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Different Reflections of Architectural Knowledge on Design S

Abstract:

Design in architecture starts by understanding dynamics of a context and by decoding the knowledge of place where the space will be created. These are then transformed into spatial concepts and end with spatial formations. Subjective knowledge that is especially enhanced by the experiences of the architect and scientific knowledge come together to lead this design process. The aim of this study is to reveal how architects from different cultures produce knowledge of space and the ways of transforming this knowledge into design process. Different architectural reflections of this knowledge are illuminated by the design proposals of architecture students from two different countries. Comparative evaluations focusing on the student works are considered as an instructive process for architects that make indiscernible discernible, vary the possibilities and by this way enhance their own architectural knowledge.

Keywords: Architectural design, knowledge of space, space making, design education.

Introduction

Design can be described a sophisticated mental process capable of manipulating many kinds of information, blending them all into coherent set of ideas and finally generating some realisation of those ideas (Lawson, 2003). In architecture, this process especially begins by generating an abstract idea and continues by transforming it to concrete spatial formations. This abstract idea whether it is called as “primary generator” (Darke, 1984), or “concept” (Lawson, 2003) is mainly developed by understanding the dynamics of the context, limitations, potentials, living cultures and requirements.

By decoding the knowledge of place where the space will be created and by focusing on life that will be taken place in architect develops these ideas in order to respond. Certainly, personal interpretations related to spatial context underline different problematic in different design processes. According to Schön, in order to formulate a design problem to be solved, the designer must frame a problematic design situation; set its boundaries, select particular things and relations for attention and impose on the situation a coherence that guides sublimates moves (Cross, 2007). These ideas are then transformed into spatial formations and open for inquiry. By generating different proposals and testing them, the architect leads an experimental process that includes both exploration and discovery. In other words the architect learns by making, learning by doing and thinking in acting (Schön, 1987). As we accept design has a solution-focused strategy (Lawson, 2003, Cross, 2007), it must be pointed out that the architect learns not only from his/her own design but also from creations of others. This is the way for enhancing spatial awareness and enriching design knowledge. Consequently, not only the design solution but also the design process has a significant importance in architectural education. In this context, the architect also represents a creative mind that can combine scientific or research based knowledge with her/his intuitions, experiences, and ideas, belief systems and values in order to perform design process (Dursun, 2007, 2009).

The aim of this study is to reveal how the architects from different cultures produce different knowledge of space when they are working on the same place and also different ways of transforming this knowledge into design process. Different architectural reflections of this knowledge are illuminated by the design proposals of architecture students from two different countries. These proposals take the city of Naples as a point of interest and develop ideas for Port of Naples and the decayed area around Piazza Mercato. Comparative evaluations focusing on the student works are considered as an instructive process for architects that make indiscernible

discernible, vary the possibilities and by this way enhance their own architectural knowledge.

Urban Hub_ Naples

In 2011-12 spring semester, one of the graduation projects at Istanbul Technical University Faculty of Architecture was given in Naples in collaboration with The University of Naples Federico II in Italy. The title of the graduation Project is "Urban Hub_Naples" which indicates an urban design project focuses on the area around Piazza Mercato and Port of Naples in Italy (Saglamer et al, 2013).

The main theme of Urban Hub_Naples was formed briefly according to the following criterions: re-questioning the interface between the sea and the coastline in harbour cities, re-gaining the valuable but abandoned parts of the city in terms of usage and functions in development process through new life scenarios, re-thinking urban transformation problems through dynamic, flexible, multi-layered value systems. The value of architecture cannot be evaluated only by the action of creating a space in another space. To concentrate on all the expansions of the concept of "relational" is a must. During the process; the main expectation is integrated activities and relations, open-ended realities, constitution of positive synergy within qualitative values and the existing reality. The candidate for being an architect should not only be an architectural object designer, but also should have the sensitivity of developing strategy about all of the expansions of a metropolis. What is not to be forgotten is; the dynamic architectural configuration is not merely an aesthetic search, but also a search for objectivity that will enable new conditions, expansions and experiences. Similarly, the programme should not be interpreted as a text that is simply related to functionality, it should be interpreted as an open-ended hypertext which is related to the concept of "event", variability and bodily experience.

