

NAPLES lab

research & tentative design

edited by
Christine Fontaine
Renata Valente
Valeria D'Ambrosio



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Framework



City Administration & Academy: dialogues for training another (kind of) architect

Carmine Piscopo

Municipality of Naples, Università degli Studi di Napoli Federico II, Italy

Mrs May, current Premier of the British Government, in the last electoral campaign, had a slogan for Brexit: “If you believe you are a citizen of the world, you are a citizen of nowhere”. She was then adapting the cosmopolitan perspective to a vaporous nihilism. In order to escape this danger, in her calculations she just had to stick as an oyster to her territory and to her identity, but also to simultaneously employ the “Other” as an enemy to keep away and separate, forever. On the other hand, there is the perspective of dialogue with the Other, to make the identity grow and strengthen through a dynamic and inclusive dialectics.

The International Workshops, initially part of the “Erasmus Intensive Program”, are open to multiple and interconnected purposes, including the fundamental purpose to activate a process of training for young Italian and foreign architects based on the idea of community, to experience and validate the relationship with the world about the concreteness of reality and the critical (and genuine) acceptance of the state of the art and its various aspects.

An important role involved the collaboration between the municipal administration and the University, identifying the specific critical issues of the local context which became a stimulating factor for the didactic activities, and establishing virtuous participatory processes. Today, the metropolitan city represents an important opportunity for transition towards planning policies of urban development according to a territorial dimension that is more congruent with the processes of cities sustainable growth. Participating in the workshop activities, the municipal administration has helped to outline the complex framework that underlies the transformation process of a complex territory in the light of the new social, cultural and environmental challenges facing metropolitan cities today.

Within a framework of complex conditions of the territory and its governance, the goal is to give impulse to the delineation and construction of an architect's figure who is available to compare himself/herself with complexity, broadly open-minded on changing situations, and is therefore very able to meet the expectations and the needs of a new era, urged by emergencies and contradictions, acted by dizzying processes of mutation rather than alteration, at risk of self-destruction. Therefore, this operator should be freed from the tight knots of the diagrams and words of the academic classrooms and he/she should be trained to grow and to be set up in open-air environments, without walls, within the dynamics in

place, confronting himself/herself with the problems of the environment, the abandon of factory buildings, the suburbs that are no longer suburbs, the cities with no more center and borders, the memories that are likely to sink forever in oblivion, the need to build a rigorous but ductile profession of the present inhabited by much past and where there is already future. This architect needs to be helped to develop new sensors in himself/herself, to be able to catch unexpected whisperings in the environment, to find out neglected spaces, to discover presences that have long been waiting to be recognized, questions of inclusion of marginalized situations. He/she must, therefore, be able to approach multi-faceted questions, with the help of not only one knowledge, but with a various multidisciplinary knowledge. This is why the dialogue between University and Administration within the initiative carried out by the professors Christine Fontaine, Renata Valente, Mario Losasso and Valeria D'Ambrosio has been a significant chance to experiment and improve on these topics, thanks to the availability of a group of experts working together for fifteen years, using a multidisciplinary approach, ready to listening to needs and multiple inspirations coming from the place.

The initiative started in Venice (IUAV) and did not casually reach Naples. A red thread has run for a long time between Venice and Naples, a red thread formed by a strongly expressed vocation aimed at bringing together Italian identity and strong relationships with the communities facing the Mediterranean, in particular those of the Balkan Peninsula, and with the Far East: pioneers of constructive relations and essential information for the West about China and Japan have left from Venice and Naples, pioneers who then became models. The chance to have about five hundred students studying, understanding and surprising along the Neapolitan neighborhood has been really important and stimulating for the local administration too, interested to observe young points of view and proposals. The role of the municipal administration of Naples was aimed at stimulating the proposals of the international working group on some issues of crucial importance for urban development. The Administration has in fact supported a programmatic drive aimed at a new vision of the city in its consolidated dimension but also towards its metropolitan horizon. Among the numerous project areas identified, the most important themes for urban development and enhancement are highlighted. The strategy for the area coinciding with the perimeter of the Historic Center of Naples "Grande Progetto Unesco" is in fact addressed to the complex strategy of urban and infrastructural architectural level for the revitalization of the central area of the historically consolidated city. On another front, the Port area has represented for decades one of the main unresolved issues in the relationship between the city and the sea, on which resources, ideas and projects must be merged with a view to supporting and integrating already defined requalification programs. In any case Naples, for a series of reasons and verification needs, was also a priority point for other courses. The two courses of 2014, for example, have been entirely dedicated to the future of the Mediterranean and Naples, both for its exemplarity as a Mediterranean city and for its physiological function of weighing needle in issues and events of the Mediterranean. Thus, new lacerations were opened and new important questions were asked about the landscape, the historical center observed as an utopia stimulus, the urban neighborhoods and the buildings awaiting requalification (M. Losasso), the navigability of the Porto (R. Amirante), the relationship with the context (R. Valente), the need to reconcile Naples with its great tradition of decisive city for the events of the South and not only of the South, the cultural heritage to be enhanced,

the spaces to be converted as Commons, the archaeological ruins to be protected. However if Naples gained great visibility, it is not for a sense of neo-Bourbon nostalgia or localism, but it is for the necessary urge of looking at the Mediterranean and southern Europe in the concreteness and seriousness of the knots to dissolve in this part of the planet, characterized by dramatic contradictions and where seismic swarms of conflict can arise that could invest the whole human community. The examinations and the overall process are extremely timely, and are rooted in an acknowledgment of objective and material feedbacks, similar to the one practiced by the great Les Annales historical school (Bloch, Braudel, Duby). All this for the advent of a new architect, who lives in the places and who knows how to listen to them.



Fig. 3

Potentialité agricole contemporaine

Learning from Naples from historical town to sustainable territory

Christine Fontaine, Renata Valente, Valeria D'Ambrosio

Vedi Napoli e poi muori! (C. F.)

Perhaps because it was the last stop of the grand tour, surely because its beauty is highly seductive, one cannot remain indifferent to the millennial city of Naples. After such a long time in Venice, here we were, international schools of architecture and urban design, long time partners, like northern Europeans of the XVII and XVIII centuries following the path to Naples, several times a year.

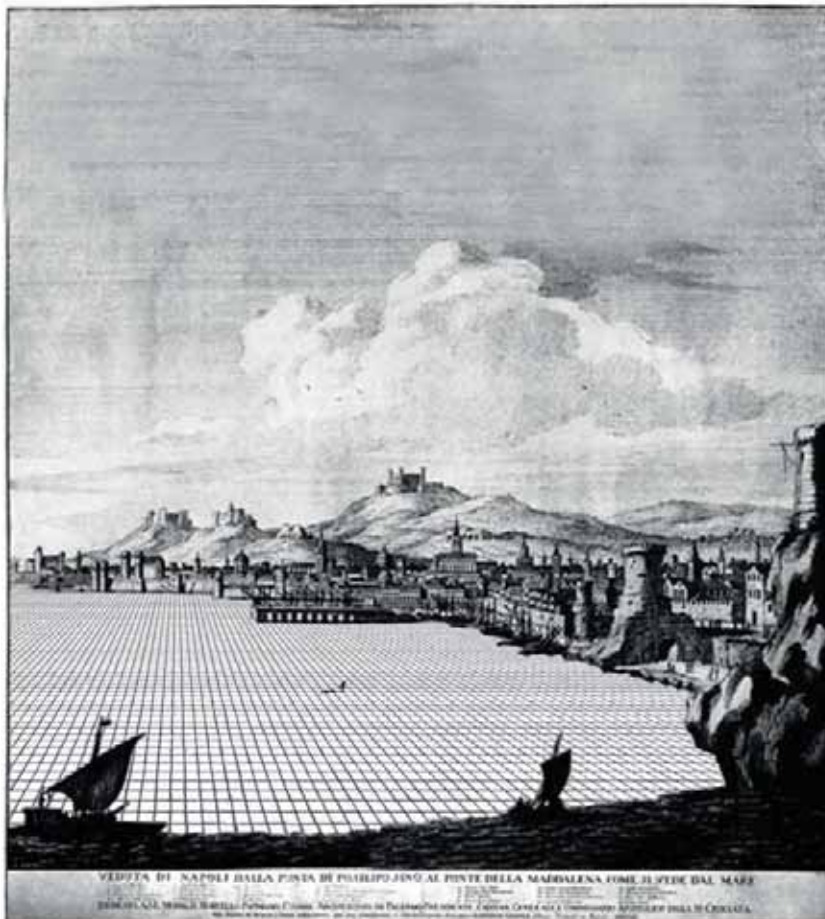
Naples is a rich territory. Layers of history have made the city a real palimpsest not only in terms of stones and edifices, but also in terms of culture and uses. When one walks through the historic town, one walks on the steps of the Greco-Roman people, sees Renaissance palaces, feels transcended by Baroque spaces but also crosses the path of a businessman, while hearing a vendor of chestnuts that seems to come straight from the middle ages.

Naples is a vast territory. From the slope of Vesuvio down to the craters of the Phlegraean Fields, the old Roman road runs along the winding coast, lined with orange trees. The farmlands still covered in some parts with high vines are contaminated with urban sprawl. Industrial monuments stand in the plain. Fumaroles break out from the ground of hillsides.

There, on this territory which has the assets of a paradise, the Neapolitans live, in fear of the explosion of the volcano, pressed by the stress of the daily work, between the noise of the ships entering the harbor and the hubbub of the insistent motor traffic.

There, everything is only disorder and beauty, intensity and monumentality.

Our international laboratory has a long history of collaboration. It started between Venice and Brussels at the I.L.A.U.D. summer program (founded in the 1970s by Giancarlo De Carlo with multiple international partners) and has progressively grown from 2000 till the present. The project on Naples began in the year 2013 upon the invitation launched by Renata Valente, from the Università degli Studi della Campania Luigi Vanvitelli. The discovery of this amazing city after working so long on the Venice lagoon, encountered the enthusiasm of all the partners.



IUAV, UCLouvain-LOCI, UGent, ENSA Strasbourg, ENSA Marseille and ALBA-Beyrouth were in fact ready to work on new challenges.

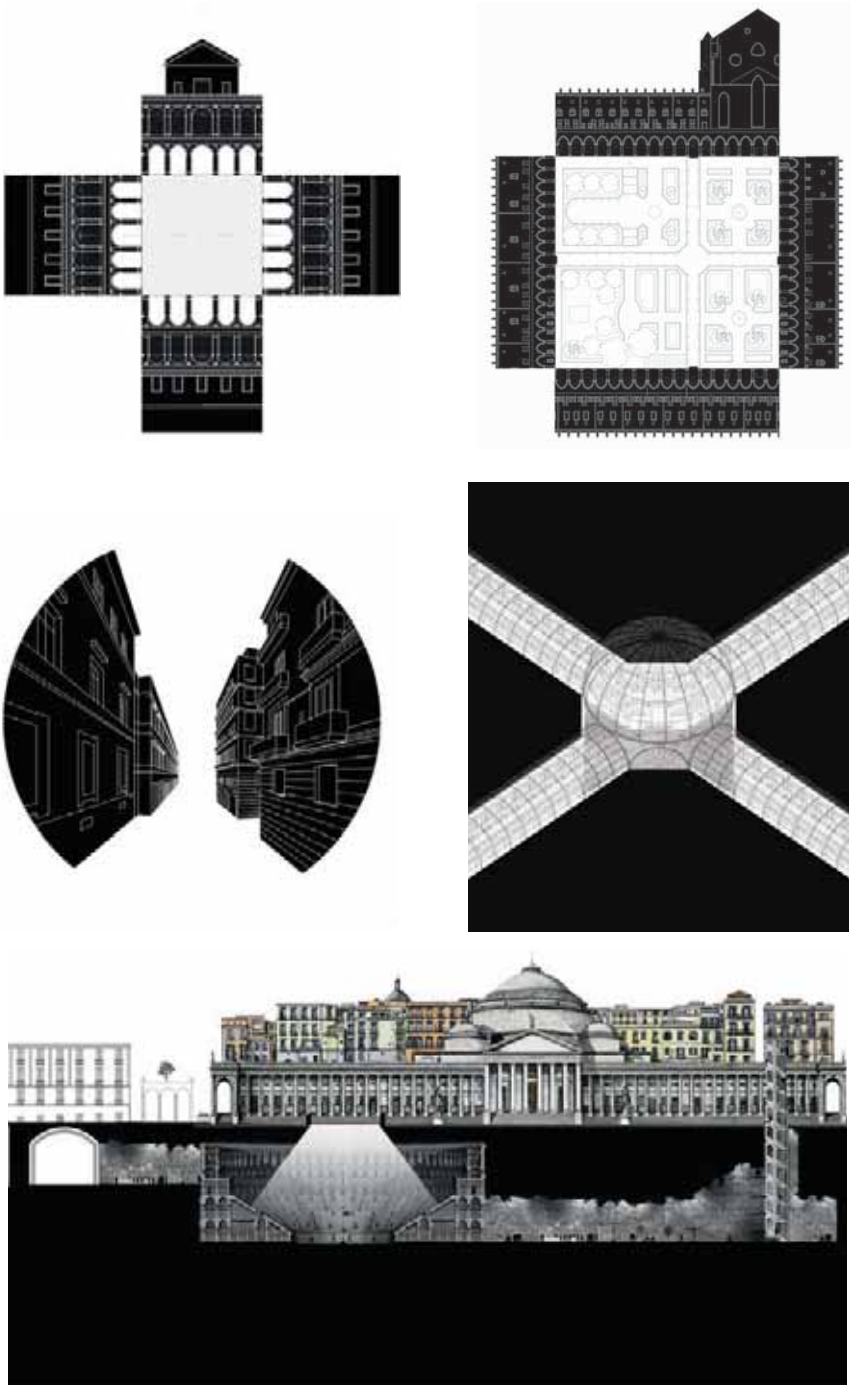
As always, each partner had the freedom to choose their field and subject of study. Thereafter, each professor took on a topic that seemed inspiring and developed the subject according to his or her own pedagogical methods. Little by little, however, the work has allowed the development of an interesting *research by design* or *project as research* that could question and nourish the point of view of local actors. The different project-vs-research crossings, drawn from the writings of B. Secchi & P. Viganò, and of R. Amirante, allowed the partners to develop interesting answers to various Neapolitan questions.

The goal of this Intensive Program has been to capture the qualities of this specific territory and respond to contemporary challenges in a poetic and original way. The workshop brought together students from planning, urbanism, architecture, architectural engineering and design from Northern and Southern Europe, to give tentative responses to local questions such as the articulation between the town and its waterfront, the future of agricultural or industrial territories, the enhancement of underground quarries, or the reinterpretation of specific types of edifice such as *case & ville*, *monasteri & palazzi*. The repercussions on the ecology and economy of the region, the habitat, the society and the cultural image of Naples are the design motivators. In order to work in this vein, students were encouraged to follow lectures given by experts from diverse disciplines.

As for each intensive workshop, we organized the format of the program as series of lectures given by professors and experts on different topics and project studios: geology, geotechnics & hydraulics, urban & architectural design, technology & specific seismic constructions, social & anthropological issues. These data fed directly into the group work in the studios and are outlined in the first part of this book. The city of Naples also suggested some fields of study for which architectural hypotheses could reveal an original perspective.

Projects in response to the questions raised by the city hall and local experts are illustrated in the second part. This multidisciplinary program brought together teams of 'specialist' students who did not know each other, so that each might learn about the contemporary reality of our practices. This multidisciplinary dimension, the contribution of local experts, blending theory and design studio practice yielded the specificity of this Neapolitan program.

We were fortunate to have been hosted by architectural schools from Federico II and the Università degli Studi della Campania Luigi Vanvitelli. Lectures took place at the Vanvitelli rectorat in a *palazzo* on via Costantinopoli while studios were hosted at the old cloister of the Department of Architecture on via Forno Vecchio, right on Spaccanapoli. Our Neapolitan partners made it possible for us to be totally immersed in this great context so that a work *in situ* was possible. The data from this inter-university research center helped to give the program a large part of its multidisciplinary nature. The help of local experts enabled us to focus our gaze as to the many facets of the territory: from the physical realities to the tradition and history of its narratives, from ambitions around the port to those of the ordinary actors: residents, students and fishermen, artisans and artists.



The kaleidoscopic result of the plural approaches from each university enables the reader to capture the portrait of Naples, from its historical background and resilience to its contemporary challenges and confrontations. Again, the proposals at multiple scales and the variety of suggested contemporary spaces evoke Naples's persistence in hosting Europe's historical richness in time, and its great diversity of people and uses in space.

The lessons of the Naples-*lab* from 2013 to 2018 are of different natures, both human and cultural. The outcomes are also from the scale of the edifice up to the landscape, but also in terms of shared pedagogies. Not only in the sense of the originality of the international workshop itself, but in the sense of sharing radical pedagogies from different professors and different studios.



- | | | | |
|---|--|----|------------------------------|
| 1 | via San Giuseppe dei Nudi | 9 | via Duomo |
| 2 | piazzetta Olivella | 10 | via Nuova Marina |
| 3 | vico II e vico III S. Maria A Cannello | 11 | Edificio piazza Cavour |
| 4 | piazza Montesanto | 12 | Supportico Lopez |
| 5 | via Forno Vecchio – largo Pignasecca | 13 | largo Banchi Nuovi |
| 6 | Scorziata | 14 | Edificio S. Maria della Fede |
| 7 | vico Maffei | 15 | piazza S. Giovanni in Porta |
| 8 | via Avellino a Tarsia | | |

Figure 1 : Naples Historical Center Available Sites Network

Challenges (R. V.)

Accepting the trial of coordinating the work of eight international university locations from Belgium, France, Italy, Lebanon, involving more than fifty teachers and four hundred students, almost three official languages, with biannual meetings over four years, required a remarkable dose of recklessness and trust in the unexpected, which was not betrayed.

Agreeing to join a working group of teachers who have been collaborating for more than ten years showed faith in the ease of interaction between designers, despite being strangers. Choosing common themes and working environments and different but interconnected options was hard work: the option of involving local administration, overwhelmed by emergencies, but always available to cooperate, rewarded the aspiration to confront with concrete problems. The acknowledgement of the Erasmus Intensive Programme grant was greatly encouraging for the first two editions of the workshops: their success then favoured the idea of continuing with self-financing.

But realising these achievements in Naples, also making two local universities work together, worried the Neapolitans more than the other partners. It was therefore decided to accept the challenges whilst choosing the most difficult theme the ancient capital still proposes: the sustainable regeneration of the city's historic centre. Wanting to overcome even scientific stereotypes of sites narration, each one of the teachers and experts revised the way of explaining the context, even with inductive and sensory methods. The shortness of time in the sites and stories forced to new sights, different rhythms and fast connections, sometimes unusual even for those who presented them.

With the cadence and the running of workshops and visits, the way of telling places changed. We experienced the effort of describing sites offering a more secular and lighter look (in the sense taught by Italo Calvino and Paul Valery), just to differently re-elaborate the contents. We proposed more sensitive discoveries and exploring, deducting scientific aspects as results of experiences. Meanwhile, it's up to the guests from abroad to say whether we and our city have changed.

The desire to present the complexity of the urban landscape, studying it as an ecosystem, has led to more side-by-side visions, even of very different disciplines, offered by experienced architects, engineers, designers, geologists and artists. This also allowed cultural short circuits, physical and perceptual surprises (underground Naples, ancient cemeteries, modern waterfronts, walking routes) in addition to the traditional monuments and historical palimpsest.

Nevertheless this diversity, wished and sometimes syncopated by time, has spontaneously created curiosity for the others' work method, whether by a fellow countryman or a foreign partner, in relation to analytical methods as environmental design. Contaminations, discovery of affinities, or profound division of interests have emerged, through the decoding gymnastics, the programmatic and instrumental discussion to deepen the themes.



Photographs of the workshop 2014 : 1. Lectures in rectorat SUN, 2. Group on steps of Castel Nuovo, 3. Studio in Federico II.

While the didactic method is explained in the following pages, presenting crossings and physical as methodological educational paths, it is useful to recall the margin of the work areas, chosen according to a multi-scale logic and also listening to the indications of the local Administration. These were :

- at the scale of the large landscape, the formalisation of urban projects linked with the blue and the green net that could reconcile Naples with its identity of city on a slope and on a waterfront, as well as reacting to vulnerability to environmental risk;
- at the neighbourhood level, the rehabilitation of particular blocks (*insulae*) and urban voids in the ancient city, allowing the control of development sprawls, while reinventing a contemporary urban mixed use around furniture and public space;
- at the scale of building, the conversion and eco-building design on post WWII dated structures, inappropriate or abandoned;
- at the economic level, the research on maintaining local micro economies and their artistic and cultural specificities in mix with the tourism industry booming, thus reacting to the increase of inequalities in social and economical development.

These work areas focused on four main themes:

- 1 - the rehabilitation of urban blocks in the historical centre of Naples, in relation to its ecology and still present historical traces;
- 2 - the conversion of post-war buildings obsolete and doomed to demolition;
- 3 - the valorisation of the central district as a place of economical and cultural characteristics of Naples;
- 4 - the links of the city centre with environmental, green and hydraulic qualities.

The City Administration was interested in projects that develop integrated holistic views which could simultaneously resolve the physical, cultural and liveability of the sites being examined. Contributions were also required in the study of the design and management process of this recovery, to ensure maintenance of assets and contexts. The key issue for the areas under consideration is the re-utilisation of unused containers, integrating buildings with surrounding environments, enhancing their cultural and asset as well as potential value. Reflections on climate and energy concern both bioclimatic attentions in the recovery of each building and the design of the open spaces of the city, based on the physical characteristics present or planned in sites, emphasizing the importance in the Neapolitan urban landscape. Another key concept is the enhancement of cultural assets with attention on the proposal of alternative compatible uses, including innovative management aspects to ensure maintenance of the well-being and the context recovered. Common term for reuse and valorisation is that of conversion to other uses, at the same time creating virtuous phenomena of vitalization, productivity and territorial control.

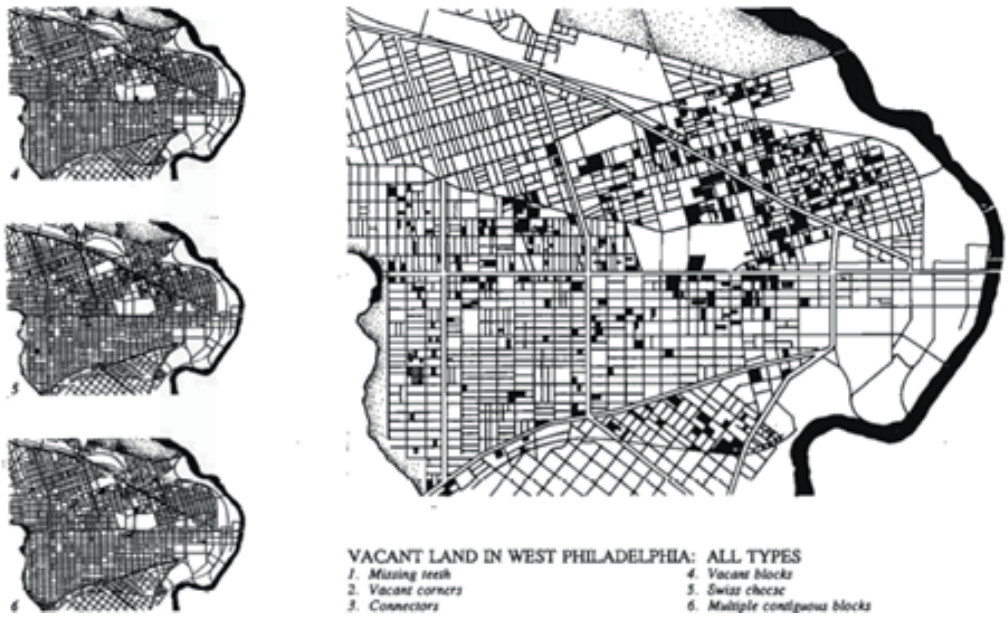


Figure 2 : "Vacant Land in West Philadelphia: All Types", A. Spim, op.cit., pag 7

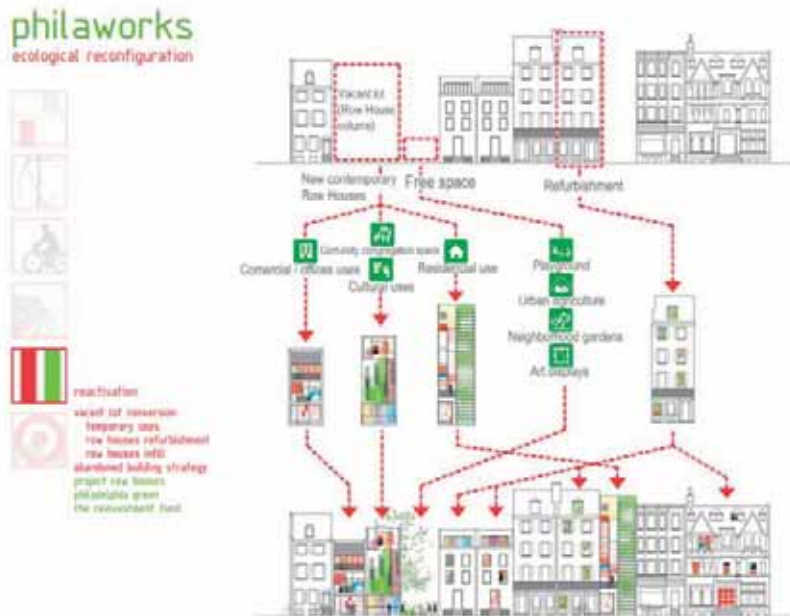


Figure 3 : ecosistema urbano, Philaworks, Diagrams for environmental recovery of Philadelphia (PE, US) , 2006-8 (courtesy ecosistema urbano)

These themes can be dealt with in several project actions applicable to the centre of Naples: 1. Complex Urban Units redevelopment, 2. Redevelopment of Urban empty spaces, 3. Redevelopment of Open Space, and 4. A Settlement Plan close to the centre (as required by European partners). The comprehension of all the presented aspects helps approach the themes by the City Administration and Naples Universities; there are cross topics as reuse of buildings, climate and energy and heritage valorisation. On the other side we can consider the different scales of sites and projects from the insulae to the vacant lots, the open spaces and the urban design scale. Aspects as vegetation, monumental building restoration, archaeological ruin preservation, historical heritage management can be specific ways to answer each project.

According to the concept of the green and blue network urban infrastructures, the proposed spots for design exercises (cfr. Fig. 1) could be the starting point for a virtuous network of requalification, with common aspects as ecological design, meant as poles for distribution of beneficial impacts on the surrounding areas, to be contaminated by positive solutions and trends. This recovery interconnects open spaces as well as new or refurbished buildings, reducing vulnerability to environmental risks by upgrading the resilience of the town. Examples are studies done on Philadelphia by Ann Spirn, who spoke of «island of renewal»¹ (cfr. Fig. 2), but also the Bohigas' strategy for Barcelona and the urban acupuncture approach, like Spanish Ecosistema Urbano project "Philaworks" for Philadelphia (2006-8)² (cfr. Fig. 3). Inoculating germs of positive rehabilitation in urban voids that become strategic points, proposing transitory and light architectures, immaterial networks and participative actions, bioclimatic approaches and sustainable management of the cycle of natural resources present in the building texture, the suggestion is to positively contaminate with good habits of usage and redesign, while at the same time enhancing the extraordinary resources of immense, immeasurable, but still badly managed cultural heritage, reinforcing each new project with networks of mutual correspondence.

It is interesting to observe how everyone tries to deal with studies, comparisons and redesigns, each one with a method and a weapon to understand with personal explanations what Naples is. Everyone chose a study partner, the walls, the cavities, the coastline, the stairs and the palaces, to interpret the places. The city allows itself to readings, perceptions, redesigns and discoveries, although it is found out that it does not change anyway, with the irremovability of an overlay complex structure.

Environmental design is interpreting the ecology of the underground (University of Gent), treating the cavities expanding the current uses of the collective spaces, declining the relationship with geology, culture, literature and genius loci, proposing a park where the difference in height the landscape creates scenographic effects and reserves of water, seeking the relationship with the ecosystem even in a stratified urban context. Decomposition methods, reading of elements, awareness of the parts and then of the relations with the

1.A. Spirn, *Vacant Land, A resource for reshaping urban neighborhoods*, The West Philadelphia Landscape Plan, Department of Landscape Architecture and Regional Planning, University of Pennsylvania, 1991.

2.Cfr. *Ecosistema Urbano, "Philaworks Urban Acupuncture, 2006-8"* in R. Valente, *Environmental Design*, Liguori editore, Napoli 2010, pp. 54-59.



Visits of Naples guided by A. Giannetti, photographs : A. C. Menditto and Ch. Saroufim

whole, grids of components to know the dizzying multiplicity (UCLouvain LOCI), temporal maps to understand the stratifications (ALBA), the environmental design is declined also in the study of courts, open stairs, endogenous materials, the inside-outside relationship, the extroflexion and introflexion of contexts, alongside an amazed study of the physical and social characteristics of the city.

Projects are always far from achievable, clashing with a reality too complex and stratified to soon develop into a canonical project. But it is worth the successful experiment to solicit cultural comparisons, activate mental connections, accepting the spell that nothing is deposited except in these pages and in our sensibilities. Still worth the great effort.



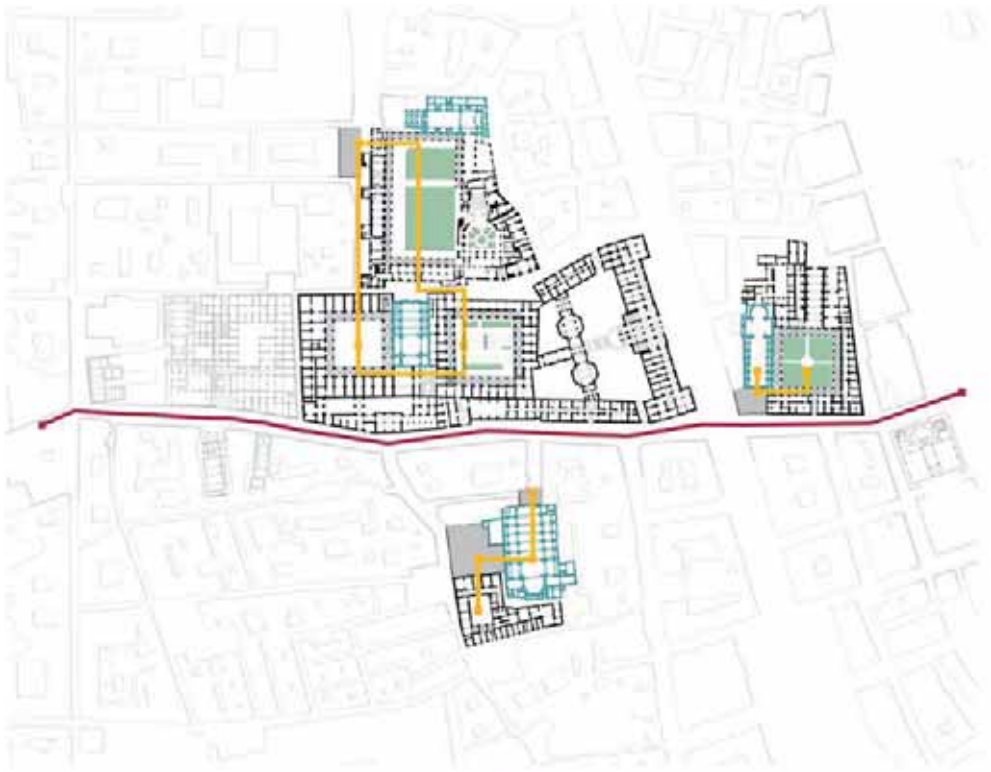
Sustainability and resilience of historical centers (V. D'A.)

The main themes of the workshops concerned the urban redevelopment in the historic center of Naples, focusing on the environmental and urban scale, on neighborhood and buildings, in terms of urban space redevelopment, considering settlement aspects and environmental risks. Lots and urban voids were taken into consideration for the control of widespread sustainable development, also by proposing equipped open spaces, with innovative systems and/or services or the conversion and ecodesign of unused or high degraded buildings. Each time students faced topics related to the ability to connect, to link (2015, Connecting worlds. Sustainable Building the Strengths of Mediterranean), or issues related to urban regeneration in relation to Mediterranean historical city (2016, Urban regeneration and environmental design in the Mediterranean town) and to the urban environment (2017, Naples: environment and historical town).

Projects in Historical Centers are traditionally raised to the safeguarding of monumental, historical and cultural values expressed in a physical way - settlement principles, building typologies, morphologies, construction techniques - and in an intangible way with reference to material culture or collective and individual behaviors. If conservation actions deal with the philological safeguard of the built environment, the redevelopment ones move on the delicate balance between the introduction of new qualities and performances and the preservation of pre-existences' values. Within this field of possibilities, the need for the introduction of contemporary elements within the historical city brings back the themes of innovation, regeneration and enhancement to deal with the issues of compatibility, reversibility and lightness of projects. The design experiments matured within the various editions of the workshop were elaborated in a scenario of variability between the previously recalled components, partly recording contradictions, partly elements of innovation and partly of suggestion of "atmospheres" of historical places. Urban voids' theme is open by its nature to the dialogue between built and private, collective and public spaces, seen in their different qualities of defined, unfinished or residual and abandoned spaces. The relationship between architecture of places, refurbishment actions and behavioral or anthropological components represents the underlying aspect that links the workshop experiences to the concepts of "updated" sustainability in which environmental, social and economic elements interact with cultural components of architecture. In fact, if some projects are brilliant but carrying less controlled transformations, others have moved on a line of research more focused to impacts and therefore better addressed to sustainability issues.

The relationship between sustainability and historical centers has in its cultural baggage the expression of several positions and experiences particularly focused on the sensitivity of these contexts and the fact that they frequently represent unique and unrepeatable goods. This is particularly borne out for the Ancient Center of Naples that keeping almost unchanged its original configuration characterized by the ancient Greek road system is one of the main UNESCO World Heritage sites.

For the historical centers the current debate proposes to look at sustainability on the one hand in relation to its origin linked to the economic and ecological thinking, on the other hand to the entry into the debate of the concept of resilience. In fact, if sustainability has become an abstract notion, plastic - as defined by Serge Latouche - and substantially depleted,



The empty spaces of the Historic Center of Naples as a complex system of relationships for sustainability and urban resilience (edited by G. Zarrillo).

resilience is a scientific and empowering concept that imposes for every architectural intervention the comparison with the intrinsic capacity of systems to restore their state after the action of disturbing effects, and with the presence of objective limits with which to compare the actions undertaken, reducing the perturbing effects of human activities on nature. Since historical centers present the fragile situations typical of sensitive contexts, even so more, resilience requires reviewing the design approaches, standard actions and behaviors as they are conventionally implemented.

The main objectives of projects based on the recognition of cultural values and on the research for sustainability conditions, which feed the urban resilience values of both buildings and open spaces, concern the basic and characterizing elements of urban areas, the priority actions for their compatible regeneration and the fulfillment of requirements that guarantee reduced environmental impact. Places identity is based on the relevance of pre-existences' values and of the elements that characterize the genius loci but which have the ability to relate to practical and cultural needs of contemporary world. The interpretation of urban themes, in contexts dense with history and stratification as in the case of the Ancient Center of Naples, is a determining factor for highlighting existing relationships within the road layouts or between them and the specialist or residential buildings, but also to create new relationships within urban spaces and built-up fabrics.

A specific example is related to the enhancement of axiality - in the case of the decumani or the main cardines - or transversely where it is necessary to highlight both the relationship between specialist buildings or notable urban locations and the permeability of spaces on the horizontal plane characteristic of the ippodameo urban plan.

More resilient cities require to be declined not only through generic concepts but with identifiable, measurable and reliable aspects, able to implement in non-flexible contexts such as historical centers limited interventions, not to alter the cultural value expressed by them, in extremely consolidated context where improvement measures assume particularly small dimensions, with smart climate actions and solutions, introjecting synergistic processes between mitigation and adaptation actions in planning and governance activities. Resilient urban systems offer effective responses in terms of amount of perturbation that the system can absorb while remaining stable, with self-organizing capacities and abilities to learn and adapt. Sustainable development in terms of prosperity with low impacts of social, economic and ecological systems is clearly linked to the resilience of urban systems. Because of high impacts, urban systems are not measured on the ability to adapt to changes while remaining within certain limits of their own stability, but on the "ability to seize the opportunities that a disruption may entail, in order to create the conditions for a combination of existing structures, the regeneration of systems and the rise of new trajectories"³. Some of the projects presented in the various editions of the Workshop emphasize these principles with greater sensitivity, both on the physical and on the social scale, in the awareness of acting through architecture on the conditions of inclusion and social participation. This design approach can represent one of the winning strategies to improve the conditions of living in historic centers, relying on the integrated response capabilities of physical spaces reorganized in their structures and socio-economic components sustained in their dynamism.

³Pelizzaro P., Mezzi P. (2016), *La città resiliente. Strategie e azioni di resilienza urbana in Italia e nel mondo*, Milano.



Figure 1 : Palazzo San Felice, Napoli, Maria Rosaria Vado photography.

Settlement system, environmental conditions and cultural values of the ancient city

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The city of Naples expresses a high system complexity, amplified today by the transition from a limited urban dimension to a wider metropolitan extension. The newly established Metropolitan City, on the one hand moving the boundary of the conurbation to the territorial scale, on the other hand, rediscovers how much the sense of belonging to neighborhoods, contexts, and places can still exist. Through a sort of “reverse shot”, the seamlessly development of the city to a trans-national scalar dimension fosters the sense of local communities rooted in neighborhoods and identity contexts. Naples was defined by Walter Benjamin as a porous city horizontally and vertically. In its physical structures and life continuously interact. What is definitive and characterized suffers a sort of refusal. «Everywhere the living space is preserved, capable of hosting new, unforeseen constellations. The definitive, the characterized are rejected», says Benjamin. Naples is a complex city, full of contradictions. But it is a city that fascinates, with its history and stratification, but also with the vitality of culture. So, we can learn from Naples. Naples is a complex system and addressing urban issues in a historic center that is one of the largest in Europe can become the benchmark for methodologies which integrate urban, environmental, social and economic data in an innovative way.

Among the several areas in which the historical parts of the city are recognized, the Old Center - which coincides with the ancient Greek-Roman city of Neapolis - represents the starting point with which every action of knowledge and transformation of the city has historically been compared. The founding act of Neapolis with respect to the first settlement of Palepoli, the ancient city, sees the implementation of the metric space principle derived from Hippodamus, applied in close relation with the environmental components and the elements of nature. The grid-shaped pattern that ruled Greek cities like Mileto or Priene is singularly applied to Neapolis, generating long urban blocks of about 190m x 36m. The urban grid is repeated and widespread in the territory it fills, and is therefore a-focal, isotropic and characterized by an extended synchronicity. Dated the first half of the V century b.C., the urban layout of the Ancient Center of Naples develops according to three plateiai (decumans in Roman times) with East-West orientation, arranged on the three natural terraces of the tufaceous bench sloping from North to South. The sequence of orthogonal stenopoi follows the North-South orientation. With the Roman conquest of the IV and III centuries

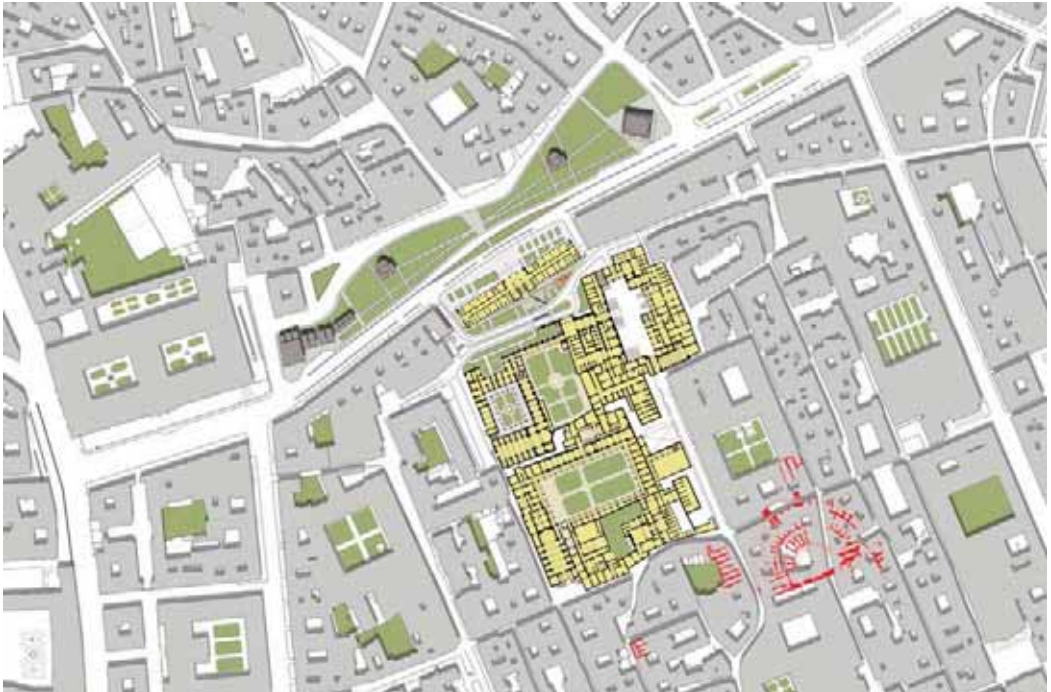


Figure 2 : Integrated use of the open spaces in Caponapoli area.

a.C. the Greek pattern undergoes significant insertions of monumental buildings and many infrastructural works, including those related to water supply with a great aqueduct of the Claudia era.

In the ancient city, the close relationship between settlement principles, building types, paths and construction techniques is consistently related to microclimatic conditions, orientation, radiation, and natural ventilation. The appropriate environmental conditions are confirmed by the orientation of main axes, the decumans, at an angle of about -23° to the West-East direction. Along with the size and constitution of the blocks, decumans explain the relation at the base of the city urban project. Environmental design elements are defined to efficiently exploit environmental flows, promote winter sunlight and mitigate the summer one. Adequacy to the environmental context is determined by the iso-orientation of blocks and buildings, set on a size of approximately $36\text{ m} \times 18\text{ m}$, as basic element of the planned parceling on which the elementary domus were built. The sequence of the buildings follows, mainly, a south-east exposure. The relationship between settlement system, geomorphological context, environment and climate expresses a great value of material culture aimed at developing forms of living adaptation to microclimatic conditions. Shading systems and openings allowed the control of natural ventilation. Architectural elements, such as loggias or arcades, functioned as climatic moderators besides representational and functional-spatial character. In the reconstructive hypotheses of the ancient Greek-Roman domus, the climatic and mediation spaces between interior and exterior (atrium and hortus conclusus or patio) were provided with specific sequences of rooms and views with a favorable orientation.

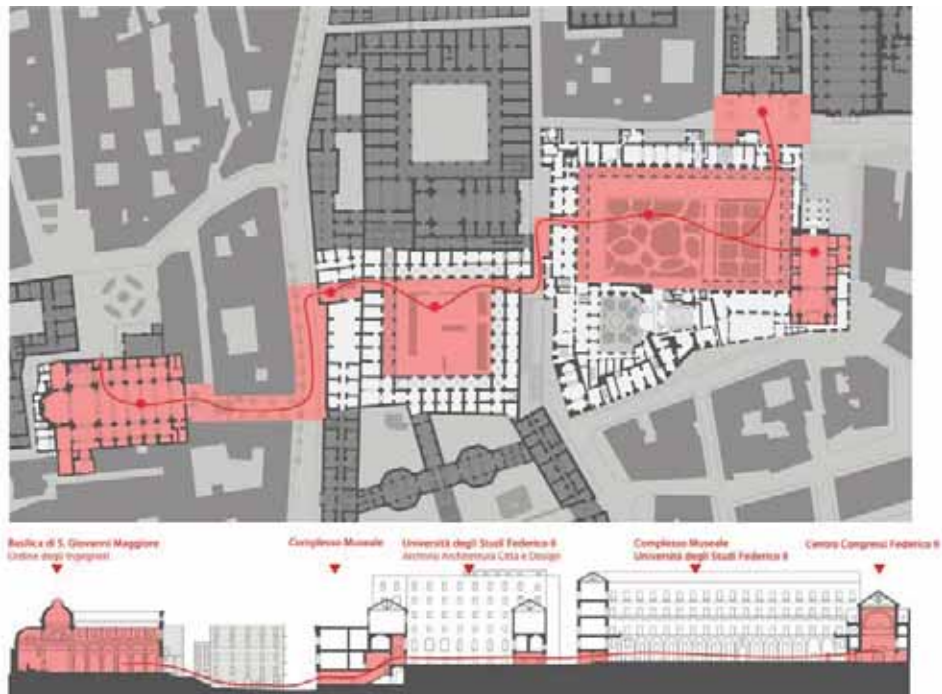


Figure 3 : Integrated use of the open spaces in via Mezzocannone area.

Starting from the assumption of the cultural value of the settlement system of the voids of the Ancient Center, the knowledge of material and immaterial reality is crucial to understand the potential of communication and the visibility of its fundamental characters. Historical stratifications and cultural values have overlapped over millennia and are linked to the ways of living, everyday activities, the sense of community that have fed original and sometimes unique lives of those spaces.

Reading the interaction between the original urban layout and the late 1800s interventions - the widenings of some North-South axes like via Mezzocannone and Via Duomo or the "ring" of via Rosaroll beyond the Aragonese walls - returns a more complex system that refers to the cornerstone of the decumans and the convergent road system with primary buildings such as Castel Capuano, on systems of roads' widenings and squares, like on the axis of Via dei Tribunali, where is relevant the barycentric role of Piazza San Gaetano, the ancient Roman Forum.

The cultural memory of the settlement of the Ancient Center still conveys its intense original traces, heritage of the housing, political, social and productive structures of the various periods. The entire settlement principle of the ancient city is a great unique cultural heritage, in which material values - the architectural and environmental physical components - are the support of the intangible ones, namely the cultural components, collective abilities, know how, relational values. They are complemented by the presence of forms of local microeconomics and unconventional forms of market. Support modes for endogenous development models based on unique forms of circular economy and knowledge, on civil economy, on cultural

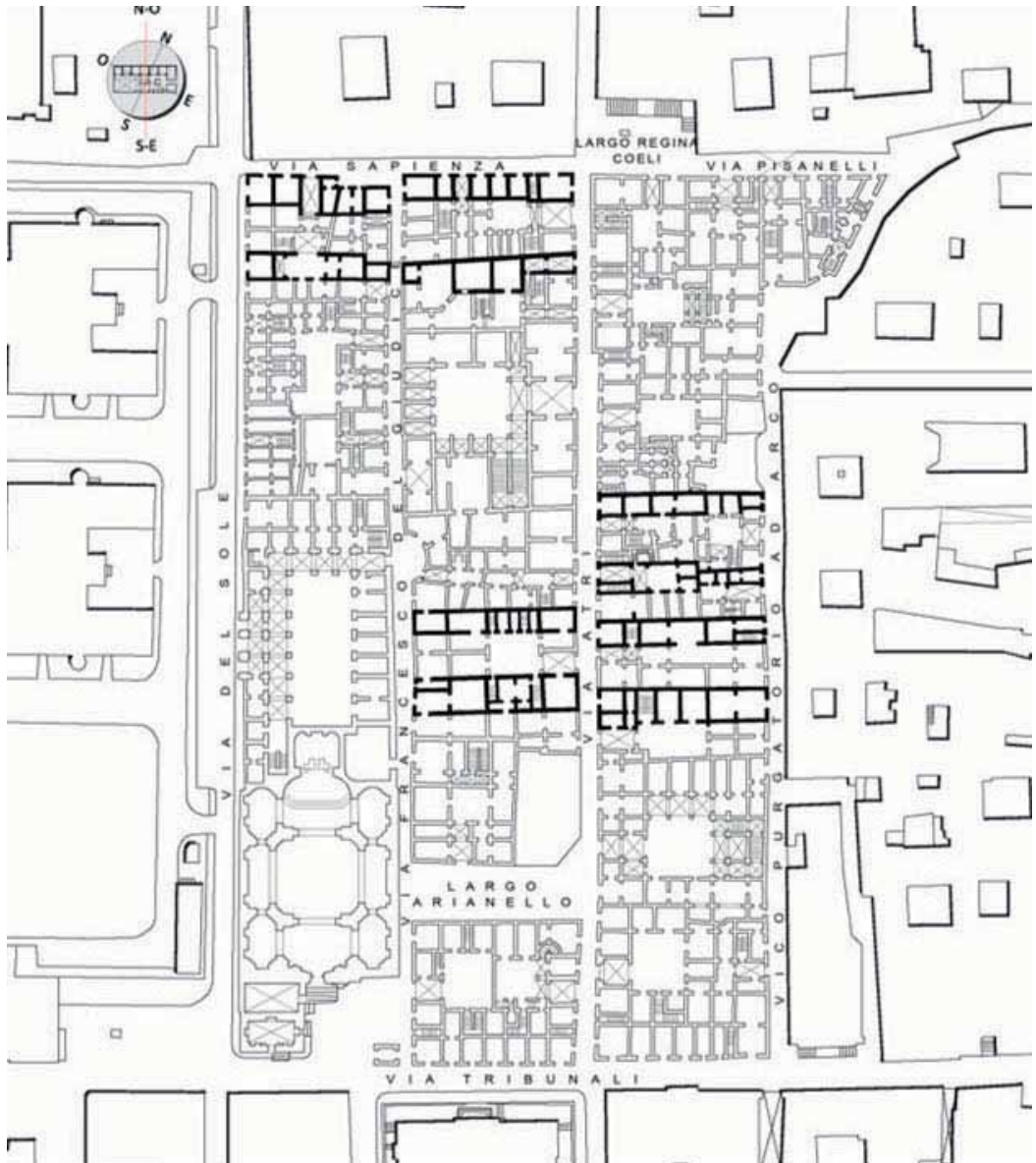


Figure 4 : Hypothesis of occupation of the settlement lot of the iso-oriented domus in the ancient city (edited by M. Coscarella) .

and environmental heritage preservation are also implemented.

A particular value is in the permanence of the public and private voids - decumans, cardines, squares, widenings, but also courts, courtyards, cavedium - through which the city reveals its porosity, its intricate permeability, its uninterrupted sequence of lights and shadows, dialogues between the ground and the underground, the spaces of relationship, rest and work. Empty space is measured, conformed and arranged to be the scenario of urban behaviors.

Many empty spaces show symbolic values and carry out specific activities or functions. In this way, the void, resulting from constructed parts juxtaposition, is not only a residual space for the buildings, but it is a complex system with a distinct autonomy as well as a complex relationship with the built. Streets, courtyards, open staircases, large covered public or collective spaces such as churches, passages couverts, or galleries can be considered external and internal voids. The street and other open spaces constitute a sequence in which the combination of the void guarantees the type of social and productive relationships that have arisen over time. The court is considered the central place and the empty space par excellence. In it there is the main overlooking of the buildings and the principal source of sun and air, which are the natural elements able to generate symbolic values but also concrete lighting and ventilation conditions.

With their porosity and structure, empty spaces favor specific social relationships that elsewhere are not repeatable at the same level of identity.

Empty spaces, that characterize the space of the Ancient Center of Naples, recall the concept expressed by Eduardo Vittoria – professor at the Faculty of Architecture of Naples in the 1970s. He said that habitat empty space is made of things, names, concepts and images, intersecting and showing themselves in real, different and contradictory processes, backed by the creative sense of the community.

The Ancient Center has cultural and settling values, it intercepts the anthropological dimension and the material culture, preserving intact, despite many radical transformations, a *longue duree*, a persistence that transcends concrete values to condense itself in purely symbolic establishes.

The city establishes its stability in the process of transmigration, through the various periods, of the paths, the courtyards, the empty spaces as a constant permanence which survives the transformations and returns a particular way of life and a non-replicable existential condition. In last decades, interventions in the Historic Center of Naples have recorded some decisive steps in order to increase its quality in terms of living and services. The first step is the realization of subway line 1, which connects the hilly area and Naples railway station, lining the edge of the ancient part of the city with important stations, such as the National Archaeological Museum, Piazza Dante, via Toledo, City Hall square and corso Umberto. The infrastructural upgrade has allowed better ways of touristic and environmental use of central areas. The UNESCO Great Project for the requalification of buildings and streets in the oldest part of the city may be another opportunity to revive the city. In fact, in 1995, UNESCO delimits the area comprehending buildings and spaces which characterize “different epochs and give the site an unmatched universal value, which has had a profound influence on Europe and beyond its boundaries”. Before the intervention established in the Strategic Orientation Document for the UNESCO Great Project in 2013, there were two specific plan provisions. The first concerns the so-called 1996 Safeguard Variant (Variant Proposal for the Historic Center),



Figure 5 : Metro Line 1. University and Toledo station.

the second the 2004 Regulatory Plan. The Regulatory Plan has absorbed the point of view that define historicized the urban fabrics when they have, at the building scale, obvious rules and typological information, which means that the city parts resulting from an uncontrolled growth and those in which can be recognized a loss of urban order are excluded. These tools have been the backdrop of the urban requalification planned with the Great Project.

In this context, filled with cultural and historical values and intervention programs on which is based a strong re-launch of the cultural tourism, it is important to underline the City Administration interest into projects developing an olistic integrated visions, in order to solve at the same time, the physical and cultural recovery of the examined places. Design ideas and management processes are also requested to ensure the use of the recovered heritage. Another key-topic is the cultural heritage valorisation with attention to new compatibles uses and management solutions. The insulae of the ancient core have specific features that might inspire new functional proposals. For both reuse and valorisation, the appropriate conversion expresses the aim to guarantee the revitalisation, productivity and territory defence.

Apart from bioclimatic recovery of buildings, considerations on climate and energy must be done also in designing open spaces, analysing physical and use characteristics of places and underlying their importance in the neapolitan townscape and their meaning for inhabitants and visitors.

The urban regeneration themes are linked to the general principles, focused on urban culture, identity and recognizability, fixed by the Agenda 2030 for the Sustainable Development for the European City. Agenda 2030 city targets focus on enhancing efforts to protect and safeguard the cultural heritage by implementing integrated policies and plans for inclusion and resource



Figure 6 : on the left, Naples underground; on the right, buildings with a court plan, Palazzo Costantino.

efficiency, but also regarding issues such as mitigation and adaptation to climate change. From this point of view, themes, which belongs to disciplines such as environmental design, can hold together aspects about the knowledge of urban settlements and socio-cultural values, linking them with intervention practices coherently with the urban environment. Among the urban regeneration possible interventions in the ancient part of the city of Naples, the understanding of typical features of places becomes relevant, according with a research line typical of the Italian and European architecture in which the interest is dedicated to the search of a balance between historical permanence and future development. This is even more true considering the cultural heritage and the environmental quality of urban sites, as there is a close parallel between conservation and transformation in the historic city.

Transformations require reference to design principles such as relations, hierarchy and comparison with the context and with the internal rules of the project. If pre-existences are included in the transformation of the built environment, it means that the transformation elements must necessarily coexist with those of conservation. This relationship should always be balanced, but in many cases, it is unfortunately difficult to distinguish what needs to be safeguarded, in a preservation of the existing point of view, from what should or can be transformed. Finding context compatibility requires accurate analysis of urban settlement principles as well as of techniques and materials used in local constructive tradition. Governance support in the urban and environmental regeneration processes, meta-project choices and intervention proposals, based on the indicated strategies, should emphasize a strong dialogue with landscape and local context, by implementing a mature comparison that leads to an open and integrated design with the environment.



Naples: tales of a city

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For a long time, we listened to the words of guides and travellers, especially those going around the peninsula on the *Grand Tour* itineraries, and we talked about Naples identifying it with the exceptional features of the richness of its landscape, tracing it back to the place of an unbridled naturality to be interpreted as synonymous with a defect of art, that is, of any rational human work, so as to allow them to take on an unlimited diversity and no hope of redemption.

We have given credit to an “extraordinary” diversity, which was linked to it during the nineteenth century by virtue of which the city was opposed to any “beautiful order” both as an expression of an untamed, primordial nature, and as a messy and dangerous *silva*, forest and urban jungle, an expression of the dark disorder of a wild and strong nature, perpetually besieging the luminous and civilised dimension of the rest of the peninsula. A Baroque city, even earlier than the Baroque period, more Catholic than Rome itself, indomitable and unpredictable, an icon of the overturning of the European cultural coordinates that had made the trip to Naples the journey to the South and «such a geographical direction, from a Northern Protestant perspective, is also a culturally regressive symbolic direction» [1], so that the anti-functional dimensions, from the vastness of the spaces to the number of churches and chapels, appeared to be excessive, ostentatious waste, irrationality of uninhabitable dwellings, impassable roads for the crowd and traffic, of squares limited by the high dark walls of piperino, dominated by false signs, surprises, dangers, like in a desert or jungle.

After all, the porosity found by Walter Benjamin and Asia Lacis in the essay of 1925 was nothing more than «its indolence, formlessness, and almost organic, pre-civilized nature. More recently, Victor Burgin, for example, has taken these tropes one step further, emphasizing the Oedipal, pre-civilized, even pre-adult and preconscious nature of the Neapolitan character and culture: a peculiar expression of the urban theory of the bodily, organic nature of urban experience well summarized elsewhere by Richard Sennett» [2]. An anti-urban city, unsustainable oxymoron, but of great charm. Let's add, then, that if we accept the idea that a city is first and foremost a market «où l'on dépose sa pensée pour la

Figure 1 : *The Last Days of Pompeii*. Karl Pavlovic Brjulov, 1827-33

rendre chargée d'objets considérables comme de léger butin» [3] in which the passer-by generally does not expect to receive anything “spécial”, we must admit that Naples has always been the exact opposite: unwanted and not even imagined, much, too much of that “spécial” was and is spilt upon the “citizens” and “foreigners”, to use the same protagonists of the dialogue about the seventeenth-century city written by Giulio Cesare Capaccio (1552-1634), one of the most famous and determinant in building such a “non-architectural” image, although resentful fury, in the name of high principles and personal political disappointments, had already been unleashed with Petrarch.

The black legend with the necessary seasoning of blood and depravity had in his letters also touched Roberto the Wise to lump up on the queens that had succeeded him so that «Petrarch's influence was inescapable: every Italian humanist in his wake, in fact every Western intellectual, was moulded after his exemplar. His works have become the fundamental and rarely interrogated texts in this tradition» [4].



Figure 2 : *The landscape of Pozzuoli with Don Pedro's villa and those of the Neapolitan nobles faithful to him. Scattered in the landscape of Puteolian antiquities.* (D. Barra, 1630s Naples, formerly collection of Della Vecchia).

The proof was also in the distance that the granddaughter of the sovereign, Giovanna I, once ascended the throne, had placed between the “cité”, Castel Nuovo, and Naples because «Distance and closeness to the old city were values as mutable as the political climate» [5], so that Alfonso the Magnanimous in the reconstruction of Castel Nuovo had privileged such residence, strategically by the sea, but decentralized with respect to those on the land and therefore to the kingdom that stretched beyond the capital, close to the world of trades and far from the ancient heart of the city «There was an implicit threat of war against the political and economic assets of a realm made up of grand principalities and of inland fiefdoms that Alfonso had little to do with» [6] and also the entrance with the magnificent “old-fashioned” triumphal arch «overlooked a space at the limits of the urban fabric» towards Chiaia and Pozzuoli, towards Baia and those vestiges «that, according to the eminent judgement of Flavio Biondo, had been the only place able to compete with Rome in the grandiosity and beauty of its buildings» [7].

The castle had two faces, one that spoke the same “Gothic” language as the Angevin City to which it faced and one looking at Baia and Rome which showed the mysterious and refined

Classicism, understood only by the ruler and his humanist court. So that the triumphal Arch of Alfonso, always considered the closest point of contact with the Italian Renaissance culture and for a long time its maximum and sole Neapolitan expression, corresponded to the flaunted refusal of shared communication and popular codes, enormously contributing to the poor attachment manifested by the Neapolitan to the House of Aragon and its supporters. An instinctively Gothic world more than Baroque: if both are used in an alternative way to classical and rational then the hypothesis can work, supported by the *long durée* of the black legend, after the tormented Aragon pause, incarnated with more horror and vigour by the expression “Spanish Viceroyalty”, baroque in the morally and ethically negative sense attributed to it by historian and philosopher Benedetto Croce (1866-1952), and the utter ignorance of a people always governed by foreign powers. Even before the nineteenth-century, nationalist rages obfuscated the strong identification between the nobility of the regent and the House of Habsburg, Pietro Summonte (1463-1526) had already admitted the fracture in the history of the kingdom represented by foreign domination «and it was this conflict between continuous local tradition and abrupt changes brought on by foreign influences that preoccupied his later writing» [8].

The Viceroys, however, starting with Don Pedro de Toledo (1482-1553), who reigned from 1532 to 1552, had preferred the noble and ancient Dicearchia, Pozzuoli, to the nearer beach of Chiaia, chosen by the families of ancient lineage and hostile to the Spanish centralism, escaping not only Castel Capuano, the old Norman Royal residence transformed by Don Pedro into courthouse, too far from the sea, but also the Castel Nuovo, on the extreme edge of which, in direction of the - after centuries - reopened via Domiziana towards Pozzuoli and Rome, had risen the villa Toletana, which had been embedded until the nineteenth century as Palazzo Vecchio in the incomplete palace of the Viceroys, now transformed into the palace of the long-awaited national monarchy.

The overturning supported by the Viceroy had been radical: it was no longer as Giovanni Pontano (1429-1503) had written in 1493 in *De Splendore* “from light to darkness” coming out of the bright city to reach the dark surrounding countryside, abandoning the refined style of the metropolis of the Kingdom tended to the rigour of the Ancient, «Spanish peace had turned the connection by making the terribly modern Viceroy metropolis the place to flee towards the surrounding Arcadia» [9]. If Pozzuoli could not be evaluated by the treasury «because it has no price» and «can only belong to the king of Naples» [10], or his deputies, as had been regularly verified by the Horti Toletani (Fig. 2), the beach of Chiaia, sparkling and worldly, dared compete with the *amoenitas* of the ancient Baia and the already mentioned Capaccio had opposed the elegance of the villas and palaces outside the walls, which he had described using the Latin language, thus addressing to the international public eye, to the lack of architectural quality of those within the walls, abruptly cited in the vulgar language in which the *Forastiero* had been published in the burdensome atmosphere of 1634. Returning after the long exile, he had flagged them as loutish – certainly not imagining that his judgement would veil the eyes of post-unity scholars - in spite of the façades and their four or five floor heights that impressed the visitors, but not him, refined intellectual, who to this vulgar exhibition of technical and constructive abilities preferred the chromatic contrast between the dark serene stone and the citrus gardens that had «summer and winter waves,

even though set in busy places, are for the vegetables joyful accompanied by beautiful fountains» [11], once again saved by the beauty of the town's nature.

Of course, the "site", which by the sea appeared «in the shape of a noble theatre» [12], had always been recognized by the ancient descriptors as having a primary role in defining the city identity, indeed the image of Naples *Paradisus Italiae* had been coined by Stephanus Winandus Pighius (1520-1604), the Dutch humanist who, in Bruxelles, had been a librarian for Cardinal Antoine Perrenot de Granvelle (1517-1586), Viceroy of Naples, when in 1575 he had arrived in the city for the then canonical deviation of the *Iter Neapolitanum* in the course of the *Grand Tour* organized for the eldest son of the Duke of Kleve, William (1516-1592), to whom he would dedicate his travel book *Hercules Prodicus* published in Antwerp in 1587. Such definition was literally taken up by Franciscus Schott (1548-1622) in the *Itinerarium Italiae rerumque romanorum libris tres*, edited in 1599 in Antwerp, the most read, copied and translated guide of the seventeenth century, representing a sort of variation of the description made of it half a century earlier by Leandro Alberti (1479-1552), the great Dominican historian, who had defined the city and its surroundings a mosaic of «earthly paradises» [13], (Fig. 3).

Tales, even enthusiastic like that of Alberti who could not separate the beauty of Nature from human works, had been elaborated almost at the same time as the scheme built by Giorgio Vasari in his *Vite*, after being in Naples to transform the Gothic interior of the church of the monastery of Monteoliveto in the modern way. The Angevin black legend got back into game: once reached the peak under Roberto d'Angiò, thanks to the arrival of Giotto, for the city had begun the usual moral and therefore artistic and cultural decline that only the presence of the Tuscan and Umbrian artists had been able to stop, without, however, solving the most serious and delicate aspect of the whole event, the physiological lack of local production worthy of interest, whose rude architectural quality was but a reflection, albeit evident.

So it is clear how his look was attentive only to modern style, failing to grasp what in the eyes of a humanist like Pighius was evident: the close bond with the classical world. The royal landscape seemed to have the aesthetic dimension of the *locus amoenus*, joining utility and beauty, taking on the traits of the ideal one. The city had embraced the traits that had belonged to Baia, to the place whose *amoenitas* was lost in the very origin of a beauty that from the times of Rome left restless and troubled. *Sinus Baiarum* was a "crater of delights" around which a topical tradition of perdition and temptation had been built.

Baia, the anti-Rome, the land of the *otium imbellis* and of the *delicata negotia*, «too beautiful to represent the harmony of Paradise before sin, or the aftermath of chaos, still in that moment of apparent and deceptive equilibrium in which the beauty of Nature shone in all its perilous fullness for the last time [...] Baia as a threatening example of what would have been repeated at every encounter between the "place of amenity" and the implacable stirring up of new times» [14], corruption, speculation, vice, *caementum*, which had allowed the conquest of the sea with the construction of palaces, villas, swimming pools. Elements that are still evident of the formal and typological diversity with the buildings in which the *humanitas* of the

Roman man were exalted, replicating the contrast between Baia, the *tiny Rome*, Ciceronian, corrupt and corrupting, and the *Urbe* with its high ethical and moral values. Baia the Nature, Rome the History. The dualism was repeated: Naples took the place of Baia, although in that of Rome it would have been better to place Florence.

The Angevin, Viceroyal, Bourbon Black Legend, seems to be a distinctive and unifying trait that reappears assertively also in the narrative scheme of Croce, with the immense influence that it has exercised on Italian historiography, but it is sufficient to replace the three adjectives with the term *Oriental* for the contrast to reveal all its ideological value: Oriental was the freedom of Baia that had softened the indomitable Romans as the decorations found on its ruins; oriental were the baths, hot springs, steam rooms and pools used seamlessly until the arrival of the Spanish moralists that Imperial Rome had left as a legacy to the new Baia; oriental was the unbridled passion for racing and tournaments of the Angevin court in the bloody hands of the new Semiramis. How else could one define the decorative excess, the “splatter” of baroque images of a city that seemed to be made only of churches, convents, monasteries, guilds, and cloisters? The term «appears in the later works of Montesquieu, de Sade, and Goethe, and from such eighteenth-century formulations in to the critique of the “oriental” despotism of the Bourbons, beginning most notably with Gladstone and continuing in the writings of Luigi Settembrini, Ernest Renan» [15] but even earlier in the memoirs of William Beckford, the master of Fonthill Abbey, who had studied Arabic and discovered Portugal and the Alhambra well before Washington Irving, who had met in Baia in the «primeval rudness» [16] chthonic gods, falling into caves and underground rooms loaded with ancient horrific mysteries. And then in the novels of Alexandre Dumas, personally engaged against the perverse national monarchy, from the truculent *Corricolo* of 1843 to the equally violent *The Bourbons of Naples*, published in Italian. A picturesque East, in which the term no longer indicated correspondence with genre scenes, but the bizarre, the extravagant of an exoticism at hand.

If, in the inexhaustible repertoire of post union clichés, all the other large or small cities of the peninsula, from Milan to Pisa, had deserved their architectural holy symbol, Naples had received the Vesuvius, if anyone had any doubts that the only metropolis of the boot, former capital of the largest kingdom of the peninsula that came out defeated, could be represented by anything other than Nature in its most unpredictable and destructive form. A recent symbol as, long after the unexpected eruption of 1631 in the city views, the volcano, not only had continued not to appear and the image built from east to west, from Poggioreale to Posillipo, so as to show the Campi Flegrei and Pozzuoli in the background, (Fig. 4) and not the other way round: in the first case, the city was looking towards Rome and the North, which from the Viceroyalty corresponded to Milan and Flanders, in the second it only gazed at the Vesuvius and its slopes remaining hidden in the gulf.

If, therefore, the word *ameno* has been included in the list of Italian words to be saved because obsolete and misunderstood, not to mention *amenity* reduced to a synonym of a bizarre and often ridiculous joke, it is impossible even to imagine that something of the ancient city identity can still be visible to the new generations, unknown of Esperidi, towards which to head and deaf to the sounds of old Triton shells, already regretted in a famous

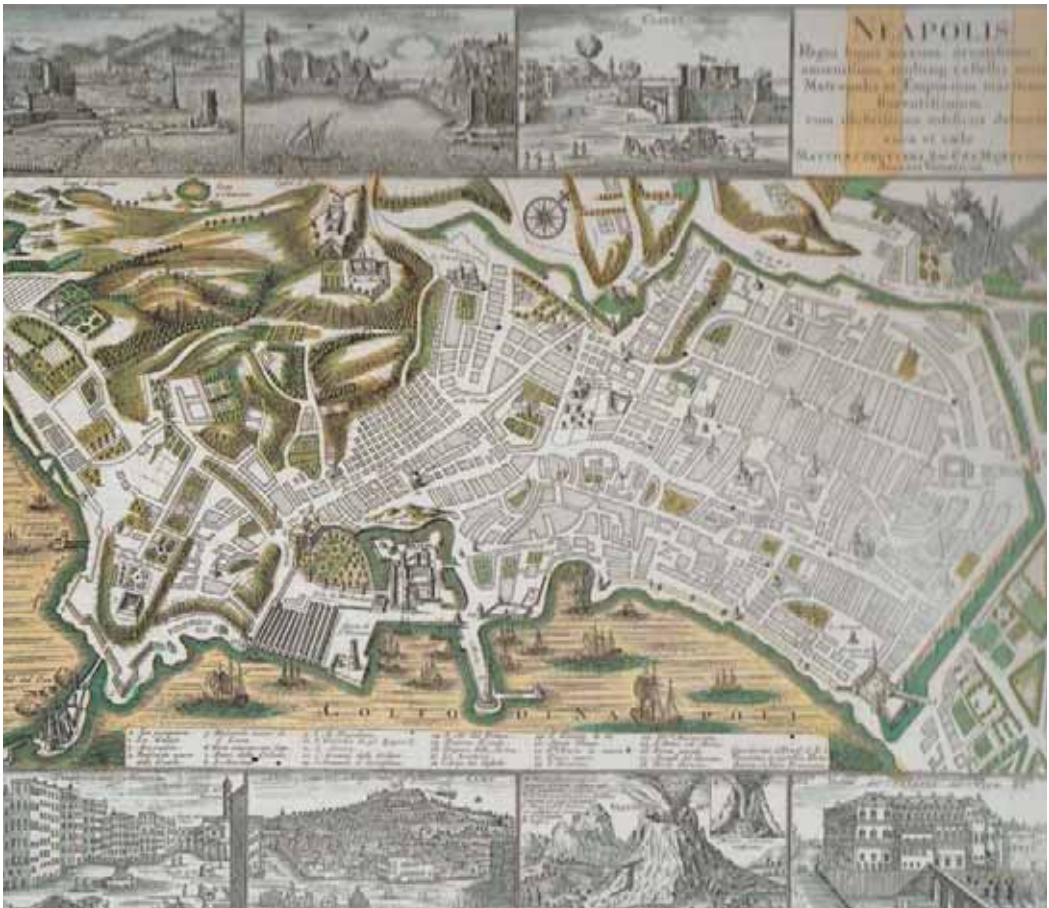


Figure 3 : *The plan view of Naples at the end of the sixteenth century, replicated around 1720 accompanied by two strips of city icons* (M. Seutter, *Neapolis Regni ...*, 1720, Naples, National Museum of San Martino).

sonnet by William Wordsworth. The beauty of the gulf has given way to the wicked charm of the volcano or rather of its only eruption - the others, from the once known one of 1631 do not count outside local studies - endlessly multiplied on the television screens of the planet in reconstructions that all return to the magniloquent painting *The last days of Pompeii*, painted by Karl Pavlovic Brjulov in 1827-33 (Fig. 1 : Naples. Karl Brullov - The Last Day of Pompeii - Google Art Project) and the far too long historical book by the same title published by Edward Bulwer-Lytton fully drawn from the commonplace of a perverse and cruel society as only a serious Victorian bourgeois could do.

The “porosity” was also tied to rocks and volcanoes, to the geologically different nature of the soil, emptied of the human work on which it had risen, metaphorically transforming itself into formlessness, the erasure of limits and differences, and where architecture did not make sense even in its basic elements, staircases, courtyards, arches, merely reflecting a “theatrical” way of life in some way wild, and, ça va sans dire, maternal, at the time when the boundaries that disappeared could be those of the subject that dissolved itself. «This

space is the source of bliss and terror, of the 'oceanic' feeling» [17]. Victor Burgin is an artist, but with all his sensitivity we do not release ourselves from the Oriental charm. Yet, the limits were and are evident, marked by bricks and stone, always so easy to recognize in the overlapping of one layer on the other, in this secular programming where only the Baroque had managed to lay a uniform hand of dazzling colours.

The lack of unity, the absence of a clear and readable architectural project, which might even erase the memory of what had preceded it, this had been the accusation which had bounced from one century to the other: lack of rigour, but we can also call it tolerance to what had come before, flexibility, resilience, but also resistance to the unique thought of a classical language that was so different from what belonged to the history of the city. Architecture as a tool for telling a single story, to limit the number of voices, to order the world confronted by a city made up of differences, tumults and temporal stagger, reluctant to every validation: a city that seems to be made in order to comfort Sennett's thesis [18], celebrating a fluid, light, inclusive and terribly Baroque modernity.



Figure 4 : *The city with the Campi Flegrei in the background.* (D. Barra, 1647, Naples, National Museum of San Martino).

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Disciplinary Insights

Urban geomorphology of Naples, southern Italy

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The city of Naples, 40°51'N latitude and 14°16'E longitude, maximum elevation 452 m asl, about 970,000 inhabitants, shows a shoreline exposed to southwest and northwest winds and sea storms. Currently, the climate is Mediterranean, Csa subtype [1], but microclimate is subtropical, weakly continental and subhumid-humid, also due to the urban heat island: about 866 mm/yr rainfall, 18°C average temperature/yr, 62% average relative humidity, 1011 hPa average atmospheric pressure, global solar radiation 178 W/m²/day were recorded in the 1972-2005 [2] period, and 250 sunny days per year, 34 days per year of average wind calm in the 1971-2000 time interval [3].

Naples was founded by the Greeks in the 8th century BC (about 2,725 years BP [4]). The etymology of the Italian city name, Napoli, derives from the colony Neapolis (*Νεάπολις*), meaning new city, which was located in the plain where the current port lies. The old Greek city, Paleopolis (*Παλιπολις*), was along and at the foot of Mt. Echia, a hill to the west and close to Neapolis, facing the dock of the tuff island of Megaris, on which today Castel dell'Ovo founds. Many places in the downtown and surroundings of Naples have Greek, Latin and Accadian origin, recalling geological and geomorphological features: e.g., Sebeto River (Accadian *seba*, channel, marsh), Arenella, Arenaccia and Arena di Sant'Antonio Stream (Latin *harenae*, volcanic sand), Chiaia (Latin *ghiaia*, fluvial and marine gravel), and Breccce, Nuova delle Breccce, Breccce a Sant'Erasmo streets (Latin *breccia*, volcanic breccias).

The city is located along the southwestern margin of a 12 km large caldera, between two active volcanic areas in unrest phase: the Phlegarean Fields, with about fifty emerged and submerged volcanoes, to the west, and the Mt. Somma-Vesuvius stratovolcano, to the southeast. The landscape is mainly modeled on Late Quaternary pyroclastics [5], among which the Campanian Ignimbrite [6] (CI, about 39 kyr [7] BP) represents the oldest formation outcropping at the base of small valleys deeply cut by streams, along the northeastern hills of the city.

From the geological point of view (Fig. 1), the skeleton of the city consists of Neapolitan Yellow Tuff [8] (NYT, about 15 kyr BP), widely outcropping along the sea cliff of Posillipo, to

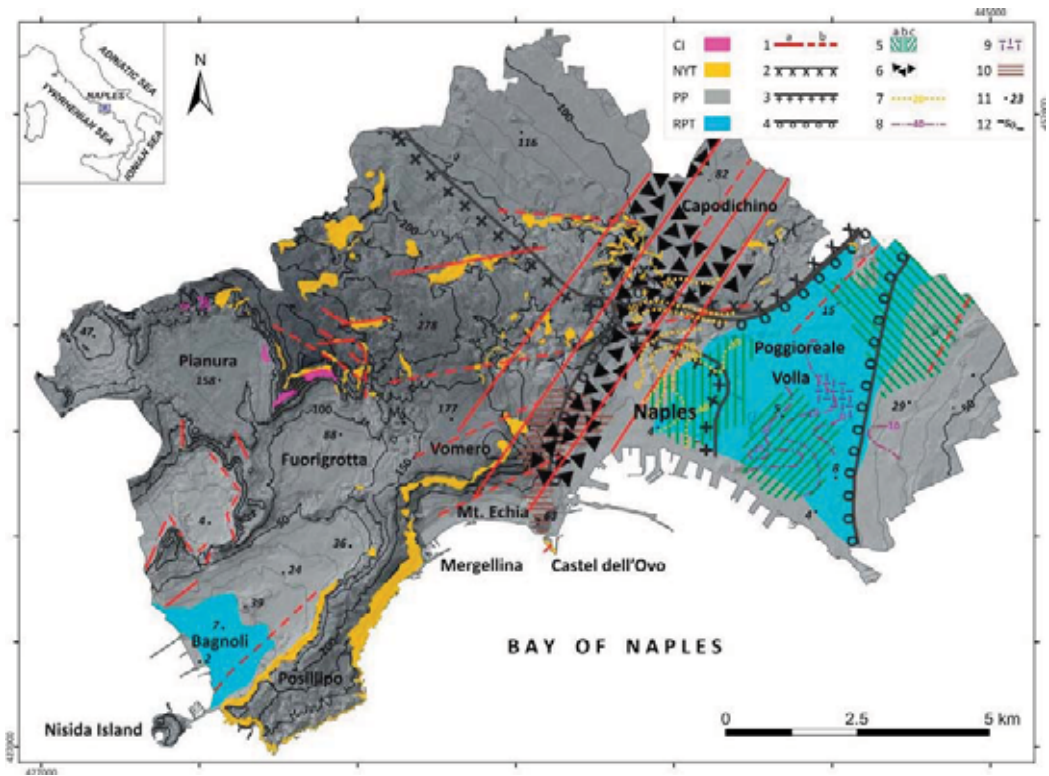


Figure 1 : Lithomorphological map of the urban area of Naples. Surface outcroppings: CI, Campanian Ignimbrite (about 39 kyr BP); NYT, Neapolitan Yellow Tuff (about 15 kyr BP); PP, post-NYT pyroclastic products (<15 kyr BP); RPT, reworked pyroclastics and alluvial-marine deposits (<10 kyr BP). Subsoil: 1, main fault: a, certain; b, concealed or inferred; 2, limit of CI; 3, limit of NYT; 4, limit of RPT; 5, peat levels: a, from +5 to +20 m asl; b, from -25 m bsl to current sea level; c, from -50 to -30 m bsl; 6, volcanic breccias; 7, isobath of NYT (-m bsl); 8, isobath of Mt. Somma-Vesuvius tuffs (-m bsl); 9, Mt. Somma-Vesuvius deep tuffs (-35 m bsl); 10, area with high concentration of caves; 11, elevation (m asl); 12, contour line (m asl) . Geographic coordinate system is WGS84.

the southwest, and in the downtown underground.

The NYT is dislocated by direct faults with over 50 m rejection, mainly NE-SW and NW-SE oriented. Other kinds of tuffs [9], outcropping in some sector of the city, were erupted by local small vents during the Late Pleistocene. To the east, in the Volla depression where the Sebeto River flowed, also volcanic breccias and other tuffs erupted by the Mt. Somma-Vesuvius form outcrops [10].

Fluvial-marine erosion and deposition processes triggered by vertical soil motions and postglacial sea-level fluctuations, as well as by the alternation of short climatic-environmental cyclical crises from hot-arid to cold-humid, have remodeled the inherited landscape during the last 5,000 years. The cover soil of present-day landscape is formed by several Phlegraean incoherent pyroclastic products, emplaced during the Early to Mid-Holocene. Among these pyroclastics, particularly the NYT is easy to quarry and cut but resistant too, then was commonly used as geomaterial for buildings since Graeco-Roman Period up to the 1970s, later the quarries and caves were closed or abandoned. The city subsoil,

down to about 45 m below ground level, shows several wide caves and channels used as aqueduct since Graeco-Roman Period up to the 19th century, and as an anti-bomb shelter during World War II. Moreover, long tunnels of metro lines, parking lot and many other small caves for public and private usages are scattered below churches, palaces and along the cliffs, drawing an intricate web of voids at different depth below this porous city. Many ruins of Roman age *villae maritimae*, pilae and docks are present along the seabed down to about 5 m depth between Castel dell'Ovo, to the northeast, and Nisida Island, to the southwest. These archaeological structures were downlifted mainly by bradyseismic phenomena, pseudoelastic deformations of the soil due to the pressure of water steam and gas in the subsoil of the Phlegrean Fields volcanic area. The vertical motion of the downtown ground,

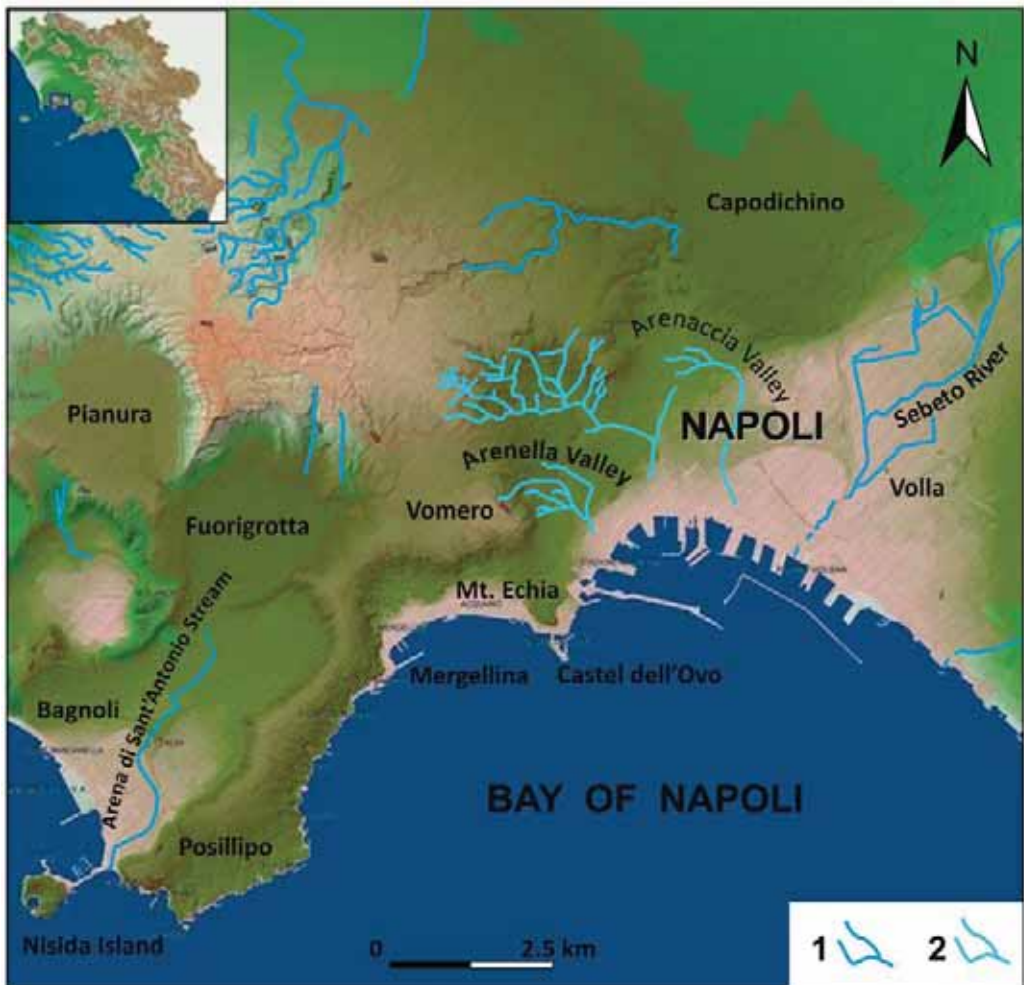


Figure 2 : Hydrographic drainage network of Naples: 1, subdendritic pattern of third-order of the engineered Sebeto River, and channelized riverbed of Arena di Sant'Antonio Stream; 2, palaeo-subdendritic pattern up to fourth-order streams [11]. Digital Elevation Model after Campania Region [12].

due to bradyseism and subsidence, ranges from null to a 2 mm lowering in the last decade [13]: this sometimes causes damages to the buildings and roads.

Two main urban rivers crossed the fluvial-marine plains to the east and west peripheries: the Sebeto River and the Arena di Sant'Antonio Stream [14], respectively. These watercourses almost completely disappeared since many years: the first one, probably due to subsidence and gradual sediment filling together with manmade interventions at the end of 1800s; the second one, mainly because was engineered with concrete levees, culvert or tunneled since the 1930s. Now, these rivers partially flow in the underground, beneath the streets or inside large pipelines discharging at about 30 m depth in the Bay of Naples, so people lost the memory of their existence and position. The pyroclastic outcroppings are dissected by a hydrographic network with subdendritic pattern and third- to fourth-order stream (Fig.2), still visible in the scarcely anthropized high valley but almost entirely bridged by landfill or masked by manmade structures in the downtown. Among these, particularly the embankments of 1930's and postwar, the seaward gradual enlargement and artificial progradation of the commercial port and Santa Lucia neighborhood changed the city waterfront.

Soil erosion processes in the city are due to intense rainfall occurred in the last decades, e.g. the devastating thunderstorm of 15th September 2001 with over 150 mm of rain in only three hours (about 1/6 of annual rainfall) and return time over 1000 years [15], triggering non-negligible effects on landscape such as flash floods, inundations, accelerated erosion and landslides in the city and in much of the region. Similar episodes already occurred in Roman times, as testified by reworked pyroclastics, debris and alluvial deposits covering the ruins today buried in the underground of the historical center as well as at the end of the 1800's [16], discovered during archaeological excavations or the diggings of the new metro line.

Considering both geological and geomorphological data, the underground of city historical center shows at its base the Neapolitan Yellow Tuff overlaid by recent pyroclastics and alternation of alluvial, marine and marsh deposits, locally covered by landfill (Fig.3).

Summarizing, a significant role has been played by anthropic action, often concentrated, rapid and intense, which changed the original landscape physiography since the Graeco-Roman Period, and especially during the last five centuries. Moreover, the realization of several manmade structures and infrastructures since the 1950s and the over-exploitation of aquifers in the 1970s have activated the accelerated subsidence. Considering all the geoenvironmental and city features, in particular (i) the current waterscape morphology, (ii) the absence of well-preserved or buried hydrographic networks, (iii) the main geoindicators of vertical ground motion, (iv) the dense urbanization since historical times, (v) the numerous caves in the downtown, (vi) that Naples is classified Zone 2 with medium-intensity seismicity and (vii) lies in a Tyrrhenian tsunamogenic sector, as well as (viii) the city position between two active volcanic areas, the overall geomorphological hazard results definitely high to extreme [17].

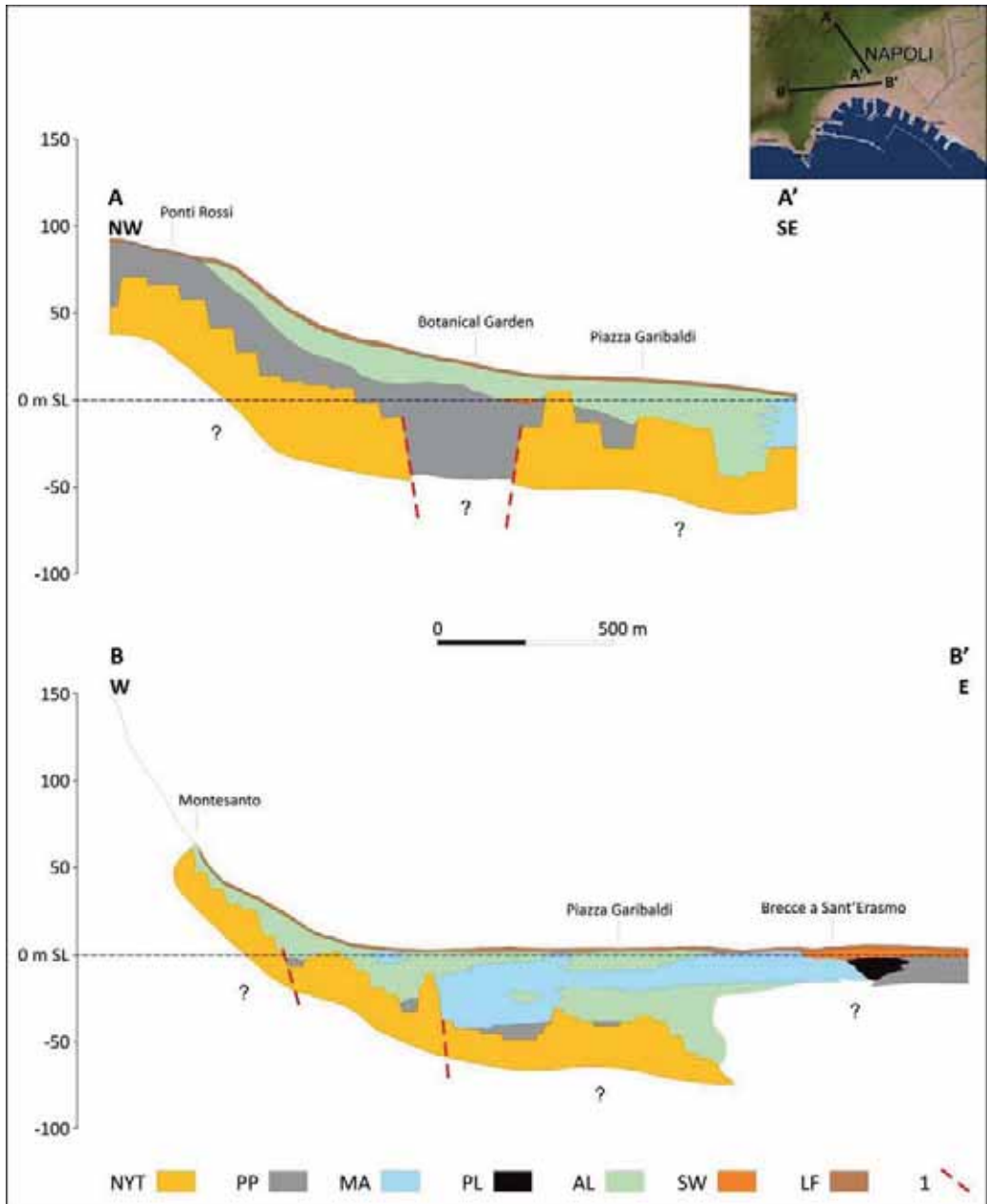


Figure 3 : Geological cross sections (A-A', B-B') of the historical center of Naples, deduced from boreholes data and outcroppings. Legend: NYT, Neapolitan Yellow Tuff (about 15 kyr BP); PP, post-NYT pyroclastic products (<15 kyr BP); MA, marine deposits; PL, peat levels; AL, alluvial deposits; SW, palustrine deposits (<10 kyr BP); LF, landfill (recent); 1, concealed or inferred fault. The question mark indicates the absence of boreholes data.

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Geotechnical properties of the deposits in the Neapolitan urban area

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The morphology of the 120 Km² extended Neapolitan urban area is quite various because of the presence of different slopes that, as reported in Fig. 1, divide the entire region essentially in six distinct main districts: 1) Hilly zone; 2) Fuorigrotta; 3) Bagnoli; 4) Historical Centre; 5) Coastal zone; 6) Eastern zone. The highest elevations (featured by a peak of about 460 m above the sea level) are attained within the most inner parts of the Hilly zone while the flattest areas are typically located along the districts next to the coastal zone. According to many geological surveys and geotechnical investigations [1,2], the typical recognized stratigraphic sequences are constituted by an alternance of pyroclastic soils that have been produced during the last tens of thousands of years by different volcanic activities of the Phlegrean Fields, a still active large volcanic area located in the West of Naples. Such soils accumulated directly over the existing bedrock, constituted by the so-called Neapolitan Yellow Tuff that was likely produced by a single eruption, occurred about 15,000 years ago, which provoked the collapse of the Phlegrean caldera. Pyroclastic deposits consist of a sequence of fine to coarse soils: the finer portion, due to the presence of ash, is in fact often mixed with other coarser volcanic products. The deposits mainly featured by the presence of sand and silt (both about 40%) with reduced fraction of gravel (about 10%) and clay (less than 10%) are known as Pozzolana. At the same time, it is also possible to directly find layers featured by higher sand and gravel fractions that are known as Pumice and Lapillus. Alternating layers in Pozzolana and Pumice with thickness varying from 10 to more than 30 meters are present in the Hilly zone, Fuorigrotta district and Historical Centre. Due to remoulding processes, weathered layers of Pozzolana are recognizable in Bagnoli and Eastern zone. Lapillus and Pumice layers, featured by thickness ranging in the interval 10÷35 m are identifiable in Bagnoli, Coastal zone and Eastern zone, where some peat levels are present too. Neapolitan Yellow Tuff, that represents the skeleton of the Neapolitan subsoil, is usually visible as along different natural cliffs, directly facing the sea or also the inland, as along artificial cuts. Typically its height from some tens of meters in the Eastern zone to more than 100 m in the North-Western part of the Hilly zone. Regarding the phreatic line, it is very next to the ground level only at the Coastal zone and the Eastern zone, while its depth is very high in the most of the districts. As a consequence, in such last areas the pyroclastic cover is usually unsaturated, i.e. the pores are only partially occupied by water unless an infiltration process, able to saturate the deposit, occurs. Since ancient

times, deep excavations were realized within the subsoil of Naples in order to extract both pyroclastic soils and tuff for construction aims. As a matter of fact, geotechnical properties of such materials have been intensely investigated since the 50's by many Neapolitan researchers who have contributed to continuously increase the knowledge of their properties. Referring to pyroclastic soils, they are essentially light materials (the mean total unit weight is about 12 kN/m^3) with a negligible effective cohesion: these features make them easily erodible. Moreover, both their hydraulic and mechanical responses are strongly influenced by volumetric water content. In particular, the increase in soil moisture due to infiltration processes, frequently associated to external factors (e.g. rainfall) and sometimes to underground causes (e.g. effects of damages in sewers and aqueducts), induce pyroclastic cover to become more pervious, more compressible and less resistant. For instance, many laboratory investigations revealed that the hydraulic conductivity of Pozzolana grows up to about four orders of magnitude, from 10^{-10} m/s to 10^{-6} m/s , if the saturation degree increases from the minimum to the maximum values monitored at different sites respectively during the dry season and the wet season [9]. Regarding compressibility, wetting processes may provoke a structural collapse in loose Pozzolana layers with consequent volumetric strain featured sometimes by values also higher than 10%: such effect typically decreases with initial porosity, becoming negligible for the densest deposits. The previously described phenomena is frequently responsible of severe engineering troubles, being able to induce additional settlements (and possibly damages) to existing masonry or concrete buildings. Wetting could also reduce soil shear strength, thus restricting the shallow foundations performance and also worsening slope stability conditions. About the last issue, the unsaturated condition provides in fact to pyroclastic soils an "apparent cohesion" of some kPa that is usually sufficient to guarantee safety conditions also to the steepest slopes featured by an inclination higher than the soil friction angle, whose mean value is around 35° . As a consequence, intense and prolonged precipitations have been frequently responsible of landslides that involved the shallowest pyroclastic covers (especially occurred in the Hilly zone) often causing damages to the downslope areas. Concerning Neapolitan Yellow Tuff, it is a soft rock constituted by an ashy matrix, highly porous elements and lithic inclusions. Its stiffness and strength are strongly higher than those associated to the pyroclastic soils, being featured by an elastic modulus of about $1,000 \div 5,000 \text{ MPa}$ (three orders of magnitude higher than that of Pozzolana) and by an effective cohesion higher than 0.8 MPa . Anyway, its natural fractured system is sometimes responsible of rock topples and falls at some hilly areas where the spatial strata orientations are particularly unfavourable, but also of the failure of existing underground cavities of different type (e.g. quarries, canalizations, wells for the water supply, road tunnel).



Figure 1 : Typical stratigraphic sequences of the Neapolitan urban area. [2]

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Risk assessment for stormwater sewer networks in unsaturated pyroclastic soils

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Urban areas are continuously expanding due to population growth. Consequently it is very important to estimate the reliability of existing sewer networks subject to new operating conditions which are usually very different from the design conditions. In fact, when designing a sewer channel some important parameters must be fixed such as maximum filling ratio h/D , where h is the design flow depth, and maximum velocity V_{max} . Design discharge is usually estimated by means of hydrologic approach and refers to a fixed return period T . Variations of operating conditions are normally due to connection of new urban areas to an existing sewer system as well as increase of impervious areas (increase of runoff coefficients).

Of course these factors should be taken into account when designing a new sewer system, but this prediction is not satisfactory when dealing with some decades old sewer networks. In this case sewer channels are subject to pressurised flow with a frequency higher than assumed during design; this condition can still be tolerable if consequences are only consisting in poor hydraulic performance. Unfortunately, for old sewers pressurised flow often leads to heavy damages in terms of structural failures or roads instability. This is the case for the city of Naples (Italy) where, in 1997, after heavy storms, large failures occurred and fatalities were recorded.

The failure mechanism is due to the dependency on water content of mechanical characteristics of pyroclastic soils in which hydraulic networks are buried. Strong reduction of shear strength have been observed for these soils in wet conditions, even up to almost complete disappearance of cohesion already at water potential height of about -1 m. This is due to mechanical actions exerted by air-water menisci on soil particles. When water fills up the smallest voids, these actions weaken and, even under small loads, soil particles collapse reaching a more compact structure. Increase of pyroclastic soil bulk density up to 40% has been indeed measured at saturation [1].

Pressurised flow in sewer channels may cause leakage of water into unsaturated pyroclastic soil layers. Consequently collapsed incoherent soil can be scoured and flow away through channel cracks when pipe flow conditions end up, causing excavations around the top of the conduit. Several examples of excavations have been observed in sewer network channels of Naples (Fig.1), where a number of branches of the original last century network are today inadequate and undergo pipe flow conditions.

A simplified procedure may be used in order to assess the risk of sewer failure in unsaturated pyroclastic soils. The procedure consists of the following steps:

- Hydrologic and hydraulic study of i -th sewer channel, in order to define the duration Δ and the pressure head h_p of pipe flow conditions ($Q > Q_{F,i}$, with $Q_{F,i}$ maximum free surface discharge) during a flood;
- Study of time dependent unsaturated flow in the soil surrounding a generic channel, in order to introduce, for each value of pressure head h_p^* inside the channel, a critical duration Δ^* of leaching giving rise to dangerous excavation;
- Identification of the critical event as the critical flood ($h_{p,i}^*, \Delta_i^*$) associated with the smallest return period [2], T^* ;
- Reliability assessment with local and overall indices.

In a quite original way the last step of the methodology allows, through a reliability study, to identify channels more frequently working in a critical condition, making possible planning of rehabilitation works and improvement of ancient drainage networks.

This methodology was applied to simulate real failure events recorded in the Neapolitan sewer network. Since excavations are due to rapid decay of mechanical properties of wet soil, a hydrograph is defined as critical, when leading to a height $D/2$ of wet soil over the top of a channel of diameter D . By means of hydrological study and simple hydraulic schematisation, duration of pressurised flow and mean pressure head inside the channel can be defined, corresponding to any given rainfall duration. Time dependent flow through surrounding unsaturated soil, due to leaching from pressurised channel, may be numerically solved, leading to dimensionless abacus useful for general identification of critical events. The application to a real case confirmed the validity of this approach, also in order to define local and overall reliability indices of sewer networks with respect to the considered phenomenon.

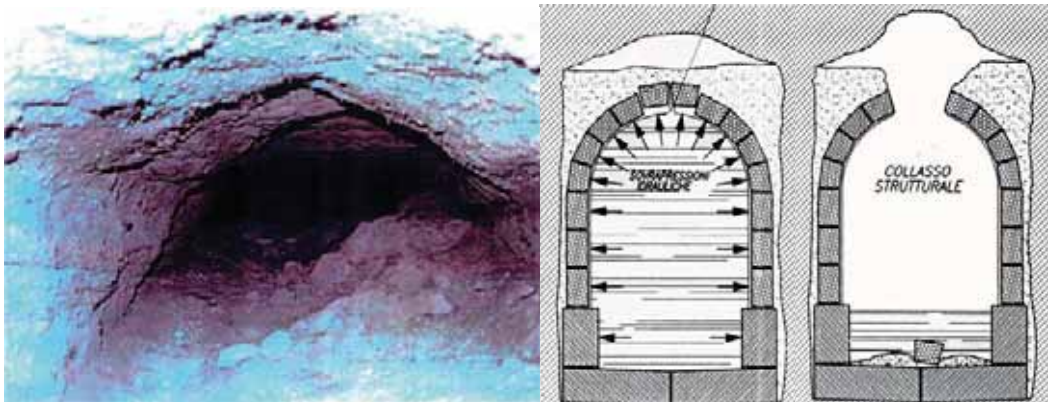


Figure 1 : Excavation over the top of the sewer channel: (a) photo, (b) scheme of the phenomenon.

1 Scotto di Santolo, A., M. V. Nicotera and M. Ramondini (2000). Analysis of instability phenomena affecting a cut slope in unsaturated pyroclastic soils, Proc. of 8th International Symposium on Landslides, Cardiff.

2 Gisogni C. (2000). I moderni criteri di calcolo e la verifica della rete (in Italian). From "Il sistema fognario della città di Napoli alle soglie del 2000". Edited by Rasulo G. Published by the City Council of Naples (Italy). CUEN, Napoli (Italy).

The historic center of Naples as a paradigm of urban conservation

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The historic center of Naples with its 1,917 hectares of extension – 1,021 of which are included in the UNESCO World Heritage List – is one of the largest and most ancient urban heritage areas in Europe. Its extension, however, is the result of a lengthy process that has given rise, over time, to debates and disputes.¹

From a historical point of view in Naples it is possible to clearly identify the presence of an older core, coinciding with the foundation, between the 6th and the 5th century BC, of the “new city” – in Greek *Neapolis* – compared to the oldest Partenope, which was founded by settlers from the nearby Cuma on the hill currently known as Pizzofalcone around the 8th century BC. This core is still recognizable today in the persistence of its plan, based on a pseudo-hippodamean scheme² and consisting of a grid formed by three main roads – oriented approximately from East to West and named in Greek *plateiai*, in Latin *decumani* – intersected by orthogonal streets – oriented approximately from North to South and called in Greek *stenopoi*, in Latin *cardi* – which defines very elongated rectangular plots (*insulae*).

This 146-hectares nucleus was that which Roberto Pane wanted to identify in the early 1960s as the «ancient center» of Naples, not as a mean to introduce different degrees of protection, but rather to clearly distinguish the “ancient” core from the rest of the city (all of which is historical by definition) basing on the presence of a dense archaeological stratification, that is an indispensable element of any operating proposition of restoration or redevelopment.³

This first identification of the ancient center has been followed by the recognition of a wider perimeter of the historic center, ratified in the 1972 town planning scheme and extended to an area of 720 hectares, which also includes neighborhoods actually already settled in ancient times as suburbs. This is also the area that has been included in the UNESCO World Heritage List since 1995. Some years later, at the beginning of the third millennium, the perimeter of the historic center was more than doubled when the General Variant to the town planning scheme (2004) brought the extension of the historic center to 1,917 hectares, including even the peripheral boroughs, aggregated in Naples only in the 1920s. Subsequently, at the time of the drafting of the UNESCO Site Management Plan (2011), the perimeter of the urban fabric already included in the World Heritage List in 1995 was expanded, bringing it to 1,021 hectares and adding to it a buffer zone of 1,350 hectares.⁴

The process just described clearly shows how, within just forty years, the notion of historic center has evolved considerably in Italy, a country that gave rise to the first debates in this regard,⁵ finally adopting the latest international guidelines despite their partial ambiguity. Therefore the specific issue of the definition of its perimeter shows how the historic center of Naples stands out as a particularly stimulating case-study. Moreover, it turns out to be one of the most studied and analyzed historic centers of Europe, in all its possible facets, as a simple glance at the rich bibliography on it evidences. Within half a century, this area has been subject to numerous proposals for intervention, some more operational – consisting of real executive plans and elaborated mainly by university research units – other more general, aimed at defining regulations or management guidelines, produced by the administrative bodies responsible for the historic center's protection and enhancement.

In the first group we refer to the major studies started in 1964, with the coordination of Roberto Pane, on the oldest core of the city, culminating in 1971 in the publication of the three volumes entitled *Il centro antico di Napoli*, containing a concrete proposal of «urban restoration and intervention plan».⁶ These studies, followed by further proposals by ICOMOS (1982) or other groups – like the so-called *Regno del Possibile* (Realm of Possible, 1986-88), marked by considerably less conservative intentions – have the common ground of a significant degree of in-depth knowledge of the urban fabric of the city and its architectural and contextual reality.⁷

The second group, on the other hand, is part of the general urban planning tools prepared for the city and therefore also for its historical center – starting with the 1972 town planning scheme – as well as those managerial ones, such as the recent Management Plan of the Historic Center UNESCO (2011). This second group is characterized by a less capillary knowledge of the urban fabric, from which more generic guidelines and regulations follow, sometimes not concretely applicable to the multiform specificities of the Neapolitan built heritage.

Beyond these differences the fact mentioned in the premise remains true: the amount of studies on the historic center of Naples is really impressive. However, to this day they have given little results in practical terms: after so many decades since the first mentioned studies, a systematic process of urban restoration is still awaited. Backed by public and private funding, this process is expected to generate a redemption of the historic center from a condition of widespread physical and social degradation. It is true that some valuable areas are an exception in this regard – as those concentrated around the churches of Gesù Nuovo, Santa Chiara, San Domenico Maggiore, and in general all the urban fabric along the axis of the *decumanus inferior*, the so-called “*spaccanapoli*”. In these areas there has been a great increase of visitors in recent years, with the consequent restoration and upgrading of buildings and public spaces. Nevertheless, it is an incontrovertible fact that buildings in the historic center generally have a mediocre conservation status. Moreover, many areas are often overwhelmed by incompatible uses and housing conditions far away from the European cities standards, besides presenting – in some parts – serious security and legality problems still unresolved. Conversely, this situation of degradation and, in some cases, of true abandonment of the historic center, guarantees a substantial integrity and authenticity of its materiality, not found in many other Italian cities subject to urban renewal and gentrification processes that have led to a loss in their material and immaterial identity.

For this complex set of reasons, the historic center of Naples may be considered as a real

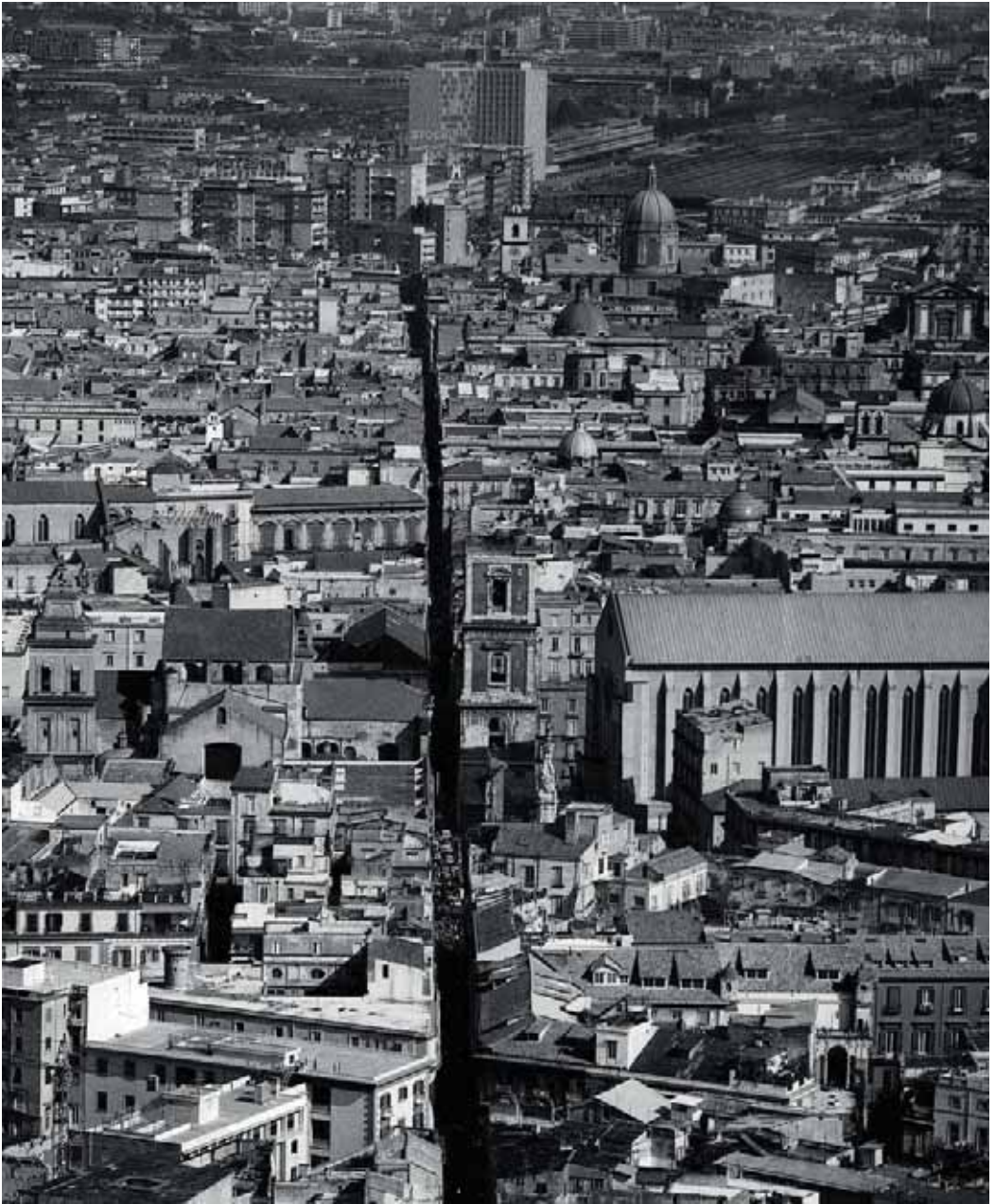


Figure 1 : Naples, the ancient core of the historic center marked by the path of one of the three main Greek roads: the so-called "spaccanapoli" (photo R. Pane, 1960s).

paradigm of urban conservation, which is particularly challenging in the field of didactics. On the one hand, in fact – thanks to the multiplicity of studies regarding it – the historic center can be seen as a reflection of the evolution of urban conservation discipline over a period of more than fifty years. On the other hand, thanks to the condition of substantial integrity and authenticity of its materiality, it represents an absolutely unique case study for future conservation and redevelopment strategies. In such a way the historic center can be intended as a living and active laboratory for didactic and operative experimentation. Hopefully researches and proposals will always maintain a strong contact with the operative reality and will truly result in concrete implementations, treasuring everything that has already been produced in the past years. All of this is fundamental in order to assure a future to this extraordinary heritage where architecture and urban fabric stand as a whole.

note

1. Among the numerous contributions cf. A. Aveta, *Restauro e rinnovamento del centro storico di Napoli*, Edizioni Scientifiche Italiane, Napoli 2009; F. Mangone, *Il centro storico di Napoli: uno, nessuno, centomila*, in *La scoperta della città antica. Esperienza e conoscenza del centro storico nell'Europa del Novecento*, a cura di D. Cutolo e S. Pace, Quodlibet, Macerata 2016, p. 259-271.
2. That is derived from the patterns adopted by Hippodamus of Miletus in the Eastern colonies. Cf. P. Benvenuti Falciai, *Ippodamo di Mileto architetto e filosofo: una ricostruzione filologica della personalità*, Università degli Studi di Firenze, Firenze 1982; E. Greco, *La città greca antica: istituzioni, società e forme urbane*, Donzelli, Roma 1999.
3. R. Pane, *Centro storico e centro antico*, in «Napoli nobilissima», VII, 5-6, September-October 1968, p. 153-157; then in AA.VV., *Il centro antico di Napoli. Restauro urbanistico e piano di intervento*, Edizioni Scientifiche Italiane, Napoli 1971, I, p. 13-22.
4. Cf. <http://whc.unesco.org/en/list/726/> access October 2017; *Restauro e riqualificazione del centro storico di Napoli patrimonio dell'UNESCO tra conservazione e progetto*, a cura di A. Aveta e B.G. Marino, Edizioni Scientifiche Italiane, Napoli 2012; A. Pane, *O destino do centro histórico de Nápoles, em quarenta anos de debates e propostas projetuais: do plano de 1971, ao grande programa Unesco*, in «PÓS» (Brazil), 21, 35, June 2014, p. 219-244.
5. Cf. A. Pane, *Dal monumento all'ambiente urbano: la teoria del diradamento edilizio*, in *La cultura del restauro. Teorie e fondatori*, a cura di S. Casiello, 3rd edition, Marsilio, Venezia 2005, p. 293-314; F. De Pleri, *Un paese di centri storici: urbanistica e identità locali negli anni Cinquanta e Sessanta*, in «Rassegna di architettura e urbanistica», 136 (2012), p. 92-100.
6. This study was preceded by the analysis of C. Beguinot, P. De Meo, *Il centro antico di Napoli. Documenti e proposte*, Edizioni Scientifiche Italiane, Napoli 1965, that, developed under the auspices of Roberto Pane, constituted in some way «a problematic anticipation» of it (AA.VV., *Il centro antico di Napoli*, cit., I, p. VII).
7. Cf. ICOMOS, *Indirizzi per il restauro del centro storico di Napoli*, Arte tipografica, Napoli 1982; AA.VV., *Il regno del possibile. Analisi e prospettive per il futuro di Napoli*, a cura di Studi Centro Storico Napoli, Edizioni del Sole-24 Ore, Milano 1986; AA.VV., *Rigenerazione dei centri storici. Il caso Napoli*, a cura di Studi Centro Storico Napoli, Edizioni del Sole-24 Ore, Milano 1988.

Historic centre and utopias in Naples after Italian unification

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After the Italian unification, Naples is as beautiful as unresolved, as attractive as unwelcoming. With about half million citizens, it's the most populous city in Italy, but its urban structure and economic system are inadequate to modern life. Built without a comprehensive program, Naples reveals a reduced presence of public green spaces, small urban spaces with a coherent design, few large and regular roads and inappropriate connections for a modern city. More than in other Italian contexts, a phenomenon emerges: a generous offer of not commissioned projects, often unrealized, aimed at resolving multiple problematic nodes. Many of the proposals to revitalize the city will be implemented in the Piano per il Risanamento in January 1885. But beside that, many utopian suggestions aim to redesign areas of the city, as Posillipo, Fuorigrotta or Bagnoli, particularly marked by nature and myth. Through the study of appropriate and modern links, the idea that the bourgeois and aristocratic city can extend to the west beyond Chiaia is consolidated. In some cases, it's planned to build privileged neighborhoods, dedicated to foreign elites. This is the direction towards which the project drawn up in 1864 by Giustino Fiocca,¹ or the proposal for the construction of the new Rione Santa Lucia presented by Luigi Lops in 1883,² or that one for a Grande Casino balneare al Chiatamone formulated in 1886 by Pasquale Cozzolino.³ All these will be followed in 1887 by the plan of Giulio Dary and Laforest for a luxury residential district for aristocratic classes and foreigners in the area between Sannazaro harbor and Coroglio beach,⁴ or by the design of Nicola Daspuro, Gennaro Sommella and Luigi Lops, who offers a long straight carriage from Chiaia to the coast of Bagnoli, to create three different areas of expansion, the first of which is destined for a neighborhood for wealthy ones.⁵ In the same year, Gustavo Scielzo and Eduardo Talamo propose the extension of via Caracciolo to Posillipo, providing around the port Sannazaro a new luxury line to combine nature beauties and sophistication of modern life for the classes of tourists.⁶ Meanwhile, the ingenious British architect Lamont Young had illustrated the most fascinating utopia ever imagined for Naples, in which he prefigured living and leisure services on land that in the early Twentieth century will be occupied by Ilva.⁷ Even pleasant hilly areas, which in some ways had set a limit on the expansion of the city, and now appear as places particularly suitable for solving the problems of overcrowding and the insolubility of old city, become the object of design imaginations; in them, the issue to be resolved is the problem of climbing to connect the lower city spaces with hilly areas. The resistance the city opposes to the importation of urban transformation models, based on the principle of continuity, in fact raises multiple research into alternative

transport systems, in a general climate of avant-garde experiments. So, many hypotheses plan to overcome the hills through bold technical solutions, underground or areas, to invent a continuous form for Naples. Elevators also appear among the lifting systems to connect roads at different altitudes: public lifts are located at Chiaja Bridge, at Sanità Bridge, between Quattro Giornate tunnel and Posillipo, between Nunziatella square and Vittoria gallery. However, hidden within buildings lined up in road front, or placed against overpass, these systems have little impact on the forma urbis. Those of two unrealized projects are very interesting for the redesign of urban shape. The first is the elevator that in Lamont Young's project is designed to connect the urban subway (designed by the Central Station to the Campi Flegrei) with Vomero. The other is designed by the architect Luigi Rodini in 1892,⁸ between Montecalvario and San Martino, as part of a program to build a vast residential district on hill. A free and evocative "suspended" mobility, such as that sought by Jules Verne, animates instead the project of Adolfo Avena, who in 1885 imagines with Stanislao Sorrentino a funicular railway between via Roma and corso Vittorio Emanuele:⁹ a majestic metal viaduct above the level of the buildings, about 342 meters long. Gradually outlined in a series of successive proposals, in 1893 the idea became the project of an aeroway,¹⁰ which, in addition to connecting via Roma with Vomero, points to the idea of a panoramic connection, where the pedestrian pathway is alongside the mechanical pathway, accessible to everyone at any time thanks to special stairs and mobile platforms. It's an exhibition of the technique, that offers valuable opportunities for landscaping, transforming itself into a tourist attraction, as the American railways or American bridges. Despite the undeniable suggestion exercised by such mechanical pathways, even the ramps, scenographic or avant-garde, continue to be imagined. In the project of Comecini and Daspuro,¹¹ in 1917, the design of via Curva is completed by a series of lateral terraced steps and two light iron bridges, which create an articulated and elegant urban complex. Other ramps are planned between piazza dei Martiri and Santa Maria degli Angeli in study plan conducted between 1925 and 1926 by the commission presided over by Gustavo Giovannoni.¹² Equally spectacular is the magnificent staircase between Monte Echia and Chiatamone, prefigured in the plan of Cimmino, Franco, Russo, Sasso in 1928.¹³ Still, in 1933, within a broader program for a general city plan of the city, Camillo Guerra imagines in Cacciottoli valley a bewitching helical tower to connect the historic centre with Vomero.¹⁴

The myths of speed and movement, heart of the Futurist movement, have now added to the Nineteenth century fascination regarding the aesthetic potential of modern technology.

note

1. G. Fiocca, *Progetto per lo ampliamento più proprio della città di Napoli con la creazione di un nobile e vasto quartiere e del modo come eseguirlo* – per Giustino Fiocca, Naples 1864.
2. L. Lops, *I nuovi rioni Principe di Napoli e Duca di Genova*, Naples 1883.
3. P. Cozzolino, *Grande Casino balneare al Chiatamone*, Naples 1886.
4. G. Dary, J. Laforest, *La nuova Napoli. Progetto di nuovi rioni fra porto Sannazaro e la spiaggia di Coroglio*, Naples 1887.
5. G. Scielzo, E. Talamo, *La via Caracciolo prolungata fino al Capo di Posillipo: progetto di un nuovo rione, degl'ingegneri Gustavo Scielzo ed Eduardo Talamo*, Naples 1887.
6. G. Scielzo, E. Talamo, *La via Caracciolo prolungata fino al Capo di Posillipo: progetto di un nuovo rione, degl'ingegneri Gustavo Scielzo ed Eduardo Talamo*, Naples 1887.
7. L. Young, *Ferrovia Metropolitana e Campi Flegrei*, Naples 1883.
8. L. Rodini, *Domanda di concessione al municipio di Napoli per un progetto nel rione S. Martino con ascensore al largo Montecalvario*, Naples 1892.
9. A. Avena, S. Sorrentino, *Di una funicolare aerea tra Via Roma ed il Corso Vittorio Emanuele*, Naples 1885.
10. A. Avena, *Ferrovia del Vomero. Progetto dell'ing. A. Avena*, Naples 1893.
11. G. B. Comencini, N. Daspuro, *Chiaia Nova*, Naples 1917.
12. Comune di Napoli, *Relazione della Commissione per lo studio del piano regolatore della Città*, Naples 1927.
13. G. Cimmino, M. Franco, G. Russo, A. Sasso, *Parco Monte Echia – Piano regolatore e di risanamento di S. Lucia a Monte Echia*, Naples 1928.
14. C. Guerra, *Progetto di un piano regolatore integrale per la città di Napoli*, Naples 1933-39.

Sant'Aniello at Caponapoli: history and adaptive reuse

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Nowadays, one of the greatest opportunities for sustainable development of the built environment is the reuse of architectural heritage and in particular of the deconsecrated churches. This is a phenomenon particularly widespread in Europe: from Holland to England, where about twenty churches each year are closed down, being transformed not only into concert halls or cultural centres, but even into gyms or supermarkets. From this point of view, the Selexyz Dominicanen Bookstore without any doubt lends itself to being 'chosen' as an example of the present phenomenon of reuse of ancient churches: it has already become an icon. Anyway, it is therefore of primary importance to reflect on the consequences of the type of transformation introduced to instil new life into cultural heritage: religious buildings, in particular, apart from their having an architectonic value and significance are also rich in symbolic values [1]. Prior to design intervention there must be a dialogue with users and stakeholders in determining the programme. Therefore, any intervention for reuse should be filtered by careful historical analysis that guarantees respect for the cultural heritage. In Italy also there are dozens of abandoned religious buildings, but they have not been deconsecrated, so it is therefore more complex a matter to find new functions that are compatible with a religious activity that may still take place. The Archbishop's Curia of Naples in order to find economic subsidies, announced competitions for management concessions for some unused churches, on condition that they were used for cultural and social purposes. On the other hand, starting from the historical and artistic value of single artefacts, the understanding of the cultural resource has already extended beyond the actual monument to include the urban context and, furthermore, is able to motivate new forms of participation and social coherence. A recent example of reuse is provided by the churches of Spirito Santo and S. Giovanni Maggiore, in which they are organized great international exhibitions. An interesting case is offered by the Church of Sant'Aniello at Caponapoli, that is extraordinary because it encompasses, in a relatively confined area, an environment that embodies distinct and quintessential traces of the development of the city. Agnello was the abbot of the monastery of San Gaudioso in the 6th century b.C. and patron of the city together with San Gennaro, though no one today remembers Agnello [2]. The Church of Sant'Aniello is the symbol of the earliest penetration of Christianity into the acropolis of Neapolis. Already in 1385 the entire neighbourhood was described as 'Regio Sancti Anello Maioris'. In the 6th century the Archbishop of Taranto extended the small pre-existing church, defining the typology of post-Reformation churches. The 6th century imprint

can be found in the double façade, which although simple in its design can be inserted in the manner of the works of Cosimo Fanzago, whose noteworthy example is the nearby church of Santa Maria della Sapienza. For its salubrity and peacefulness, in that place was also built the Hospital of Santa Maria del Popolo degli Incurabili [3]. Celano describes «a beautiful square called S. Aniello that serves as a delight in the summer for the Neapolitans [...] and in the evening there are meetings of learned men» [4]. Nevertheless, damaged during World War II, the church was described in the visitors' guide of 1976, as «redone a number of times and now ruined» [5]. The innovative restoration transforms the internal configuration of the church, creating an entirely new sense of the space due to the large empty rectangle of 9.65 x 5.15 linear metres created in the floor of the nave. From the entrance one may admire the prestigious main altar of the sixteenth century and, at the same time, one may see part of the defensive Greek walls of the city, part of the Roman walls opus reticulatum and some tombs from the Dark Ages, without having to go down to another level, and just by looking through the glass 'invention' dug into the centre [6]. Now its restoration is almost completed, but it requires with an equal degree of necessity, an activity that can re-establish a public civic function, adequate to its importance. At present there is an opportunity for its use and subsequent opening, possible due to the valuable collaboration of the 'Legambiente' (Environment Party). The process of defining the most fitting activities for the reuse of the church is underway. On the other hand, it is useful to study possible strategies aimed at raise the attention on the monument, to promote recognition or spread awareness and knowledge of Sant'Aniello at Caponapoli. In this way, cultural non-religious activities, with the active contribution of associations and people from the cultural and institutional world, may not only nurture an economic virtuous process in support of further restoration and management, but they may transform the church into a center for regeneration of the urban and social fabric, contributing to the sustainability process of the old town center.



Figure 1 : Sant'Aniello Church before the restoration (photo by B.A.P.S.E. di Napoli e provincia) and during a recent event.

1. C. De Falco, Strategies for dissemination of historical knowledge and promotion of tourism in the reuse of churches, in *Conservation/adaptation: keeping alive the spirit of the place. Adaptive reuse of heritage with 'symbolic value'*, D. Fiorani, L. Kealy, S. Musso eds., Quasar, Roma 2017, pp. 41-48.
2. G. B. Pandullo, *Per lo scuoprimento delle reliquie di S. Agnello Abbate [...] descrizione fatta dal Reg. Ing. Gio. Battista Pandullo, Napoli, 1799, p. 7.* For further historical bibliography see: C. De Falco, cit.
3. A. Giannetti, *La collina di Caponapoli da cittadella religiosa a cittadella universitaria*, in G. Amirante, R. Cioffi eds., *Dimore della conoscenza, Le sedi della Seconda Università di Napoli, E.S.I., Napoli, 2010, pp. 15-19.*
4. C. Celano, *Notizie del Bello dell'antico e del curioso della città di Napoli*, Stamperia Floriana, Napoli, 1856, vol. II.
5. L.V. Bertarelli, *Guida d'Italia del Touring Club italiano: Italia Meridionale. Napoli e dintorni, II, Milano 1927, p. 256.*
6. U. Carughi, G. Muselli, *Un progetto per la chiesa di Sant'Aniello a Caponapoli*, note by B. Gravagnuolo, «Bollettino d'Arte del Ministero per i Beni Culturali e Ambientali», 1989, 58, pp. 101-110. R. De Fusco, *Archeologia e modernità della chiesa di Sant'Aniello a Caponapoli*, «Rassegna ANIAI», 2011, 3, p. 22-25.

Survey models

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What is a survey for engineers and architects? The activity needed to guide and orient design can be synthetically defined as follows: to reconstruct from the existing artifact the documents and drawings needed to realize it. Normally, these rarely coincide with the state of the sites. The description of the design or the design itself is, for obvious reasons, an approximation of the artifact. There are two phases in a survey: one in which a numerical model (discrete, discontinuous, imperfect) is derived from the artifact and another in which the obtained numerical model is abstracted in its calculated form (continuous and theoretically perfect in the idea).

Having carefully described the data acquisition mode and thus the reliability of the tools, it is possible to consider the numerical model as experimental data, i.e. objective data. By contrast, deriving the mathematical model is a question of interpretation. This is easily explained with an example. Let us imagine that we have identified three points on the cornice molding of the portal illustrated in the figure and that we have measured these points using trilateration. If we carefully describe the tolerances, it would be reasonable to think that another operator could shortly afterwards verify our results using the same tools according to what we define a numerical experimental model. However, in order to visualize the form we would have to join the points with a continuous line. As the points are not aligned we could use segments or curves and we would obtain a circumference arc or perhaps an ellipsis or a polycentric, how would we decide? In the past the surveyor had to rely on the geometry of intuition but today digital technology offers procedures that automatically verify the adherence of the geometric model to XYZ_RGB point clouds and so it is possible to measure the gap between the experimental (numerical) model and the theoretical or ideal one (mathematical). This possibility paves the way for a better understanding of in progress variations.

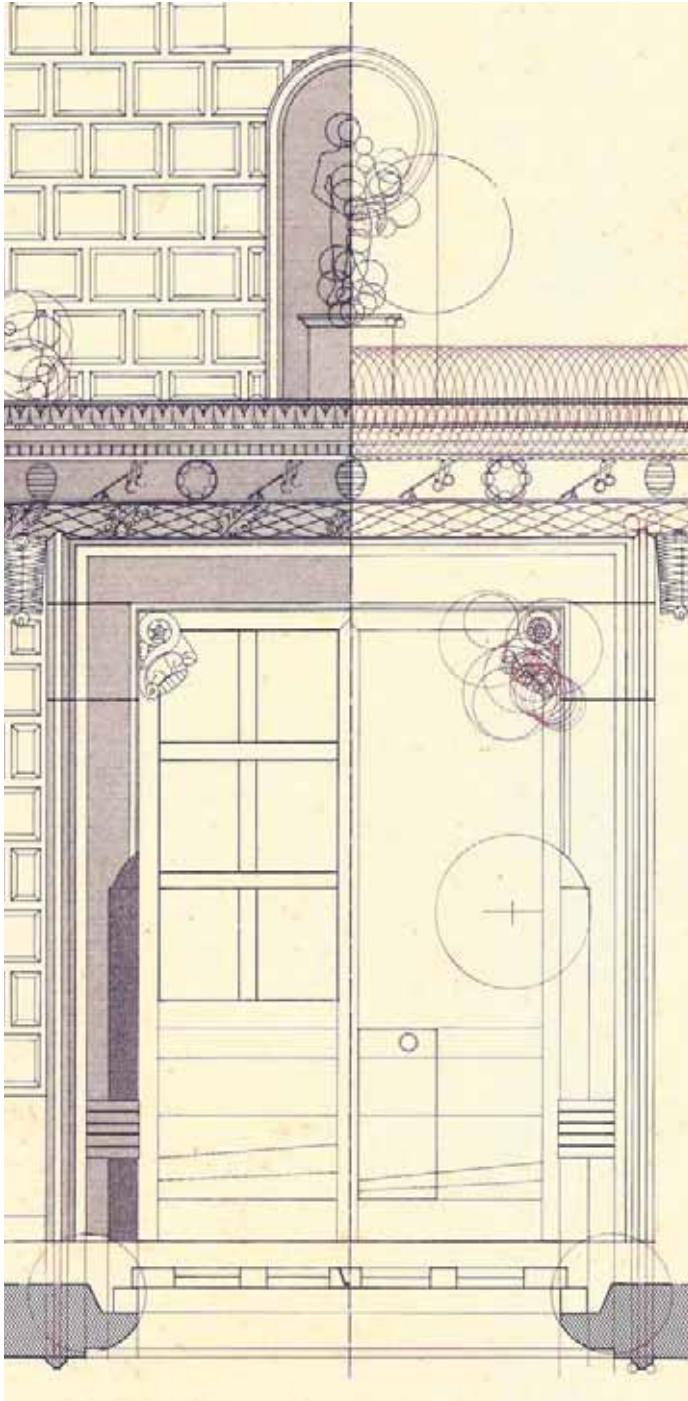


Figure 1 : Palazzo Petrucci portal



Figure 2 : Door swing.

Naples: sea city with harbor

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Even when they resemble each other, port and city have “remote” relationships. These are different territories, essentially separate; and when the reasons for the existence of the one, the harbor, are no longer understood and accepted by the community inhabiting the other, the citizens, the risk is intolerance and rejection: and it is perhaps superfluous to remember that the only way to combat intolerance is to promote knowledge.

This knowledge, especially when it’s linked to the will to build new relationships between port and city, must move from the identification of the differences: one thing are urban realities that could / have had to relocate or dismantle the harbor facilities that occupied their most consolidated front; another are those that could “fragment” them because of the different, very different functions of their parts; another are the ones that must live with their, often cumbersome but historicized, presence.

It is welcome in this latter case, which is the case of Naples, a logic of “opening” of the harbor to the city, an integration of the spaces of each other, so different even when they look similar; provided that this integration is not a cancellation but “availing” of the differences and it can also serve as a vehicle of knowledge of the other, most significant differences - concerning modes of use, legal provisions on customs matters and security requirements - that prevent citizens from freely accessing all port facilities, as is instead the case with “internal users”.

It is welcome, in short, the awareness that the port is also, and perhaps above all, a specific and complex place, made up of spaces, land and water, buildings and “machines”, constructed and layered over time, and linked in articulated manner - even over time - with the city behind it. Before you imagine its transformation and integration with the spaces and life of cities, you need to know how to read and describe it.

The work of describing this place serves to highlight its identity features, to retrieve the traces that history has left in its piers and quays but also to highlight the accelerations that have been imposed on this story by the rapid evolution of the modes of maritime traffic; it serves to clarify the quality of its relations with the urban structure and to identify the “parts” of the port that more than others are hit by this; it helps to think about the particular and differentiated qualities of the artifacts present in the harbor and their modes of occupation or structuring the space; it contributes to accurately detect the typology and distribution of the

activities taking place in this area and to verify its connection, congruence and compatibility with the places they use; it serves to discover the recognized and potential qualities of empty spaces and artefacts, measuring them not only on the specific value of individual objects, in the formal, historical, constructive, typological, functional sense, but also on their position and role within of the port area; serves to identify the points of discontinuity or degradation, analogous and different from those of the city, to turn them into places of new relationships or redevelopment opportunities. In this way it is possible to “base” on the knowledge of a specific reality the modification hypotheses, avoiding hasty assimilations with the most emblematic and known cases of transformation of port areas and recovering instead of those experiences, especially their being parts of a cultural process that has seen increasingly emerging the reasons for a respectful integration of differences rather than those of simple assimilation between urban space and port space.

It is with this spirit that between 1998 and 1999 a group of researchers at the Faculty of Architecture of Naples, led by me, on behalf of the Port Authority, dealt with the task of developing “preliminary studies for the drafting of the new plan regulator of the port of Naples” (the “old” one - then still in force - dates back to 1958). The work was, *inter alia*, based on the indications contained in the recent Law 84/94 establishing the Port Authorities and stressed the need for port planning based on an “agreement” with local authorities: city and harbor were to establish a new dialogue, based on the identification of common interests and the necessary compromises linked to a often difficult coexistence. Never again, therefore, a plan like that of 1958, which had planned a generic and violent - as ineffectual - extension of the port on the east coast of the city; and never again the generic claims of a drastic downsizing of port facilities and functions in the name of an equally generic “liberation” of the sea front of the historic city, completely obstructed by the nineteenth-century expansion of the port infrastructure. Rather, a careful identification of possible new relationships based on the interpretation of a complex a paradigm of clues that takes account of the reasons and potentials of a story, to a certain extent, common and projected into the new dimension of contemporary portuality. Meanwhile, the physical relations between the port and the city have somewhat “softened” (in 1999 only the wall surrounding the Beverello quay - the one used for traffic with the Gulf Islands - had been demolished - but the gateway of Piazzale Angioino was still standing; the customs barrier still tightened the space of the adjacent quays, the Immacolatella was invisible and unattainable), in some cases giving reason to the predictions of the old preliminary study: today some of the port spaces are freely traversable by citizens, the customs barrier has been “backwards”, the pedestrian crossing is under construction, which will link Piazzale Angioino with the new Municipio metro station. But it is equally evident that the city and harbor spaces have remained contiguous and have not become continuous; that a generic opening - which did not distinguish, for example, between piazzale Angioino and the adjacent quay (still destined for roll-on roll-off cabotage and, therefore, for the low “urban” presence of trailers) - involves only improper visual and functional contamination and unnecessary restriction of the most proper ports logic; and above all the fact that the lack of a deeper and more aware dialogue between the two administrations (and far-sighted management of strength relationships between business groups and Port Authority) has prevented from looking far and leaves unanswered some of the most obvious transformation potential, extraordinarily concrete and productive for the city and its port, which was already shown in the 1999 study.

Best practices in improving energy efficiency in a cultural heritage urban scale building. The Real Albergo dei Poveri in Naples Italy

Francesca Brancaccio

Conservation Architect

The worksite for the construction of the Real Albergo dei Poveri, in Naples (Italy) started in 1752, on project of the architect Ferdinando Fuga, strongly wanted by the King Charles III of Bourbon, with the idea of housing more than 8.000 destitute citizens in the Kingdom of South Italy, to give them shelter, nourishment and work. The forecasted building was supposed to have 4 pavilions, organized around 4 courtyards, in order to keep separated “categories” of poor people, by sex and age, symmetrically organized around a central body hosting the administration’s offices and a church. The urban scale of the design - 660 mt. long, 100 mt. wide, more than 40 mt. high – meant to emphasize the power and to suit the functions of one of the largest public building in Europe, even if not completed (only 40% of its initial design was eventually accepted, only 3 out of the 5 courtyards eventually built, the church and the back front were never completed). In 1980 an earthquake caused the collapse of some parts; abandoned and disaffected until the end of 90s, the Municipality of Naples, its owner, started big conservation efforts through an European competition awarded in 2002, by charging of the project an interdisciplinary group of architects and engineers, the RTP Croci Repellin.

The opportunities that the restoration opens in the future, are an important challenge for the city, because emblematic of an operation on a large scale. The research methods aim to restore the building by finding adaptive reuse solutions, integrate preservation and sustainable development, in order to ensure the protection of both past and present.

The Italian School of Restoration of Monuments, from Renato Bonelli and Roberto Pane up to Giovanni Carbonara, has shaped the philosophy of minimal intervention, through the premises of “critical restoration”, by combining “old” and “new”, with surveys, architectural analysis of degradations, historical research, considering the “monument” as a “document”, through attentive observation and study of its environment (“ambiente”). The result is a sustainable project, that matches all the data and findings with philological conservation, compatible re-employ, potentially reversible new technologies. Sustainable development is among the current objectives of cultural heritage preservation, through the actuation of “good choices” and “best practices”, by allowing continuity in a new dialogue towards future between buildings and their context, history and modernity, “old” and “new”, past and present.

The new project combines a philological respect of the architectural typology and its stratifications, with new materials, by critical operations of demolitions, and by integrating history and modernity through eco-compatible solutions. The intervention is not based on dogmatic rules, but it wants to give answers to the problems of structural consolidation, reintegration of gaps, elimination of the added parties and of reversibility and readability of interventions, through a critical control of restoration techniques, execution of details of substitution and necessary integrations. The project wants to respect history and to transmit it, under the best conditions, to future generations, by keeping, when possible, restoring when needed, implementing in order to give effectiveness to the building, to clarify the reading and convey its values. The elimination of added parties, non compatible with historical values, has been evaluated, case by case. Contemporary solutions, clearly identifiable, are studied in order to efficiency to what time has transformed, matching with new exigencies of future users. According to the concepts of minimum intervention, structural compatibility, chemical and physical sustainability, the intervention aimed at increasing the legibility of the figurative unit and its historical stratifications, and to reach a high environmental quality through the use of ecological energies, by developing technical solutions for restoration. Environmental management has been used, in order to reach energy efficiency. The building is being refurbished using traditional, locally sourced, materials, achieving high thermal efficiency. The project includes integrated project planning, active and passive solar design, low energy construction, sustainable materials and components, renewable energy technology and building energy management systems. The priorities taken into consideration are:

- respect for history, already existing historical materials and shape;
- use of traditional techniques in reconstruction;
- use of local, natural and ecological materials in restoration.

Renewable energy technology and rational use of energy criteria are compatible with the restoration of historic buildings, especially by the implementation of renewable energy sources, new materials in the restoration of cultural heritage buildings, improvement of conditions - increasing thermal comfort (heating, ventilating and air conditioning systems), implementation of automation systems and modern installations, heating and cooling systems in cultural heritage buildings.

The research work on site has shown how the existing structures can form part of an intelligent energy strategy, when working with thermal mass, inertia and passive solar gains. The involvement in the European project S.A.R.A., among 6 highly sustainable and replicable Public-access buildings in EC Member States, has been of fundamental value to maintain the innovative energy aspects of this restoration project. The result of a sustainable, cost effective, high energy performance, public-access eco-building, replicable at large scale was the objective attended by the project, through the key aspects of public-access, innovative yet cost effective and replicable results, producing large scale social, urban and environmental benefits. In 2008, the advisory UNESCO-ICOMOS mission report to the historic centre of Naples assured that the project was “a successful response to the challenge of reusing large-scale buildings”, by underlining its innovative approach. “The project team aimed at applying an integrated design for an eco-building - innovation in planning and architecture to reach sustainability, at adopting natural and local components and materials, as well as integrating renewable energy systems in the restoration of the ancient building”.

Decumano maximus, Neapolis urban shape

Giovanni Multari

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In international workshop activities like those held at the University of Naples, it is critical to report to the students project experiences carried out, useful references both for a methodological and a compositive point of view.

The main aim is to share the idea of “how to shape an urban area”, merging design solutions referred to differet issues: architecture, archeology and accessibility.

The “Decumano Maximus” is a series of specific projects aimed at redeveloping public open spaces in the historical fabric of the city, working on the accessibility and direct use of the assets.

Different design focuses are taken into account: the Acropolis, the Necropolis and the ancient Forum, all remarkable points of the urban fabric over the millennia.

Miraglia square in Policlinico area was the ancient Acropolis of Neapolis. For the church of the Croce di Lucca, one of the most important monuments in the area and currently no longer devoted to worship, a museum destination and access to the archaeological area is proposed.

The square project has two levels, in the lower one it will be possible to see the ruins of the ancient Greek-roman walls. From the surrounding courtyards the view of the excavation is offered.

At the far end of the “Decumano Maximus”, Castel Capuano stands out with its majesty. The castle has been deprived of its function that subsequently led to a social impoverishment of the entire urban area. In the ancient Greek Poleis, cemeteries were built outside the city’s walls. An ancient Necropolis was found on the site of the castle. Romans, as usual, overlapped the tombs on the Greek ones.

The project, according to the principles already mentioned, tries to give a new function to the place creating a path that allows to reconnect to the entire area. The place where the finds were located is currently underneath a parking, which according to the project, will become a big square, back to being a public good.

San Gaetano square, built on the ancient Forum of the Greek-roman Naples, split in two different levels connected by small stairs. On the opposite side there is San Lorenzo church, where it is possible to find post-war period ruins. The project proposes a staircase linking the two levels and creating a unified space.

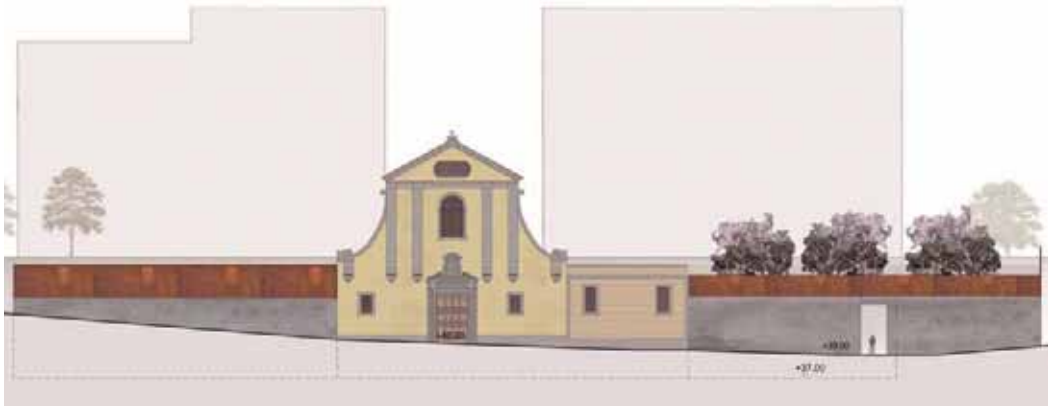


Figure 1: Applied research on the historical centre of Naples (drawings by the students Serena Barone, Martina Ciampi): Acropolis, the Croce di Lucca Church and the Greek Walls; Necropolis, Castel Capuano and the north-western excavation; the ancient Forum and the reconstruction of the ruin on Vico Maffei.

Naples in the twentieth century

Sergio Stenti

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Naples in the twentieth century occupies little space in the millennial history of the city, but some places express their modern stylistic features better than others. In short we chose nine key places as significant to the modern city: the liberty style at Chiaia, the monumental at the rione Carità, the modernist classicism at the Mostra d'Oltremare, the twentieth-century eclecticism in palaces on the seafront, the traditionalism and avant-garde in the bourgeois residences of Vomero, the mediterranean rationalism in the villas at Posillipo, the modern urbanism in the Fuorigrotta district, and tall buildings at the Directional Center and contemporary design at the Metro Stations.

1. On the coast line the construction of the late liberty style station of Mergellina stimulates the creation of new neighborhoods and the nearby eighteenth-century municipal garden enhanced with new chalets and pavilions such as the elegant iron and glass structure of the Cassa Armonica (Alvin, 1877) and the Press Club (Cosenza and Canino, 1948) of a late and sober rationalism.

The important seafront of Via Partenope acquires a varied and eclectic configuration with the new residential and hotel buildings such as the Royal hotel in '59 by Chiaromonte with the interiors designed by Giò Ponti and the hotel Vesuvio in '48 by Platania using a quite Italian modernity style.

Into the Harbor appear many specialized buildings such as the Fish Market by Cosenza in '29, that is the first Neapolitan example of modernity, Loris Rossi's Dockworker Club in 1966, like a sculptural experiment of Wright's matrix, and the Bazzani Maritime Station that completes, in the thirties, the Town Hall square.

While in the post-war period the Via Marina's seafront is developed along the port as business district, there are also new important infrastructures around Piazza Garibaldi: the Railway station in '54, the remarkable Commodity Exchange in '64 by Capobianco and the Circumvesuviana station by De Luca and Marsiglia in '72.

2. During the thirties the fascism created a new city center, the rione Carità, with monumental public buildings. Razing the historical edifices, the new buildings design massive constructions: the marble and mendelsohnian Post Office Building by Vaccaro and the twentieth-century style brick building of Public Finances by Canino. Other public buildings nearby oscillate between renewal of the tradition (the Province Palace, by Chiaromonte and Canino in '34)



Figure 1: On the left Mannajuolo Palace, Via dei Mille, C. Ulisse Arata, 1910. On the right: the Post office building, piazza G. Matteotti, G. Vaccaro and G. Franzi, 1933-36.

and the avant-garde Littoria style (War Crimes Mutilate building in '38 by Guerra).

Completed in the postwar period with commercial buildings, the rione Carità still succeed to express some interesting works such as those that complete Town Hall square (the Bank of Italy and the Ina Palace by Canino and Foschini in '51 and, towards Marina str., the Italian nineteenth century style Corner Business building by Canino in '50.

3. The district of Chiaia is marked by two architectural styles, liberty and rationalism. While at Parco Margherita are declined all the variants of the bourgeois residences, from castle to small apartment block, along via dei Mille there are mostly residential buildings. with Liberty decorations. The protagonist is Giulio Arata who proposed with his Mannajuolo apartment block in 1909, a remarkable and scenic urban solution, and moreover the most beautiful commercial building in the city with large windows and thin structures, the Gatti building. At Carducci St., Chiaromonte and Platania designed in the 1930s the first reinforced concrete buildings using an architecture style hanging between rationalism and the Italian nineteenth century. It is worth mentioning the open courtyard condominium by Platania, which recalls the contemporary Milan example by Terragni.

4. Posillipo is a green place far from the center, overlooking the gulf of Naples, and it is a privileged site of grandiose villas since the 19th century. The theme of the villa continues in the twentieth century. We find the elegant "Villa Pappone", perhaps the best example of a liberty building in the city, and many rationalist works declined in all its variants such as: the mediterranean villa Oro and villa Savarese by Cosenza in '37 and 42, the villa Maderna and villa Crespi by Pacanowski, the organic White villa by Pica Ciamarra in '65. In addition to the villas, few buildings deserve attention in the wide post-war speculation: the condominium by Di Salvo in Manzoni str. in the 1950s and the remarkable terrace complex of the Swiss School in 1964 by Schnebli.

5. Fuorigrotta is a modern neighborhood designed in the same period of the Mostra d'Oltremare in 1938. Here the popular post-war dwellings have produced a quarter of significant examples of rationalist neighborhoods such as Viale Augusto Complex by Cosenza in 1947, and the almost organic layout of Loggetta quarter by De Luca and Cocchia in '55. The most beautiful architecture is undoubtedly represented by the Politecnico University by Cosenza in '55, which, together with the adjacent residential complex, occupies an entire

block of the plan. A dry and compact complex, a courtyard plan, with tall, hardened and curved part of the building. The Politecnico also design the whole side of Tecchio's square. Also worthy of note are the CNR building, a technology construction by Pica Ciamarra in '84, the multiplex MED by Costa and Scognamiglio in '99, and the Rai auditorium by Avolio De Martino in '59.

6. The Mostra d'Oltremare is an urban park born in '39, which is today an architectural museum of the twentieth century.

Designed by Canino, avoiding the traps of the perspective axes and the planimetric symmetry, the plan revisits some Italian historical public spaces and, together with Luigi Piccinato, develops a modern landscape view, leaving wide freedom to young architects who designed many pavilions (Cocchia, De Luca, Ventura, etcetera) such as the Esedra Fountain, the Mediterranean Theater, the Torre delle Nazioni, Restaurant and Swimming Pool, the rebuilt Arena Flegrea, the Office building and the Golden Cube.

7. The town's middle class residential area, the Vomero, welcomes the lightness of liberty style of the first residential buildings designed by the Avena's, but these small villas disappearing into the mass of subsequent high-rise condominiums. Among the condominiums emerge the Decina complex by De Luca and Capobianco in '56, the Sacchi building by Cosenza in '59, and the apartment flat at S. Giacomo dei Capri St. by Loris Rossi in '66. Among the great works in the area, we find the 2nd Polyclinic district with the elegant biological tower (Cocchia, Nunziata, '63), the Faculty of Theology (Izzo, '68), and the striking industrial steel pavilion and sheet metal by Pagliara in '73.

8. Late example of a mono-functional business district, the Centro Direzionale of Naples is born in the nineties by the design of Kenzo Tange, which planned a large central pedestrian axis with porticos to the sides and concentrates the 30 floors tall buildings at the focal points of this district, still today unfinished. Style other than curtain wall architecture we can discover in the two postmodern towers of the Banco di Napoli by Pagliara, in the CNR technological towers by Pica Ciamarra and in the small pavilion Olivetti by Piano.



Figure 2: On the left the Mostra d'Oltremare complex, 1938. On the right: Engineering Faculty, Piazzale Tecchio, Luigi Cosenza, 1955-69.

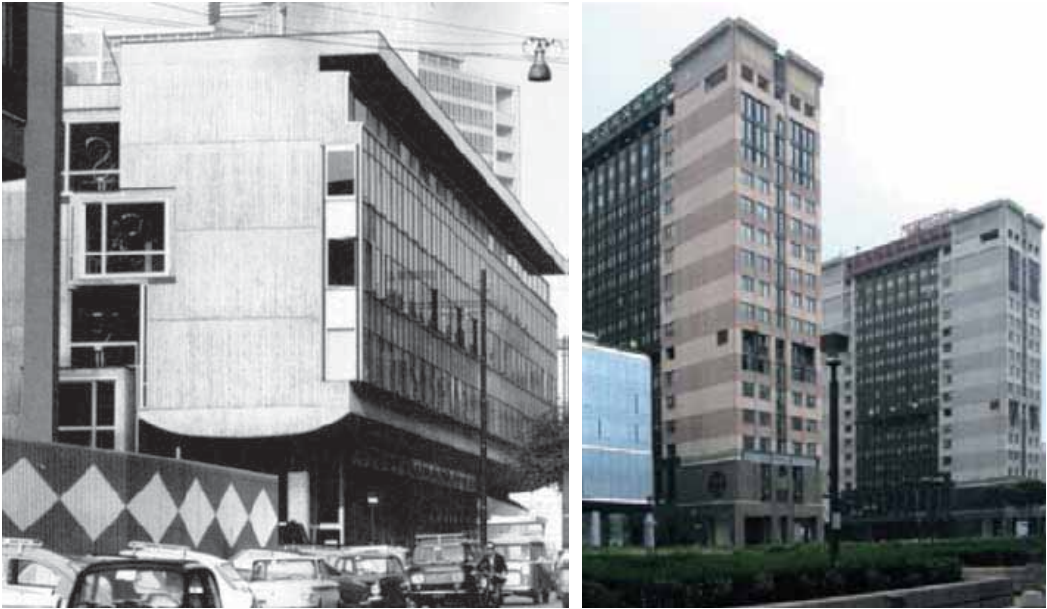


Figure 3: On the left the Commodity Exchange Market, Michele Capobianco, Riccardo Dalisi, Massimo Pica Ciamarra, 1964-71. On the right: Banco di Napoli's Towers, Nicola Pagliara, 1987-93.

9. Usually left in the subsoil as nodes of fast connection between congested urban areas, Metro stations in Naples have the ambition to go out into the surface and become attraction and regeneration objects of central urban spaces. Architecture, art and design are the engines of this urban renewal program that has collected many archistars projects. Among the many, the hub of " Garibaldi " with a lowered commercial plaza (Perrault), "Toledo" (Tusquets) with spaces of a visionary artistry, and "Municipio " (Siza) with its courageous understatement.

Lighting up the Historical Center of Naples

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A workshop about the re-design of the artificial light in the Historical Center of a City like Naples is a hard challenge for young architects. We have to consider what the interaction between light and architecture entails, in terms of usage and fruition, in a place of such extraordinary value. Artificial light can bring new urban, night sceneries to life, which can become real experiences for anyone, from residents to visitors.

A light that is carefully studied to work in harmony with the historical, architectural and urban environment can lead to unexpected results; for instance, it can contribute to the tale of the city. A wisely designed light, far from being spectacular, is rather the result of an interdisciplinary project carried out with a holistic approach, in order to unveil unknown aspects, and integrated with new technologies and a new language, to interest and engage the traveler.

Observing the actual status at a general level, one aspect is clearly emerging: even though the building heritage and urban equipment is partly degraded and partly in good shape, the artificial light is consistently lacking quality, as it was never approached by an organic project. In particular, it is evident that:

- the large majority of the lighting in the historical center generates light pollution, projecting light beams horizontally or even upwards. For this reason, it would be necessary to substitute it with fixtures that comply with the current regulations (Campania Region Law n. 12/2002), in this way not only providing energy efficiency by directing light only where it is needed, but also allowing a better vision of the night sky with its clouds, moon and stars.
- the entrance doors of shops and buildings are often lit with overly powerful lamps, creating a disturbing glare and, in some cases, not respecting the rules about the safety distance between light sources and people. Any operation to improve the atmosphere and make the places more pleasant and enjoyable would be neutralized by these violent lights, creating unbalance in the overall situation. The human eye is a very sophisticated instrument, and it can adapt in a few seconds to the amount of light; for this reason, passing by a shop window lit by a 400W metal halide lamp, the eye will adapt to that enormous quantity of light, and, going back to a normal light situation, for a few meters one will feel like being in total darkness.
- some of the most prominent monuments have dedicated lights. Those are often in contrast

with the ordinary lighting. In fact, very often the street lighting completely erases any special lighting effects on monuments.

- the types of light fixtures and the light color (warm or cool) have no relation with the spaces they are there to serve. In fact, the same kind of lighting is often used on both pedestrian and motor vehicles roads, and sometimes even different lighting is used from a pedestrian road to another. It would be desirable to have people associate intuitively the type of light with its relative space, thus receiving the right safety information.

A substantial correction of these mistakes would be very desirable. It would improve the comfort and allow people to see the evening and night sky. The peculiar daylight blue of the Neapolitan sky becomes a spectacular scenery at night and, without light pollution, it can interact with the artificial wonders that this side of the city is offering. One could restore and return the “natural ceiling” to the “Cardi” and “Decumani”, like the one they had in the first millenniums of their history, before the senseless use of electric light would erase its magic. To obtain this ambitious result, it would be necessary to use last generation lamps classified as “cut off”, with a further receding of the inside light source where possible, so to send the light where it is needed without glare.

It would be useful to reduce the light level (wherever the law allows it), especially in the pedestrian areas, counting on the contribution that could come from the great number of monumental façades, them too to lit with much more care. It would be useful to light up a larger number of monumental buildings just as much as it would be necessary to defeat the lighting abuse of small shops and condominiums.

It would also be necessary to reduce the number of poles and suspended cables running from one side of buildings to the other, which contribute to a general sense of pollution: waste bins, road signs, street lights, monumental lighting, video control systems, advertising billboards, signposts, information signage, suspended banners, hanging wires, traffic lights, etc., in some parts of the city some of these things block the sight of monuments; there is a famous picture taken by an amateur photographer in Piazza Municipio, where the Laureana Arch of Triumph is completely blocked by a “forest” of poles. Such an excess, built up during the course of time, comes from a total lack of collaboration between all the different service providers, so that anyone of them will add its own fixture to whatever is already there. An efficient way for a reduction of the number of poles, would be for instance the use of wall fixtures (with or without arms), suitable throughout all the Greek/Roman urban fabric of Naples. Where this is not possible, a solution could be to use the street poles as support for other services, like signage posting, monumental light fixtures, piping and other installations of electronic nature.

This set of solutions, intended to serve the population and its well-being while walking through the city, would be possible thanks to the state-of-the-art technology available; they would also provide a desirable energy saving outcome for both public and private sectors, as a side benefit, and advantages to the whole community. All of this would also be compatible with a new trend inspired by the moderation generated by the recent economic and environmental crisis.

A note on the typological characters of Ancient Naples

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The smallest unit in which the arrangement of building types gives birth to urban fabric is the block. Indeed, the block (in Italian *isolato*, from Latin *insula*, meaning island) is the smallest part of the city defined by the road layout. This definition highlights one of the constituents of the city, whose characters depend on different factors. Analysing these factors allows to get a classification, which can be used to establish the typical features of the elementary unit of the city. This elementary piece, is in turn consisting of multiple buildings, which define the block itself in different ways. The block's perimeter is shaped by the urban plan, which changes from city to city, as well as within the same city from block to block. The factors to be used to analyse the block are two: internal factors (characters of the constituent buildings) and external factors (urban plan layout). They together determine the blocks' design. The shape and dimension of blocks is fixed by the road layout, that is the public part par excellence in every city. Then, the definition of the block's boundaries is the public moment of the city-building process [2]. The external key factor taking into account the place layout (orography, structure, etc.) is the urban plan. Neapolis' plan has an orthogonal pattern. Three platee (*decumani*), oriented from east to west, and twenty-two stenopoi (*cardines*), oriented from north to south (in reality in Naples, probably for the orography, platee and stenopi are slightly rotated anticlockwise), draw the boundaries of locus, set by three planes staggered in height and degrading to the sea through natural jumps. The city is characterised by the scenic singularity of buildings, organised over multiple overlapping terraces. The agora (Main Square) is located in the most central spot of the city, crossed by the second platea, later called *Decumanus Maior*. Around this place, are located a number of *insulae*, maybe used in the past as public buildings, as supposed by Bartolomeo Capasso (Fig. 1). Theatres are located upstream, characterising the upper platea, while the layout of bottom one, close to the coast, is defined by the shopping centre. The sacred area, the acropolis, as demonstrated by the number of archaeological findings, is S. Aniello a Caponapoli, identified by Mario Napoli as the primordial nucleus [3].

The current appearance of the built environment is given by the spread of the noble courtyard building between the sixteenth and the eighteenth centuries. Yet, the urban layout badly fitted to the typological patterns adopted in other European cities, such as Rome or Paris, to build up patrician palaces. Indeed, the narrowness of the roads obliged the designers to find

peculiar building solutions, never used somewhere else. The architectural sign becomes an optical marker, as the transversal reading of the Palace located in narrow streets is the most frequent situation. The use of Classical Architectural Orders and Mannerist features was unsuitable because of the impossibility of drawing back. For this reason, architects designed thick façades, so that the human eye is able to mark their rhythm, despite the narrow angle view. This way, optics becomes a smart ally for the social sphere, using a metaphor “the greatest steps forward, shows is power, his wealth, his lineage” [4]. These limitations in designing the building volume and his façade led to paying more attention to the courtyard, rather than to the façade. The sequence portal, courtyard, garden or monumental staircase scenically links the street to the courtyard, splitting and merging them at the same time. This arrangement along the axis of portal sets a new typo-morphological relation. The new concept adopted by Neapolitan nobles, completely projected outside, revolutionises the idea of residential block, closed to the outside world. Palace Trojano Spinelli is a well-fitting example (Fig. 2). The building, originally accessible from via Nilo, was renovated in 1767 by Ferdinando Fuga, who linked together the previously separated multiple courts, creating one single perspective view, from the entrance to the side scene, by way of small courts and hallways. This way, he realised a perspective façade, easily enjoyable from the narrow via dei Tribunali. This façade perfectly replaced the standard vertical façade in representing the social role of the family. Being the enjoyment of the façade dependent on the doorway opening, the inside is projected to the outside, blending public and private spaces in the user’s perception. The character of the city has been strongly influenced by these constructive choices that implanted a standardised type, the courtyard building, on a urban fabric born, in the Greco-Roman era, as a support for terraced housing. Combining the concept of court with the traditional block produced the inner and outer factors that currently make the block a typical, although standard, feature, characteristic of Neapolitan architecture. The urban plan layout yet described has been the matrix within which the block developed, representing the unchanging element, at urban scale, in the typological development of the Old Town, over the evolution of internal factors.



Figure 1 – Plan of Old Town of Naples [1].

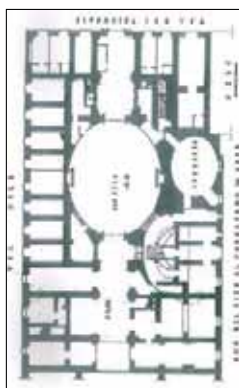


Figure 2 – Plan of ground floor of Trojano Spinelli Palace, Naples [5].

- 1.B. Capasso, Napoli greco-romana esposta nella topografia e nella vita, Società Napoletana di Storia Patria, Napoli, 1905
- 2.A. Monestiroli, L'Architettura della realtà, Milano, 1979
- 3.C. Cirillo, La lettura dell'isolato semplice del Centro Antico di Napoli, in AA. VV. "Storia, architettura e tecnologia dell'insula 34 del decumanus maior", Napoli, 1991
4. G. Labrot, Baroni in città, Napoli, 1979
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Journey on rationalism in Naples

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Modernity is a very old concept and I like to remember it to the young Belgian, French, Turkish and Lebanese students who arrive in Naples overwhelmed by media stereotypes, bad information and even an atavistic communication problem that this city continues to have. The National Archaeological Museum, where Pompeii maquette is always updating the excavation status, ideally build a relationship between the most important tangible witness of Romans daily life and the present time. It frees itself from the monument, attracting the attention of all, scholars and travelers, on everyday life, on an idea of harmonious, measured (tempered) and human living.

For about four years I have driven a large group of architecture students and teachers, from different European countries and the nearby East, to discover for the first time the rational design in the city of Naples. This territorial reality, despite having had some important protagonists of rationalism, preserves this heritage in a contradictory way, partly denied. The journey, allows us to make new discoveries on a set of projects, achievements and experiences that remain after all, the greatest legacy of contemporary design culture to the city. The Olivetti factory in Pozzuoli, by Luigi Cosenza for architecture, Marcello Nizzoli and Pietro Porcinai for colors and landscape design, that despite its refunctionalization still maintains a clear character and image, representative of the idea of a human factory. The building of Politecnico for the University of Naples by Luigi Cosenza, with its typological and detailed solutions is a building-skyscraper based on a court type, implanted on an intentionally organic structural shaping plan, where is yet visible the integration between



Figure 1: Villa Oro by Luigi Cosenza and Bernard Rudofsky. The Olivetti factory in Pozzuoli, by Luigi Cosenza

the mediterranean tradition and the best modern principles of rationalist architecture. The Mostra d'Oltremare Exhibition with plots of pure volumes designed in a green contest, with its many occasions largely lost, yet witnessing a deep reflection made by young Neapolitan designers (Giulio De Luca, Carlo Cocchia and Stefania Filo Speziale driven by the mastering of Marcello Canino and Luigi Piccinato) on the contradictory relationship between functionality and representativeness during the late fascism. The palace of Post by Giuseppe Vaccaro and Gino Franzini, that, while violating an ancient urban fabric, retains its memory, regenerating it, imposing itself as a high-definition project model where all parts up to the last detail of interior design are held together. Casa Oro by Luigi Cosenza and Bernard Rudofsky, as a built-in manifesto for the best modernist utopia, an expression of an ideal relationship for landscape, nature and construction, and still the small presences of modernity in the ancient eighteenth century factories, that provide us with an important teaching, still present today. This set, sometimes weakened and little-known outside of a circle of design addicted, still represents an undervalued heritage, to be resumed and studied, cured and brought to light for the culture of architecture. This heritage is useful to the design culture, but above all to the renewal of the city's culture. If films, comics and arts in general told us this reality, which despite itself became a set of spot and media, movies and fashion initiatives, with less capacity, politics and official culture gathered this value to make it become the element of a renewed, non-oleographic and folkloristic idea of the city of Naples.

At a time when the crisis (economic, value) seems to be the answer to the radical and accelerated transformations facing the technological world, the recovery of the idea of a modern project pervading this ideal tour, which we tell between places and stories, can provide us with a clever and well-grounded way of escape, a way out from the invasion of a bad spectacularization and homologation of architecture that is being produced globally. The idea of design based on ordinary people's needs is what we need to recover in order not to lose the transformation and regeneration opportunities we face: like the recovery of the Hospice for the Poor by Ferdinando Fuga, or that of the industrial areas, starting from the Park of Bagnoli. If this path is understood and pursued seriously we will avoid the mistakes that an eventual and purely symbolic and contingent idea produces. If ideas of rationalism will continue to live in the imagination of designers, administrators and intellectuals then we could say that culture can still be a driving force for the future, for equity, but also for development, production and social mobility. Providing project opportunities and achieving this transformation is the greatest challenge and the inevitable task that the present generation must assume to build a sustainable future, ecologically attentive to the needs of today's inhabitants, but above all the future ones. Only with a tangible transmission of these rational values the city can progress with its people, otherwise what will be gained will be a growth without perspective, a blind development, based on a fallacious and temporary wealth, that could produce a urban future forgetfulness of the goals own of an idea of construction as art of building, of a production that is not finalized to consumption but to live better, evolve and grow with more comfort. The quality of transformations also defines the quality of the culture that is expressed through it, and the future proposal is the core of any design projection. Design simulation is the main tool of building knowledge for the architect-student and should therefore be measured not in its realism but in the imaginative projection. Measuring with the stratification of such a rich and complex fabric is therefore a formidable tool for developing design sensitivity and intentionality.

Contextual Design and tacit-knowledge

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The contexts talk to us and suggest the vision that design has to summarize, to transform and perform itself into the encounter and exchange with local entities. It works if it performs as a coherent system of actions set up to make a concrete change in local development, promoting and implementing dynamics of accompanying based on capabilities. In consideration of the social, economic sustainability each project is characterized thanks to the networking oriented to an appropriately use of resources, while providing completely independent results. However, design concurs to the development of a thought related to local knowledge; sensitive and heterogeneous tacit knowledge with an indeterminacy component that supports system connections. A soft recognizable and adaptive model, a Mediterranean Model, in opposition to the modernist cultures that tend to assume the lives of the territories and consequently of the people; consolidating existing imbalances and inequalities, focusing on models of development characterized by scarcity and deprivation. The consideration of the vulnerability stages of social, economic and environmental systems of urban historical city - as Naples -, undermines the structure of current cultural and economic thinking; the consequences still undervalued to be assessed the price of change in place, in public and economic structures of specific realities. Alongside, local systems demonstrate low resilience, the design process supports and provides local action groups with the design tools able to visioning the change. The way of local development of historical cities, contemplates an approach that imagines and promotes a new vision of the urban space that recognizes its environmental vulnerability; Naples that gets local weak interactions to evolve and which believes in profitable relationships on the net [1]. The design of historical contexts considers resilience as an index of the complexity of system; it breaks into planning thinking as a critical factor to restore social spoilt capital, implementing forms of local productive development as an element of self-determination of communities. It happens that the interactions of the networks carried out by the local actors become a design activity that acts on the aspects of the material contexts; the value-creating process starts with local tacit-knowledge [2], but also acts on the network of economic and social structure of the territory [3], demonstrating how the different use of the capabilities is economically more useful and profitable. The greatest benefit achieved is to translate the structure of the business network [4] into a wider one, due to the territory conversion into its physical-social dimension; creating a relational model that brings the exchange among stakeholders to discover unedited and locally scalable co-design forms. Design assures the role of mediator in social and productive relationships, a very complex activity that involves alongside designers, people who voluntarily connect with each other through various formulas and express their ability to become the 'community of sense' [5].

Design of contextual tacit-knowledge

The design project arises in contexts, where cooperation and collaboration are fundamental parts of the complex system of relationships, which make up and identify the territorial system focused on the development of shared strategy [6]. Local historical systems express a contextual tacit-knowledge and it's such knowledge that is generated into communities and belongs them; whose participants convene within a shared environment e mix of experiences, language, and common culture. Regain this kind of knowledge, derived from living the places according to a relational context, gives to design a role of listener of places acting as a mediator of silent and uncodified knowledge. Design, as an organization of skills, is able to intervene concretely in such mechanisms, making a contribution that becomes evident the dimension of 'how to do things' in terms of concrete solutions; on the other hand, by intervening on the terms of scenarios definition and future actions that promote the wider processes of local development [7]. Therefore, design can engage a 'strategic visioning', associated to the ability of imagining trajectories of development and to prefigure new relational networks; innovative ways to experiment future actions such as scouting skills, useful to the urban system. The design suggests specific operational solutions derived from contextual design options and clarifies the spreading participation as a form of co-design in the project development, through the cooperation between stakeholders and users [8]. If we also consider design tools available to designers, we can identify different categories: project tools that support the analysis of territorial resources; information and communication and dissemination; facilitation and involvement in the creative process; visualization of project and activity solutions within the whole process. The aim is the introduction of innovation to the historical urban scale [9], restoring the links among places and people, continuous learning, the enhancement of material elements such as contextual tacit- knowledge, culture and the enhancement of traditions. Finally, it's necessary to adopt an approach, which promotes a form of community sharing project, capable of acting with an integrated way on strategic, organizational and design levels concurrently. Contextual design is a methodology that aims to develop innovation processes for the urban environment and establishes context design practices by testing models of co-design among different activity systems developing specific tools. Designers, researchers, businesses, users and contexts of life are the resources that are part of creative ecosystem where the method is developed. The Contextual design process offers the conditions to capture the creative, productive and economic opportunities offered by local ecosystems; the network is the model where competency-based relationships mix together among nodes to develop connections, thus generates responses to specific needs. In the network economy [10], a fundamental role is played by the 'interferences' of the nodes that represent a random source of information, playing a role capable of implementing a radical change into the configuration of the network and thus the project [11].

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Inverting City Standardization: a participatory solution

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Our contemporary society is even more influenced by technology: our daily actions and our way to approach the news are increasingly spread by technology. Social Networks are creating new opportunities, both for people and businessmen, offering new potentialities and facilitating a huge interaction. Based exclusively on the principal social networks, users can: share videos on YouTube, post anything on Twitter, share photo and every kind of media contents on Facebook and Instagram, making real a communication strategy whereas capacity is dynamism and interaction with different users connected by the same tool.

Looking at a city like Naples, not only in a touristic way, what happens is that the single point of view is more and more standardized and stereotyped, people lingers on “a first look”, which would allow to reach the greatest number of likes and tweets, without trying to build their own point of view of that place: the final result are equal photos with equal photographic filter, with the same hashtag and comments.

We wonder how to get over this one way reality, seen by everyone in the same way, since man is naturally able to recreate the images all around: thought and concept, memory and dream, the whole experiences are reported for unique images. They definitely do not



Figure 1 : Project Image: Fallo Tu / Do It Yourself - Smart guide to Naples

represent objects, rather the archetypes of things seen and experienced, once or frequently. The sedimentation of impressions gives life to a kind of stylized drawing, without any well defined outlines. These are images similar to those dreams, schematic, iconical [1].

Therefore our aim is an experiment, more than a project, where the editorial expedient is a useful tool in creating a participatory device [2], where the primary role is the invite, directly to users, of composing their own image of a place.

In order to get this target we've projected a guide of Naples where the double page is structured with various contents such as curiosities, legends, but also tweets and posts, which regards that place, so there's an hybridization between ancient and contemporary agora, divided according to the cartographic orientation of the same place, and on the right page user can write down as preferring his impression on a place through a drawing, a phrase, a thought, the receipt of the bar or the subway ticket, creating in this way the unique image, normally and usually suppressed by the use of social networks, such as anybody is no longer able to realize.

The participatory project exists when, at the end of each "journey" there will be "n" guides, all different from each other, characterized by the time, the tastes, the passions, the abilities of each single visitor.

1. Adrian Frutiger [1928 - 2015], *Segni e Simboli*. Stampa Alternativa.

2. Participatory Design: the design field characterized by the involvement of final users in decision making and planning, aimed at developing artifacts capable of better responding to end users' needs. One of its critical aspects is the ability to bring out the needs and implicit knowledge of users, as regards both their needs and their desires and their hypothesis of design and implementation.



Figure 2 Project Image: Fallo Tu / Do It Yourself - Smart guide to Naples

Naples: the porous city

Emanuela Spanò

The idea of porosity, proposed by Walter Benjamin in *Images of cities* (2007) [1], well expresses the concept of co-belonging, instead of being opposite, of spatial and temporal categories, always in relation with the subject experiencing them; in and out, exteriority and interiority, private-public, past-present-future. In relation to Naples, Benjamin argues that porosity organizes the city working as its law. In this sense, reading Benjamin and Lacis's essay "Naples" (1925), creates the opportunity of exploring this fascinating concept more in depth highlighting its still relevant potentiality of reworking the nature of the spatial, temporal and social borders. Starting from this premise, the aim of this contribution is to briefly review all the different "nuances" this concept brings with itself in relation to the specific urban dimension of Naples.

Benjamin's essay on Naples is one of his lesser known works. He was obviously fascinated by the nature of the city of Naples. What does its architecture mean? Where is the feeling or sense of its identity located? Working through Naples, the term porosity it is, firstly, connected to one of the most demanding terms in Benjamin's work, namely grey. In relation just to Naples, he writes:

«Fantastic reports by travelers have touched up the city. In reality it is gray: a gray-red or ocher, a gray-white. And entirely gray against the sky and sea. It is this, not least that disheartens the tourist. For anyone who is blind to forms sees little here. The city is craggy. Seen from a height not reached by the cries from below, from the Castel San Martino, it lies deserted in the dusk, grown into the rock. Only a strip of shore runs level; behind the buildings rise in tiers (ivi, 309).»

Porosity works together with grey (Fig.1). Grey as a color, as a surface, is the sheen of potentiality. Grey is pure gossamer. Grey is always the range of colors. Benjamin concedes that this predominating grey may have a detracting effect. In fact, he argues, that «Anyone who does not see form sees little here». Seeing into the grey is to allow for sight to acquire its own type of porosity.

What is at work here is the movement of interpenetration. For Benjamin, in fact, porosity assumes interpenetration. What can be described as a seeing-into occurring at the same time as a coming-out-from (Benjamin A. 2005) [2]. The latter is the continuity of that which is finding form. The former - seeing-into - is allowing for this continuity's registration. Seeing grey dissolves surfaces - or rather dissolves surfaces as given in opposition to depth. The German philosopher notices:



Figure 1. Palazzo Orsini di Gravina: an example of Neapolitan grey Figure 2. Pallonetto Santa Lucia at the end of XIX century

«Brightly dressed boys fish in deep-blue streams and look up at rouged church steeples. High above the streets, washing lines run, with garments suspended on them like rows of pennants. Faint suns shine from glass vats of iced drinks. Day and night the pavilions glow with the pale, aromatic juices that teach even the tongue what porosity can be (Benjamin 2007, 312).»

Flatness founders, the stream is deep blue, the steeples wearing make-up thereby allowing surfaces, apparent planes, to have been captured by the continuity of coming-out-from. They start to appear, to shine, capturing light, displacing its effect, caught, amongst other things, as a moment within refraction. Becoming, reappearing no longer as one but as the continual play of light, color and, in the end, texture. Though this is no mere end. All of which is there in the grey. There, that is, in grey as inexhaustible potentiality. As the tongue tastes, what is tasted colors walls. Light slips through to solid and taste from tongue to sight.

So interpenetration, though not as an amalgam, but as the continually enacted set of complex relations, reworks the differences between time and space. A reworking and not a vanishing, hence spaces become timed as time acquires spatiality (Benjamin A. 2005). In this sense, time, space and the body work together, are porous themselves. Porosity provides a way of making space and time work together to define both the urban condition and the body's place and presence within it. In this sense time is integral to an understating of urban affect. Benjamin and Lacis describe, in fact, the city of Naples in both spatial and temporal terms. They assert that the city is in a continual process of discontinuous transformation. In Naples, porosity and transience manifest. The city is not homogenous but porous in its mingling of private and public space: the home spills into the street. Similarly, it has no temporal fixity. Nothing ever seems fixed so that you can't tell if the architecture is in the process of being built or in decay and ruination because «the stamp of the definitive is avoided» (ibidem). Following

that line, the second nuance of term porosity resides in this refusal of the distinction between different spaces, such as “the sitting room” and “the street”, “the courtyards”, “arcades” and “stairways”, or between “day” and “night”. What it does is to begin to define their relation in terms of an already present sense of interpenetration. For this reason, Benjamin has been describing a series of rooms within the city of Naples, its buildings and finally within the cliff faces. Shifting from the grey surfaces and the interpenetration of taste and sight, he defines the architecture of the city «as porous as this stone» (Benjamin 2007, 299), describing the dynamic interpenetration of different elements – the courtyards, arcades, and stairways – and styles – civilized, private, ordered, anarchic, village-like – in a process of perpetual change where the definitive form, the static, is avoided.

It is evident that this is more than a spatial description. As though all that is involved is a series of interlinked chambers and rooms (Fig.2). But, as mentioned above, porosity also involves a temporal dimension. In fact, for Benjamin the interpenetration is positioned within the framework of a productive sense of the provisional. Only by allowing for this original sense of connection can there then be the actuality of interruption and thus the occasion of what



Figure 3. Thomas Jonas Naples Building on a Cliff Top (1782)



Figure 4. Neapolitan “vicolo”

he describes as «new and unforeseen constellations» (Benjamin 1962) [3]. The condition for the emergence of the “new” as an interruption (Benjamin 2000) [4].

In relation to this idea of emergence and co-presence in which the temporal and spatial dimension are fused, Benjamin describes the base of the cliffs, the point at which the city touches the sea, a point of encounter, a place of touch, there are, he notes, doors and caves (Fig.3). They are neither separate nor merely connected. In relation to them he writes:

«If it is open one can see into large cellars, which are at the same time sleeping places and storehouses. Farther on, steps lead down to the sea, to fishermen’s taverns installed in natural grottoes. Dim light and thin music come from them in the evening (ivi, 309).»

And continues:

«Porosity results from the passion for improvisation, which demands that space and opportunity be preserved at any price. Buildings are used as a popular stage. They are all divided into innumerable, simultaneously animated theatres. Balcony, courtyard, windows, gateways, staircase, roof are at the same time stage and boxes...Just as the living room reappears on the street, with chairs, hearth, and altar, so...the street migrates into the living room (ibidem).»

Porosity, moreover, is a psycho-corporeal boundary of space, expressive of the fragile state

of the body. As Victor Burgin remarks, this image of space is latent in all of us:

«The pre-Oedipal, maternal, space: the space, perhaps, that Benjamin and Lacis momentarily refund in Naples. In this space it is not simply that the boundaries are porous, but the subject itself is soluble. This space is the source of bliss and terror, of the “oceanic” feeling, and of the feeling of coming apart; just as it is at the origin of feelings of being invaded, overwhelmed, suffocated. How suggestive is this “feeling of coming apart” for the state of the subject and its space in Naples who soon found itself increasing overwhelmed not by the bliss and terror of pre-oedipal maternal space, but rather by the invasion of the modernization invading its very interiority (Burgin cited in A. Benjamin 2005).»

Porosity is finally linked to personal and private life. As above mentioned, for Benjamin in Naples private life is equally porous. Public lines are drawn through the private. Moreover, what are taken to be merely private concerns are drawn through the public. Their opposition is thus undone and the terms are radically transfigured. The house does not vanish as a place but rather is repositioned.

«Similarly dispersed, porous, and commingled is private life. What distinguishes Naples from other large cities is something it has in common with the African kraal: each private attitude or act is permeated by streams of communal life. To exist - for the northern European the most private of affairs - is here, as in the kraal, a collective matter. So the house is far less the refuge into which people retreat than the inexhaustible reservoir from which they flood out. Life bursts not only from doors, not only into front yards, where people on chairs do their work (for they have the ability to make their bodies into tables). From the balconies, housekeeping utensils hang like potted plants. From the windows of the top floors come baskets on ropes, to fetch mail, fruit, and cabbage. Just as the living room reappears on the street, with chairs, hearth, and altar, so - only much more loudly - the street migrates into the living room (Benjamin 2007, 315).»

Rather than allow the house and thus the private to be equated with the domestic Benjamin repositions it. A move enacted by the particularity of the space having been given by, and through, the continuity of movement, the house becoming thereby an “inexhaustible reservoir”. Thus for one living in Naples solitude takes on a different condition. «Private existence is the baroque opening of a heightened public sphere» (ivi, 311) (Fig.4).

To conclude, if one term could be offered to characterize the city of Naples, it would certainly be the word “permeable”. Permeability denotes the state in which the categorical distinction between the city, body politics, and the text written on that body, dissolve. On this body, one can «read what was never written» as the German writer Hugo von Hoffmannsthal once said. Porosity is the image of this (un)written text which defines the physical and political (pre) modernity of Naples; it constitutes a continuum in the shifting identity of the city and its social body. Porosity of Naples is the symptom of an urban life in which the remnants of the pre-modern and pre-capitalist social forms that never succumbed to the modernist segregation of life between private and public spheres survive. In contemporary Naples, the metaphor of porosity of undifferentiated space competes and survives side by side with “modern” Naples in a dialectical relation between interior and exterior, which belongs to the modernist representational space.

1. Benjamin W., A. Lacis, «Neapel», *Frankfurter Zeitung*, 19 agosto 1925; in Benjamin W., in *Immagini di città*, Torino, Einaudi, 2007, pp. 3-13.

2. Benjamin A. (2005), «Porosity at the Edge: Working through Walter Benjamin's “Naples”», in C. Magerski, R. Savage, C. Weller (Ed.), *Deutsche Universitäts-Verlag*, Wiesbaden.

3. Benjamin W. (1962), *Schriften*, Suhrkamp Verlag, Frankfurt am Main, 1955; trad. it., a cura di R. Solmi, *Angelus Novus. Saggi e frammenti*, Einaudi, Torino.

4. Benjamin W. (2000), *Das Passagenwerk*, a cura di R. Tiedemann, Suhrkamp Verlag, Frankfurt am Main, 1982; trad. it. a cura di E. Ganni, *I “passages” di Parigi*, 2 voll., Einaudi, Torino.



Connecting Visions



Between resilience and resistance: a journey through Neapolitan scales

Christine Fontaine & Gérald Ledent

with Abdelmajid Boulaïoun, Cécile Chanvillard, Joëlle Houdé
UCLouvain, Faculty LOCI, Belgium

At the beginning of each site discovery abroad, our programs are mobilized to build a production of useful knowledge for teachers and students in the purpose of highlighting challenges specific to the context. So was the case for Naples. Architectural and urban planning studios, elective courses, as well as drawing courses have focused on the city and its wide territory.

With Joëlle Houdé, survey drawings were undertaken in October of each year. These drawings enabled the students to look carefully at the town and specific sites of but also to study and draw sections in which students could insert their proposals afterwards.

At the architectural studios along with Abdelmajid Boulaïoun, Cécile Chanvillard, Christine Fontaine and Gérald Ledent, students were invited to understand architecture as a cultural production. Through exercises of decomposition and recomposition, we questioned the works that ground the discipline with a contemporary point of view, to better situate compositional actions today. The modes of representation are a priori classical but also inscribed in a history of knowledge of representation. Understanding the existing voids and elements through the comprehension of their uses is a way of addressing design objectives.

This exercise aimed a collection of representation of Naples, a repertoire of elements for the understanding of local architecture and a design aid as the process continues.

In March of each year, a delegation of our school participated in the international intensive workshops. Philippe Honhon and Bernard Maquet are some of the teachers who came along with us.

Finally, some students chose to develop their master thesis on Naples, directed by Cécile Chanvillard, Christine Fontaine and Gérald Ledent.

Some of these works are illustrated hereafter.



UCLouvain-Naples Intensive program 2015: Noya 2.0 - S.Dahan ENSAM, R.Dibe ALBA, P.Fares ENSAS, N.Kazma ALBA , V.Le Penderen ENSAS, JM.Maatouk ALBA, M.Mauvois ENSAM, V.Metafora DIARC FEDII, V.Petré ENSAS, C.Russo DIARC FEDII, S.Russo DIARC FEDII

Vedute

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Naples: an infrastructure of stone on the sea

In this ancient town, where nothing is still but everything is fragile, stone persists through time, inhabited by uses¹ and beliefs, like those figures of the Virgin that punctuate the walls of the streets. In this city, throughout the centuries, many powers succeeded one another, each leaving its influence. The local noble families persisted, and with them their artistic and architectural imprints and traces². The Neapolitan urban landscape is the result of this permanent resistance. Resistance to occupation, resistance to earthquakes, resistance to the volcano. High and proud, the city stands, monumental and dignified.

The monumentality and the materiality of Naples made it possible to preserve the strength of an infrastructure of stone raised above ground. The *tuffo* stone, extracted and reassembled from underground quarries to become, through the work of stonecutters, an inhabited stone architecture, evokes the idea of a city by the sea, carved into the rock, as described by Walter Benjamin³.

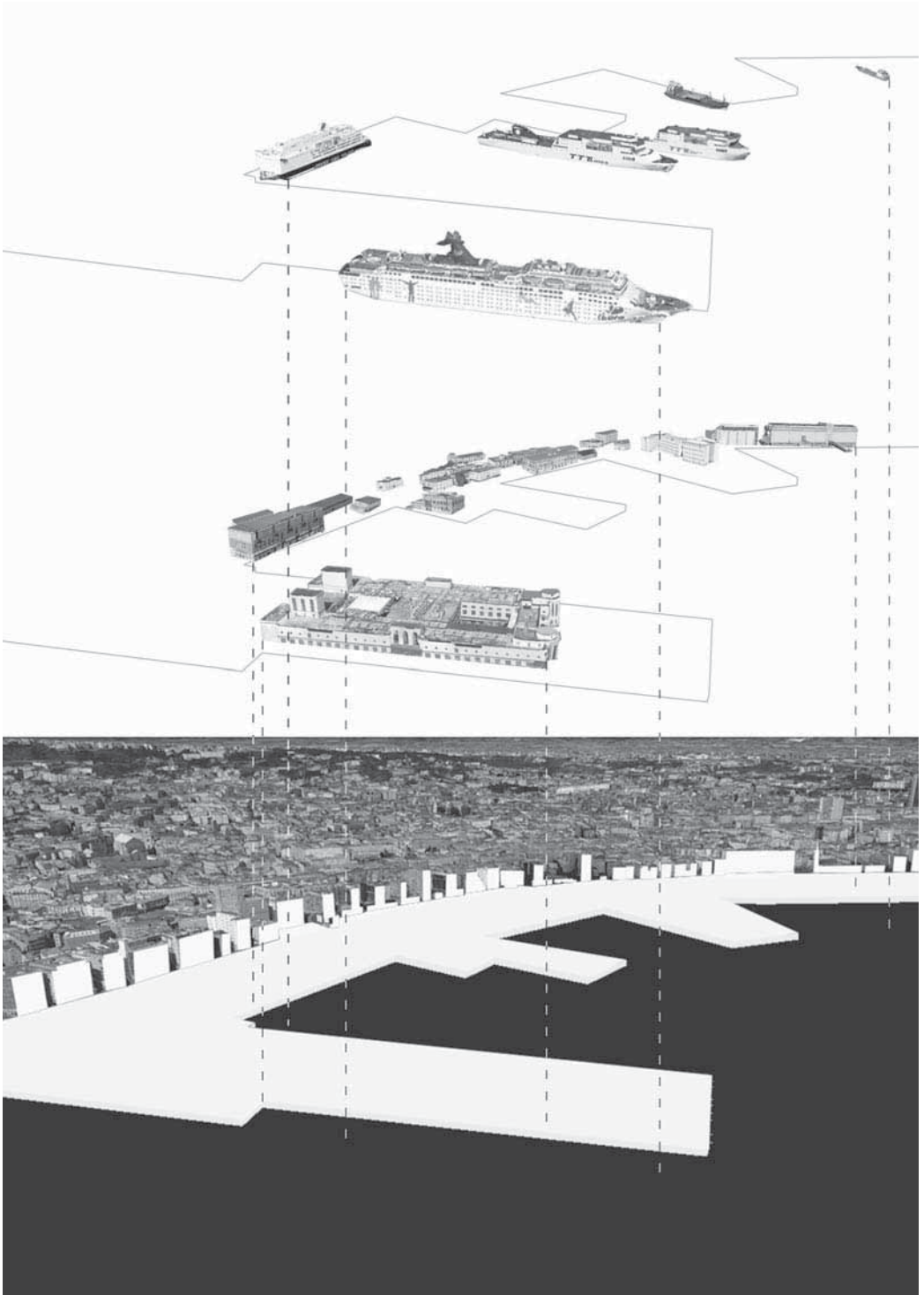
But today the city has lost much of its brilliance and continues to deteriorate under the effect of phenomena such as abandonment to peri-urbanization, poverty, the rise of tourism and the power of the port established on strategic landscape areas, maintaining a rupture between the town and the sea. Some neighbourhoods are experiencing physical, social and economic deterioration despite their high density.

However, the nature of Naples is the opportunity for tomorrow's economic and ecological (re)development. In fact, Naples remains as a productive agricultural land and a harbour on the Tyrrhenian Sea.

1. Described by Malaparte, C. (1951) *La peau*, FOLIO FRANCE.

2. Ferraro, I. (2002) *Napoli. Atlante della città storica. Centro antico*, CLEAN.

3. Benjamin, W. and Lacis, A. (1925) *Reflections. Essays, Aphorisms, Autobiographical Writings*, New York: A Helen and Kurt Wolff Book.



Naples has always been represented as a city in balance between town and nature, between agriculture and harbour. With time, Naples came up with a specific culture, enriched by the collection of works of art and expertise, accumulated throughout the centuries. As the greatest works of art are preserved in the monumental *palazzi*, crafts and small shops are maintained in the *bassi*. The force and vitality of this city, ever alive, acts as a provocation at the foot of Vesuvius, as if to prove that life wins over fear.

At the scale of the harbour, thanks to Roberta Amirante⁴ and her team, we were able to recognize the traces and actors at stake and understand the quality of the cultural landscape. Thanks to Anna Giannetti, we understood that the contemporary issues of the town could also become opportunities for the mutation toward a new *Veduta*. Indeed, this contemporary portrait of the city could embrace the new actors and their activities as recognition of their presence and characteristics of the contemporary town.

From Veduta to Vedute: Breaking the wall

Today, the city is cut off from the sea by its industrial and touristic port. Via Nuova Marina, a true urban highway, also acts as a rupture.

As the population becomes more and more urban, Mediterranean towns are fighting against sprawl along their coastlines⁵. Indeed, how can a town like Naples maintain its porosity, as its spreading absorbs the littoral, the surrounding villages and consumes agricultural lands?

At the scale of the broader landscape, the challenge is to reconcile Naples with its natural ecosystem and its identity of a sloping city at the sea front. The transformation of the harbour into the extension of the historical town could act as the revelation of a new contemporary space. The design of shared places on a continuous dock space could include a pedestrian walk linked to a bicycle path accessible to the inhabitants of the near periphery as well as to the workers on the harbour. This new urban area could become a linear centre at the scale of the metropolitan Naples, connected by the metro and a new tramway.

At the scale of the neighbourhood, how could the invention of new connections through the port offer new uses for the inhabitants of the ancient city toward the sea? From the coastline of Naples Bay and its villas to the occupation by an uncontrolled sprawl and the spreading of the harbour, a hope to link the city and the sea still exists. Two scenarios have been studied in that sense.

4. Amirante, R. (1993) *Il porto (Napoli, uomini e luoghi delle trasformazioni urbane)*, Napoli: Electa.

5. *Revue Méditerranée* 1.2, 2001

Allum, P. (2001) 'Pouvoirs politiques et urbanisme à Naples depuis 1945'

Bertoncello, B. and Girard, N. (2001) 'Les politiques de centre-ville à Naples et à Marseille : quel renouvellement urbain ?'

Burle, J. (2001) 'Marseille et Naples : patrimoine et politiques urbaines en centre-ville'

Froment, P. (2001) 'Le centre historique de Naples : un espace productif menacé ou valorisé par les politiques urbaines ?'

Gianni, R. (2001) 'Ville de Naples, directeur du service de la planification urbaine'

Rodrigues Malta, R. (2001) 'Naples-Marseille : Waterfront attitude'



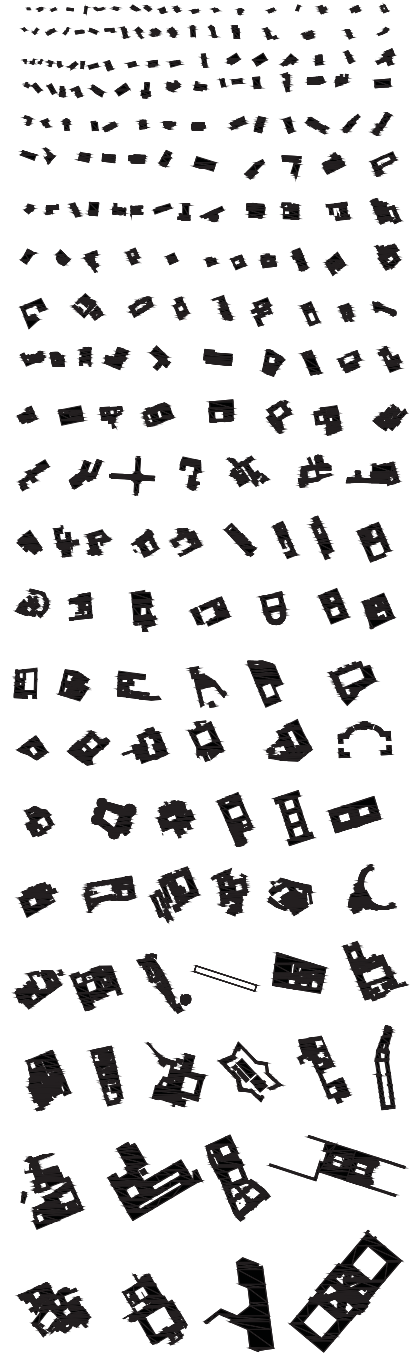
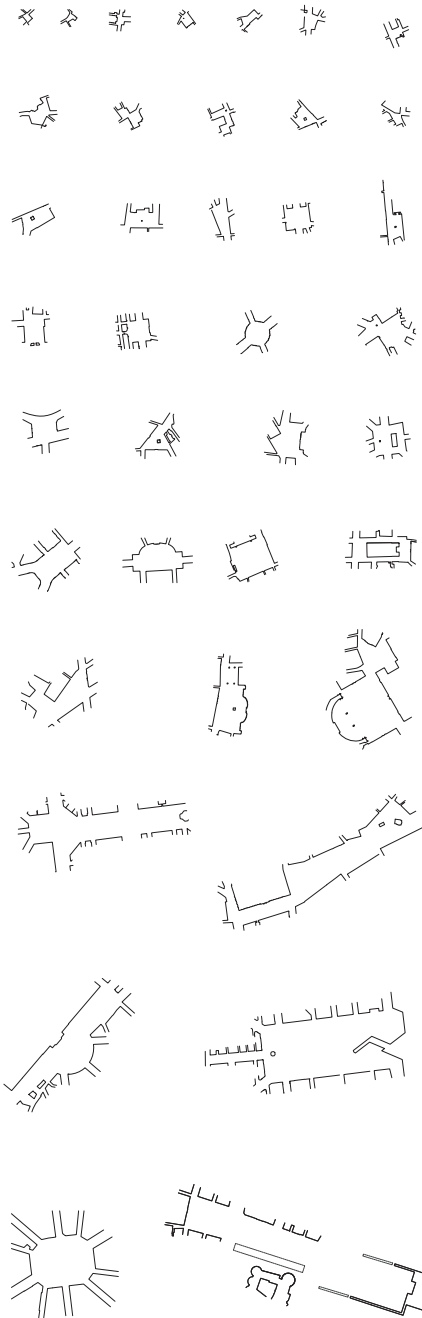
One scenario is linear, along the coastline as a parkway between the historical town and the water. The design of a large park along a new *via Marina Nuovissima* would link the port and the city with a landscape element at the scale of one and the other. This park would also respond to a cruel lack of green space in this part of the city. It would include spaces dedicated to sports, culture and social activities. It would also be a response to the flooding risk at the base of the slope, by offering permeable soil.

A second scenario, more realistic at this stage, consists of different transversal connections. These 'transects' from the slopes of the city to the Tyrrhenian Sea could be invented in support of the heterogeneity and multiplicity of actors.

One important challenge of this latter scenario is the topographic crossing to join the city to the seafront, the passage through the intense corridor of the *via Marina Nuova* but also the programming that would give a reason to the Neapolitans to extend their promenade to the port. Could it be a cultural link from the San Carlo theatre to a contemporary venue? Or an economic one, through a market with both products from land and sea, near the Municipal or the Market Square? Yet another economic link, in the reconfiguration of the maritime station, confronting the Castel Nuovo in the background? Symbolic stakes prevail here. One must act, but within the limits of the existing built heritage, carefully composing a contemporary *veduta*. This new portrait of Naples would reveal spaces considered at the rear of the harbour and the back of the *città*, granting to Naples a renewed waterfront and a reconciliation with the sea.

The strategy consists in working with a more sustainable viability by sharing infrastructures between users of the territory - no zoning, no space for specific use, but shared space. Several tools are developed to this goal: mixing by layering, identifying spots of intensification, offering outdoor rooms of silence, framing new views, extending new uses and therefore the porosities of the town at a greater scale.

On the other side of *Piazza Municipio*, the area around the university can become a link between the historical centre and the port. A program could use the presence of Federico II University to develop a cultural and economic program. The remarkable heritage in presence here has been surveyed and analysed to understand the building types and the possibility of percolating through buildings and voids, down to the sea.



A 'transect' takes shape from the church and monastery of Santa Chiara towards the cold storage of the port. It goes from roof to roof, from garden to dock and can become a support for places suspended above the urban intensity and act as a refuge between sea and sky.

From *Piazza San Domenico Maggiore* to the *Molo Immacolatella Vecchia* on the port, this section passes through a string of cloisters now inhabited by the university. Further east, the north-south axis of the via Duomo is the only visual axis that reveals the port from the north of the ancient town. The extension of this section on to the sea could become a platform that articulates the berthing port for the tourist boats, and the cargo port that becomes industrial from that point. Economic activity has been studied, to guarantee programs of work for a diverse workforce. The reading of the European and regional reports helped to reveal the strength of this area, as well as remarkable buildings (silos, halls, refrigerated buildings), witnesses of an industrial past and that the students soon called the '*intouchables*'.

Piazza del Mercato was once among the most popular areas of the city but also a place full of stories, often tumultuous. In the centre of the medieval district, it was the scene of intense economic activity until the nineteen seventies. Today deserted, its emptiness could become a window to the bay if there was not the obstacle of the ten-floor building of housing, on the *piazza Masaniello*. Sections through the market square to the port could pull the public space toward the water including the big silos present at the port and allow the Market piazza to become the hub it once was.

The last district addresses the intermodal challenge between the station and the port, via *Corso Giuseppe Garibaldi*. The connection between the exit of the motorway, the station and the sea stations for tourists in transit to the islands or cruises in the Mediterranean would be reconsidered here. One of the longest axes of the city stretches from the *Albergo del Poveri* at the northern entrance of Naples and down the slope to the Molo, which separates the passenger port to the west and the merchandise port to the east. It marks the historical entrance of the 18th-century Naples. Here, a park is projected along the *Calata della Marinella*.

How can the project be this place of recognition and completeness of the city *veduta* by embracing the traces of all the times that have passed and at the same time deal with the grey nebula of the contemporary reality? The tentative designs done through the workshops have tried to represent



Naples as a world. These projects act as an object of research. They reveal the questions raised by possible new figures of tomorrow's Naples *vedute*.

Slowly, this new linear shared space along the water, could make it possible in the long term to imagine a metropolitan area whose centre of gravity would be the bay, the line of intensity, the coastline and its limits, the greater peri-urban Naples connected by the metro lines, complemented by a possible tram line along the port to ensure a smooth and public mobility accessible to all.

City collage: Working by layers - one actor, one action, one layer

Working by 'transects' from town to sea allows one to imagine a specific negotiated occupation on what is today the harbour. The ambition of the strategy is to have private actors help the interests of public ambitions by allowing public institutions to cohabitate on some specific spots and develop more space for all by the superimposition of public and private built layers. The strategy of contamination of uses by points of densification could also allow the intensification of the park. The spaces left empty and abandoned by the harbour would be left to the park, exposed to wear and the patina of time. A division in planted lots would permit a (re)appropriation on the long term following an acupuncture strategy.

Many utopias have traversed the history of visions for the city of Naples. Some projects have faded, but others reveal extremely interesting ideas from which we can draw broad lines of potential even today. Each of the projects imagined by great architects does not have to be taken in its entirety. Certain visions suggest urban or architectural forms and can be interpreted as many tracks and keys of reading, revealing Naples. This is the case from the *Piano di ricostruzione dei quartieri Porto, Mercato, Pendino* drawn by Cosenza in 1946 to the openings of visual axes revealing new large urban voids through a great urban density in Siza's plan in 1983. All these projects and utopias have brought the students to a reflection on the (re)appropriation in phases of an industrial universe converted into a large urban park. Here, students were invited to take sides and produce their own thinking, revisiting the theoretical concepts of 'palimpsest'⁶ and 'porosity'⁷ to situate new actions. The readings on these themes also fed into their theoretical discourse.

6. Corboz, A. (2001) *Le Territoire comme palimpseste et autres essais Tranches de villes*, Editions l'imprimeur, 14-35

7. Benjamin, W. and Laciis, A. (1925) *Reflections. Essays, Aphorisms, Autobiographical Writings*, New York: A Helen and Kurt Wolff Book.

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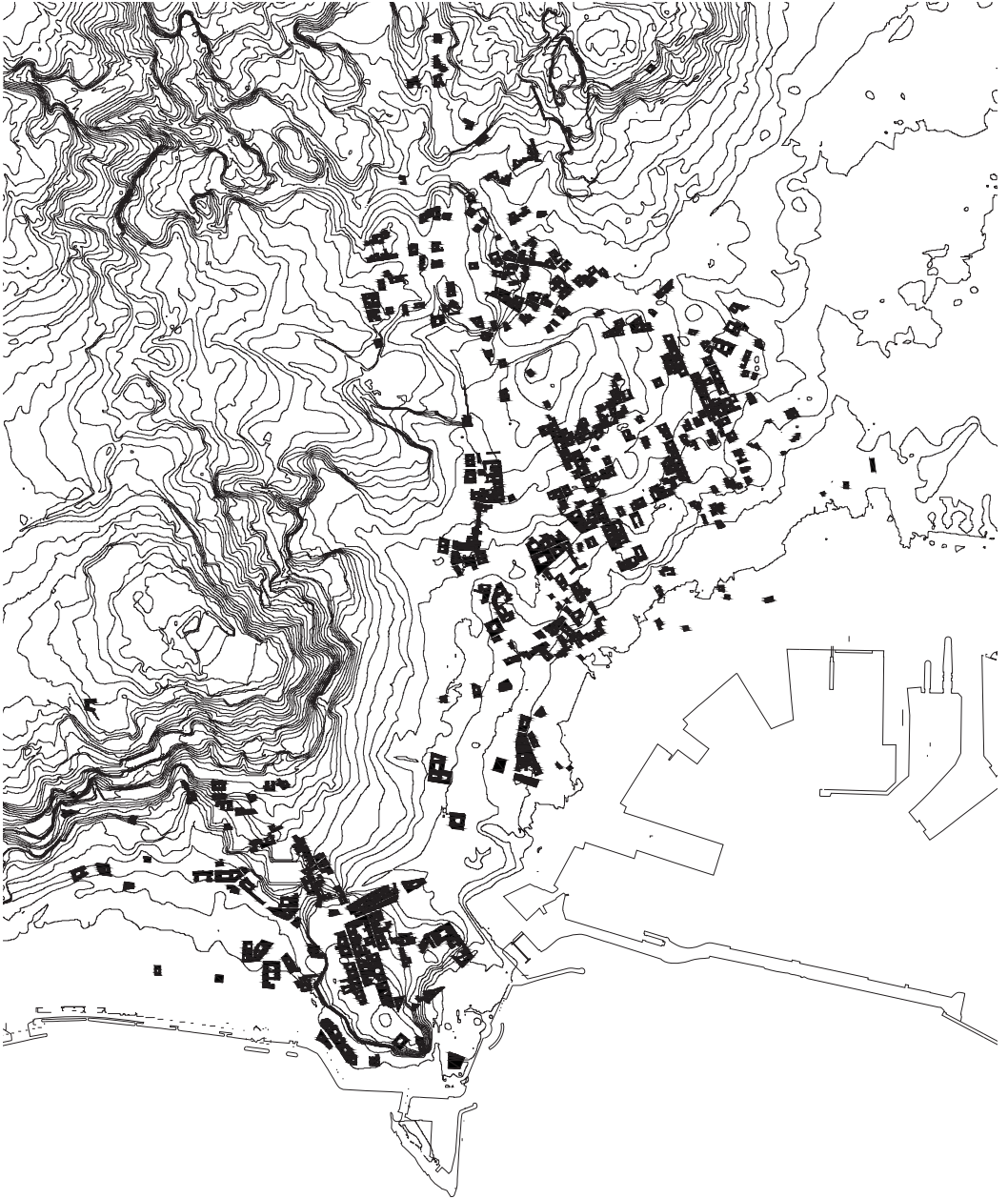
Bertoncello, B. and Girard, N. (2001) 'Les politiques de centre-ville à Naples et à Marseille : quel renouvellement urbain ?'

Burle, J. (2001) 'Marseille et Naples : patrimoine et politiques urbaines en centre-ville'

Froment, P. (2001) 'Le centre historique de Naples : un espace productif menacé ou valorisé par les politiques urbaines ?'

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Decomposition - Composition: The Neapolitan *Palazzo*

Gérald Ledent

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Understanding the character of Naples

Much has been written about the domestic life of Naples, which could be brought down to a simple word: frantic. Yet, the spatial setting of this frenetic life is its perfect contradiction: a hieratic and permanent architecture. The character of the city is deeply rooted in this combination¹: a timeless architecture supporting a diversity of uses and life trajectories.

The notion of 'referential type'² is a powerful tool to identify this character. The referential type is a housing standard, usually massively produced in the golden age of a place (the Berlin *Mietshaus*, the Haussmann buildings in Paris, etc.). It is an inseparable combination of spatial and socio-cultural features, offering a condensed overview of the dwelling characteristics of a specific place. Given this double - spatial and social - association, understanding the spatial constituents of a referential type illuminates the socio-cultural character of a particular place³. In Naples, the referential type is clearly the 18th-century *palazzo*.

In order to understand the Neapolitan *palazzo* and hence the very character of Naples, a pedagogical method was developed in several architectural 'Naples Studios' led by a team of professors (Ch. Fontaine, C. Chanvillard, A. Boulaïoun and G. Ledent). This method – decomposition-composition - is twofold. First, it involves a decomposition process. Before designing anything, understanding the ingredients of the design is essential. