 5 Le Piagge Student Housing. 1) third floor, with common spaces for the residential unit. 2) Floor of double rooms with bathroom of the residential unit.

7 CONCLUSIONS.

It is easy to observe that since its origins, through the modern age and up to our days, universities and annexed facilities such as the residences have nearly uninterruptedly kept their proximity relationship with the urban fabric. Only during the modern age this tradition was broken because of the housing shortage of the period.

Today, the municipalities promote policies aiming at re-establishing the symbiotic relation of the temporary lodgings for students and the urban centre. Despite the reduction in funds allocated to Education and in particular to universities, the Italian government, through the financial bill of 2009 has kept unaltered the funds to ensure the application of the Law 338/2000. The possibilities of action on the housing models introduced by the D.M. 42 and 43 of 2007 are more and more encouraging private and public investors to realize such structures. The mini-apartments and the integrated nucleus model, indeed, offer the chance (above all to private investors) to build structures similar to the traditional residential buildings. This kind of model has the advantage to offer a differentiated type of accommodation to the students and at the same time, it allows an easy change of use into traditional housing. According to our study, in conclusion, a possible development of these structures would be due to the coexistence within a same building or complex of several types of housing offer. The single or double rooms with bathroom, preferred by the freshmen, should be placed next to mini-lodgings and integrated nucleus structures. The students should be put in charge of the management of these last types of lodgings as it happens in case of private houses rented by students. Such structures should be located within the urban areas to be redeveloped, in order to let the local economy be revitalized as it spontaneously happens in the university cities. Basically, a process which is spontaneous in the university cities, should be planned and systematized, as it has been in some Italian cities.

ACKNOWLEDGEMENT

This paper steams from the experience gained writing the book “Temporary student residences: An Italian Atlas” during my PhD period at the Bari Polytechnic. I would like to express my gratitude towards our head of the department and internal project guide Prof. Renato Cervini for his excellent motivation and guidance of our project.

REFERENCES

- [1] C. Chiarantoni, *La Residenza Temporanea per studenti. Atlante italiano [Temporary student residences: An Italian Atlas]*. Book, Firenze, Editrice Alinea, 2008
- [2] c. Chiarantoni, *Doctorate Thesis. La residenza universitaria. La storia e le funzioni. Analisi critica della situazione italiana. Il ruolo del progetto tra norma e tecnologia nella definizione delle nuove tendenze*, Department of Architecture and Urbanism, Faculty of Engineering, Polytechnic of Bari
- [3] DM 22nd May 2007 n° 42 and n° 43. *Actions and methodologies for project presentation, and for the assignment of funds devoted to university student housing, included in Law 14/11/2000 n. 338 and Law 23/11/2000, n. 388. Published on Gazzetta Ufficiale n° 274 (23rd November 2000)*
- [4] P. C. Pignatelli, *L’università in espansione. Orientamenti dell’edilizia universitaria*. Book, Milano, ETAS KOMPASS S.p.A, 1969
- [5] G. Arnaldi, *Le origini dell’università*. Book, Bologna, Il Mulino, 1974
- [6] M. Kiene, *L’università nelle città europee: l’architettura universitaria*, in G. P. Brizzi e J. Verger, *Le università dell’Europa. Gli uomini ed I luoghi*. Milano, Silvana Editoriale, 1993
- [7] S. Belforte (a cura di), *college universitari: esempi e progetti a confronto*. Torino, Celid, 1996
- [8] A. P. Bestente, D. Fassi, *Tesi di Laurea, Abitare da studenti*, Torino, 1999/2000. Project guide, prof. arch. S. Belforte
- [9] *Archives private of Ente per il diritto allo studio of Turin.*
- [10] A. Pilati, *Project for student housing Le Piagge*. Archives private of A. Pilati.