The city of Naples is a great urban laboratory with its social, cultural, economic importance as a harbour, commercial and touristic city in the country, its architectural features and dynamic everyday life practices. The city has been functioning as an important harbour and commercial city in the Mediterranean basin till its establishment in 6th century (BC) as a Greek colony. The harbour played a significant role during the city's economic, social and cultural development and enabled different cultures and social groups live together. These circumstances were also reflected on the city's physical entity, and with its churches, museums, squares and narrow streets the urban fabric gained a unique character. The historical centre of the city is under protection by UNESCO (CTUR, 2011).

Naples has a significant role on sea tourism not only in Italy but also in the Mediterranean basin as an important harbour where cruise ships prefer to approach. As Naples is growing through tourism, it is very important to provide transportation both in the city and to the adjacent touristic spots like Pompei, Pozitano, Capri, etc. On the other hand, the barrier like character of the harbour area between the city and the sea is considered as a big problem in terms of integration for universities, municipality and port authorities.



FIG.1. The Project Area, the Port of Naples and Piazza Mercato

The main objective of the graduation project was to rethink, function and vitalize the harbour area that was defined by two main axes – Via Duomo and Corso Garibaldi – and includes Piazza Mercato (Fig. 1, 2). It was also aimed to design a terminal building for cruise ships connected with shopping, retail, recreation and cultural areas. Piazza Mercato is located just behind an important transportation corridor and was one of the significant gates of the old city as the house of mostly textile and jewellery business in the history. With the relocation of these commercial activities to the outskirts of Naples, this area became abandoned and detached from the city life. The critical aspects of the project can be as following: how to evaluate the potential of the

square, how to bring it back to city life, how to emphasize its relation to the sea and how to re-function it. While re-functioning the area, small-scale production and a different type of textile and jewellery business were introduced in conjunction with exhibitions in an international scope. Within this scope, it was also thought to re-function and redesign the existing housing block – Ottieri building – that defines the seaside edge of Piazza Mercato (Fig.3).

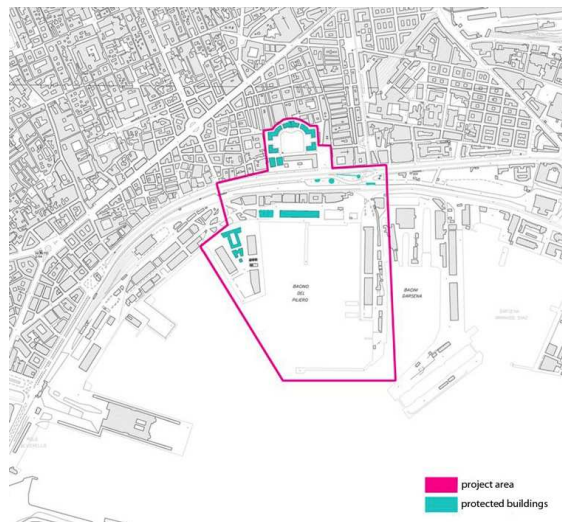


FIG.2. The project area

It was anticipated that the project proposals would revitalize social aspects as well as the physical built environment. The designed urban flow would let both the visitors and the locals experience the city of Naples as a coastal city through social and cultural events that enrich their lives. In this context, the students were asked to propose holistic life scenarios with its all aspects and develop detailed architectural interventions that would correspond the area and functions through these scenarios. Dynamic, multi-layered building(s) | structure(s) that can change according to the urban flow and contemporary use and prospect; and also support and relate the spaces and functions which were flourished spontaneously within the tension between order and disorder at the Port of Naples and around. With these qualities, the proposals should act like a “hub” which enables the urban flow. This can be

considered as the first aim of the project. The product, which should be appropriate to the programme outline, environmental conditions and projections, would be improved by the student and should be the result of the student's own design process and intellectual activities. Thereby, the graduation project is not only made up of an objective solution, but also the student | the designer should discuss about the conceptual frame and its relation to the contemporary discourse during the process.



FIG.3. Ottieri Building

After making the master plan for the whole area, the detailed constructive design of a volume of 60.000 m³ [$\pm 10\%$] is expected. Volumetric assignments concerning the proposed programme components will be preferred by the student | the designer. The flexibility and variability of the configuration is open to interpretation providing that all of the proposed programme components will be included and total volumetric limitations will be obtained. Proposed programme components can be listed like: temporary and permanent accommodation, cultural, recreation, information, production, working units, node for transportation network, services, open spaces that are open to different uses/experiences.

The main expectation is; to design a building | a group of buildings that will relate the city and the port in the region defined by the main axis in the urban design area at the Port of Naples. The main aim is to sustain and ameliorate the existing dynamics and functions, to provide a multi-layered and flexible spatial configuration that will fulfil urban possibilities.

The process of the graduation project consists of three mid-reviews and a final review. This fourteen weeks period was enriched by a field trip to Naples and seminars by the faculty of ITU and University of Naples Federico II. Fig.4 illustrates the experience of the students, their readings and comprehension of the city through sketches during their stay in Naples.

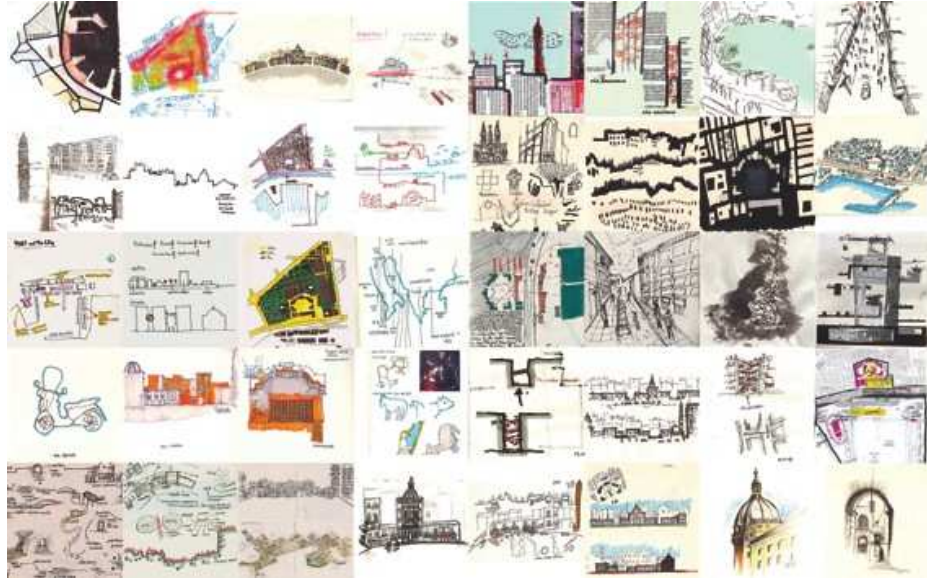


FIG.4. Students' Sketches of Naples

The proposals are remarkable in terms of understanding the whole area defined by two main axes - Via Duomo and Corso Garibaldi - and consists of Piazza Mercato, which has an important social, cultural and architectural value, comprehending the city through existing dynamics of life and trying to find various solutions in different scales. In some of the proposals the problematic of controlling a large area was handled through creating urban landscapes by folding surfaces or repeating units (Fig.5). Some others were developed according to the existing axes that are parallel or perpendicular to the coastal line (Fig.6). The percentage of the constructed areas, the value of the landscape, the relations between the fragmented units, the flow of the spaces, the scale of the proposals and the transformation of the coastal line were discussed during the process.

The developed ideas vary in terms of the conservation of the existing buildings on the Port area and the housing block - Ottieri building - that creates the edge of Piazza Mercato. Most of the proposals remove the large and small buildings on the Port area and offer new ones; on the other hand the silo buildings were conserved and re-functioned (Fig.7). The proposals for the square and its edges also differ; almost all of the designs offer a new building for Ottieri building with additional functions such as socio-cultural spaces - restaurants, cafes, exhibition halls, etc. - and commercial

activities. Even though possible life scenarios were developed for these functions, the main concern was usually the detailed spatial organisation of the Port area

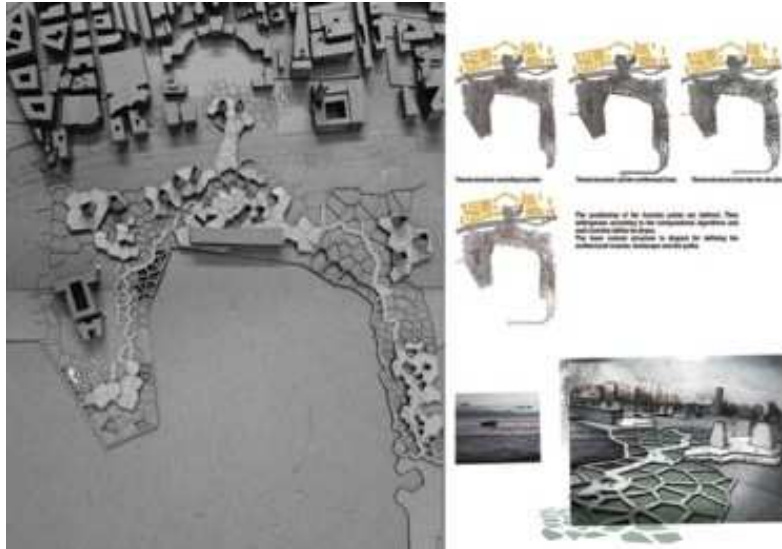


FIG.5. "Culturespace – An Experiment on Self-Organizing Urban Space", İdil Seren Yücel



FIG.6. "Urban Passage", Fulya Menderes

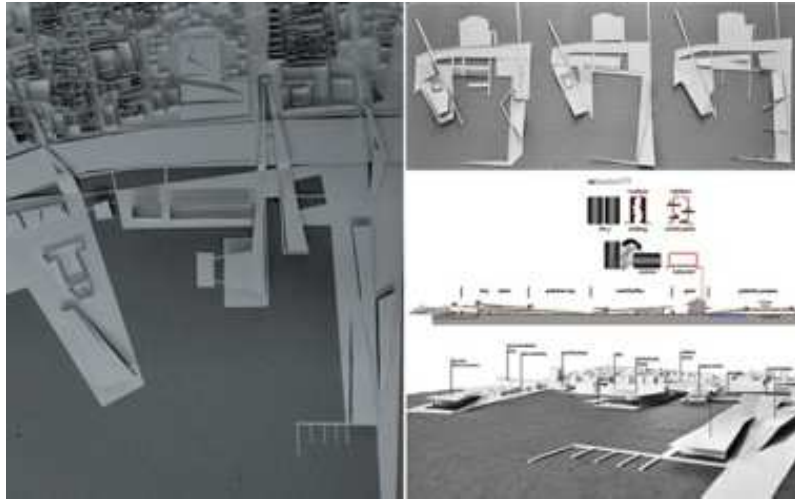


FIG.7. "Port of Culture", Ayşegül Taşkın

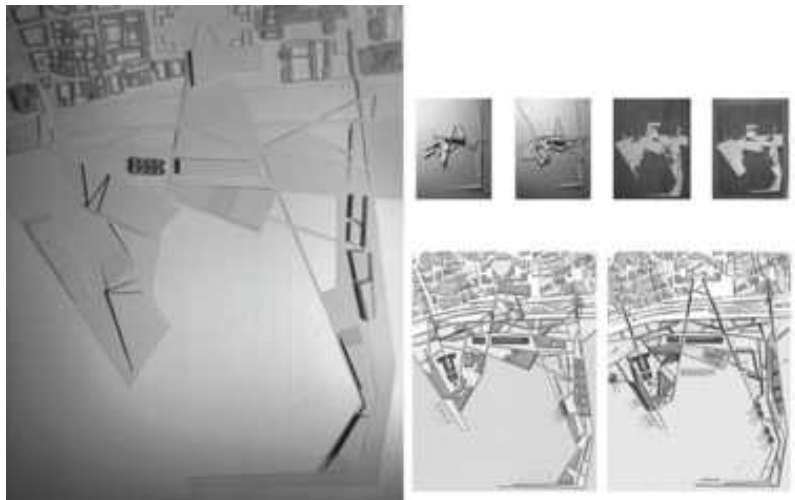


FIG.8. "Pattern Topography", Gizem Çakır

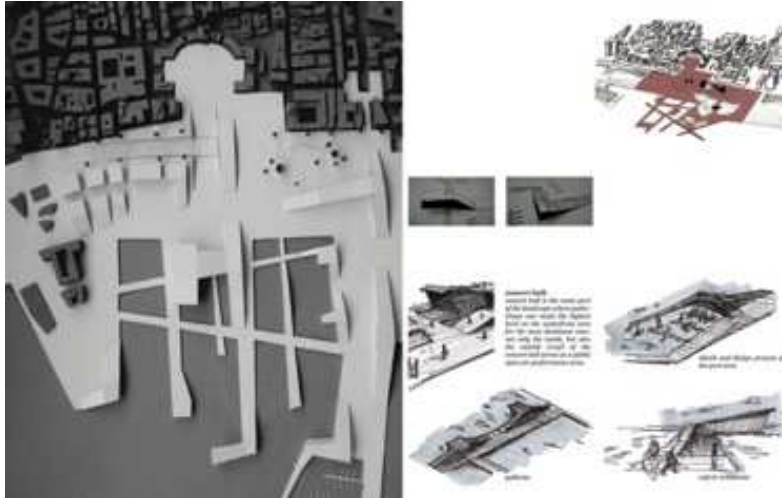


FIG.9. "Floating Platforms / City", Mert Bozkurt



FIG.10. "Borders", Mehmet Gören

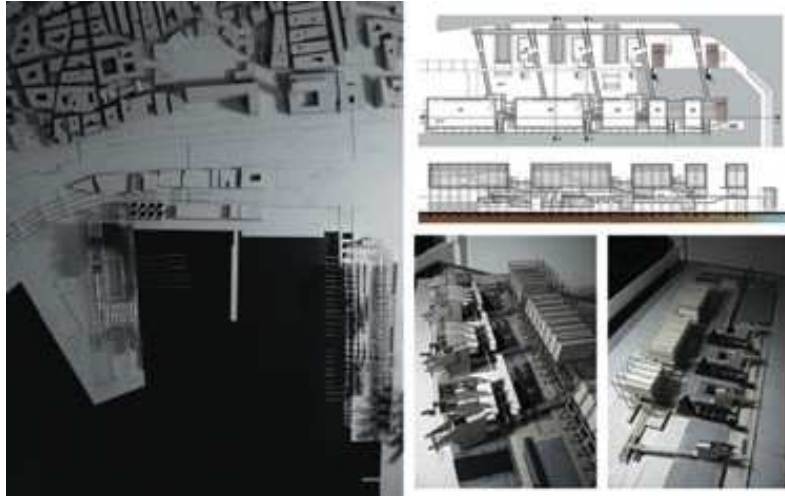


FIG.11. "Cinecitta Napoli", Deniz Üstem

The proposals also vary in the way of reconstructing the spatial relations of the city and the sea, and reorganization of the mobility systems both vehicular and pedestrian. Some of them configure the flow according to urban traces, axes and different levels and orient people through these traces (Fig.8), others locate vehicular traffic underground in order to create civic spaces above (Fig.9). On the other hand some of the proposals construct over the road – bridge like buildings with various functions – that divides the urban fabric into two between Piazza Mercato and the Port area. Some of the others design public spaces above the sea in order to create urban flow and gathering spaces (Fig.10).

It could also be mentioned that some of the projects proposed specific functions and activities so as to transform the port area and create new attraction points through new life scenarios: film studios together with ship making and repairing workshops (Fig.11), market space at the harbour for civic uses and its experimental workshop spaces (Fig.12), offering a hybrid scenario by taking the advantage of being closed to water, using hydrogen energy to create a new public life which was integrated with a school of architecture and design (Fig.13).

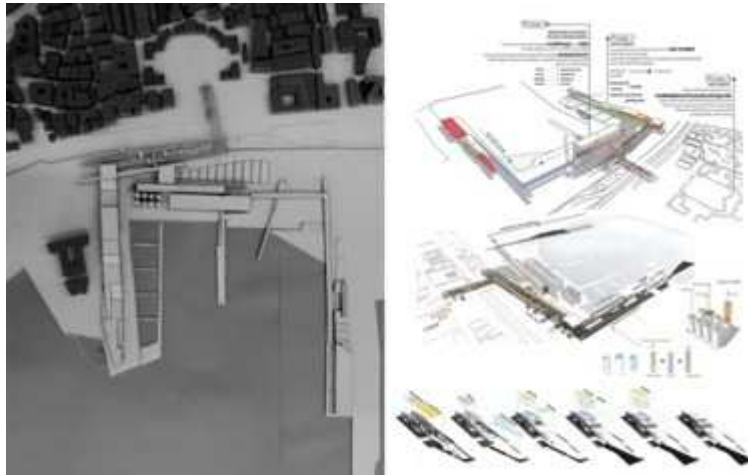


FIG.12. "Marketlab", Ece Sila Bora

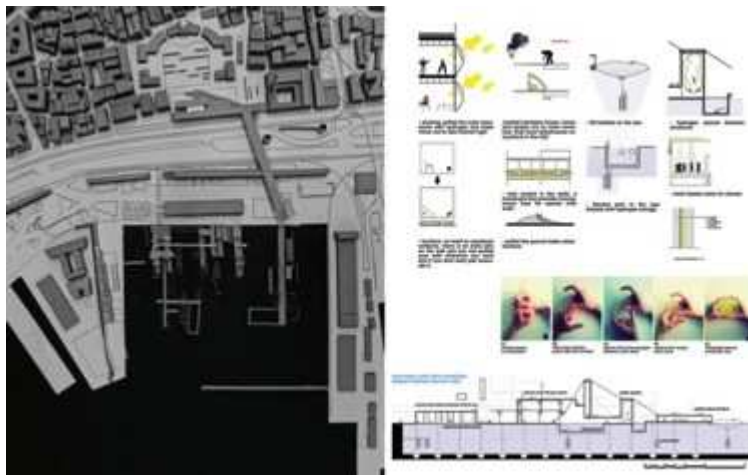


FIG.13. "New Energy, New Public Life: Hydrogen", Ayça Yazıcı

Projects on Piazza Mercato

This part of the study focuses on the projects of undergraduate students from University of Naples Federico II. The 5th year projects were designed in same area that ITU students have worked on. Here, an external client was included in the design

process and solutions were developed in a limited time of four weeks (Parita, 2013). The process is also supported a series of events such as lectures, workshops, reviews with tutors, final presentation to the local actors. The projects were developed by the collaboration of Municipality of Naples and Port Authority in three phases between the years of 2009-2011.

In the first phase the students focused on regeneration of the area and aimed to reconnect historical centre and the port area (Parita, 2013). By maintaining the main functions of the area and considering the maritime transportation activities, the solutions searched for alternative ways to integrate this heavy structure into urban fabric. The proposals included designing possible pedestrian gateways to the city through the port and transforming the big gate that separate the port from the city into a new element that works as a kind of passage wall hosting different spaces (Fig.14).

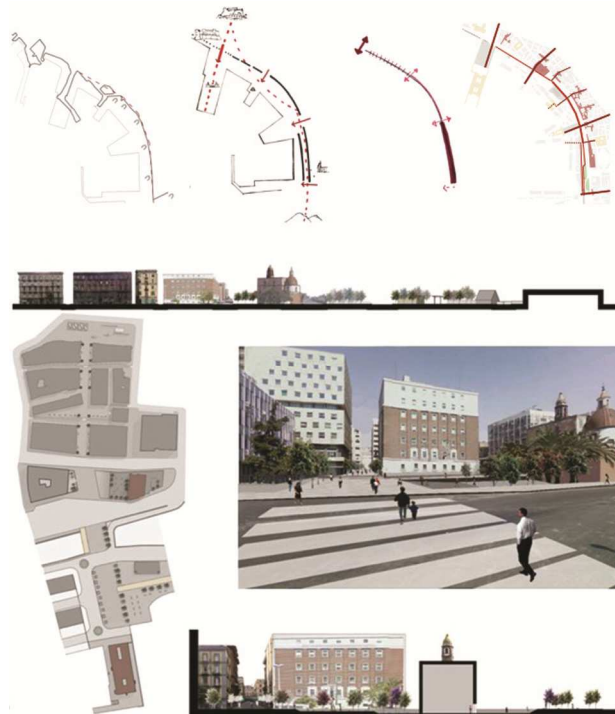


FIG.14. Design Proposals on Pedestrian Movement Flow (Parita, 2013)

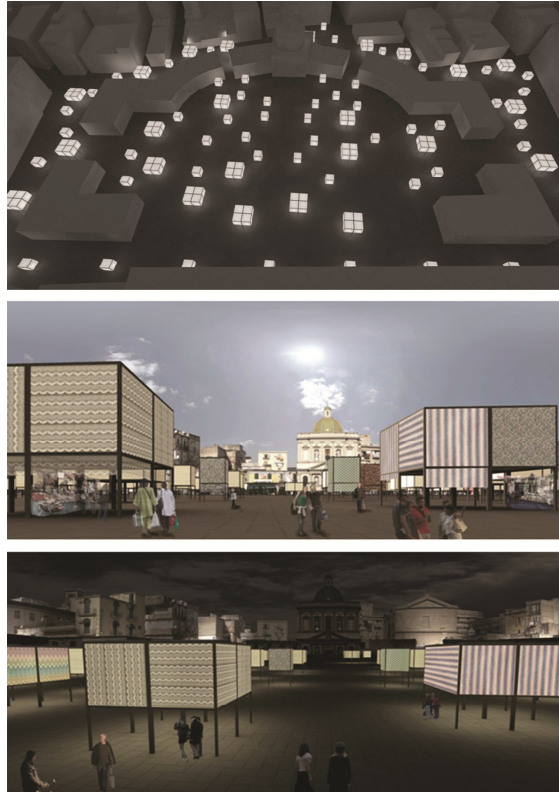


FIG.15. Design Proposals on Piazza Mercato (Parita, 2013)

In the second phase the students were asked to develop projects focusing more on the square, Piazza Mercato. In a limited time period they were directed to create design themes on the temporary uses of the square. Minimal, light, reversible interventions aimed to respond both the question of re-using as much as possible the pre-existing architecture and the strictness of the local plan (Parita, 2013). The students mainly developed projects that are re-using the square as a market place, particularly related to textile and they search for alternative spaces for exhibitions. The elevated light cubes, small parasite objects or additional voids as containers were created for multiuse, both public and private activities (Fig.15).

In the third phase students were asked to focus on the Ottieri Building. As the previous attempts to demolish the building was not successful, existence of the building accepted as a fact and new ideas were developed to transform it. The

students were expected to think about how the guidelines of local plan can affect a real and sustainable transformation of the building (Parita, 2013). Two main strategies were proposed by the students. The first one tried to modify the design and the living scenario of its basement and roof floor and suggested using these levels as public spaces. The second one generated a scenario that mainly focuses on expanding living units that could be enlarged time by time by the owners (Figure 16).



FIG.16. Design Proposals for Ottieri Building (Parita, 2013)

Conclusion

Design is a sophisticated mental process in which different knowledge should be brought together. It deals with both understanding existing dynamics, limitations, potentials, living cultures and requirements and developing new ideas, new concepts and new lives in order to respond. Design is an experimental process that includes both exploration and discovery.

When we carry out a comparative analysis on these two different groups of students significant differences can be observed among the design proposals. ITU architecture students have created an important debate on the limits of architectural implementations in historic cities like Naples. In the design process, Italian students mostly prefer to design small temporary spaces and develop minimal, light, detachable design proposals for public and private activities: designing pedestrian passage ways connecting the historical core of the city and port, placing small parasite multipurpose spaces for both in and around the deteriorated old square, Piazza Mercato, etc. Their proposals for huge housing block, Ottieri Building generally appear as preserving the building as it is and offering minimum changes on its facades or redesigning its basement and roof floors with public facilities. Unlike these proposals which is more preservative and small scaled, Turkish students focus on the relation between the port and the city and generate more radical interventions that

are large scaled, bold and creative. They intend to understand existing dynamics of the city and try to restructure these dynamics by generating innovative concepts for the future of the city. With the aim of connecting port and the city the students design the movement flows at different levels. They either organize these flows in the whole project site benefiting from a powerful landscape structure or designing these passageways in or under the proposed building spaces. The students mostly intend to remove the existing buildings in the port area as well as Ottieri Housing Block or they recommend preserving these buildings with functional changes in their original form. Public spaces that are designed on and along the sea enhance the daily life of the city. Apart from the small interventions, by proposing new functions that will re-shape the future of the city, designers have used advantages of being next to the sea and presented decisive, powerful approaches in terms of rebuilding urban fabric of the city.

All design proposals were developed in a way that the architect transforms the spatial knowledge regarding on contextual characteristics and existing living patterns into meaningful spatial formations. Here, it comes into question how an architect formulates his/her design problem, in other words how he/she frames his/her problematic design situation. When we talk about Italian case, as a result of living in that particular urban fabric, design process is resulted by the approaches that are too sensitive for contextual characteristics, rules, agreements and values of the society. In the Turkish students' case, having a different cultural background makes the students giving different priorities to the existing constraints. It is believed that in the process of re-evaluating and reformation of existing urban fabric, these independent mediums enrich architect's own design knowledge and design experience by different design practices. Here, rules and limitation are re-interpreted in a particular design logic and reconstructed in designed space.

The process expose substantial efforts by means of grasping the challenge of urban life as a result of disconnection between sea and the city in most coastal cities by taking into account innovative and creative perspectives. At the same time these efforts are valuable in terms of transforming these knowledge and experiences into architectural practice with future scenarios. This educational practice also documents an important discovery and learning process for the architects. This process includes not only learning from his/her creations but also learning from creations of others. Comparative evaluations focusing on the student works are considered as instructive process for architects that make indiscernible discernible, vary the possibilities and by this way enhance their own architectural knowledge.

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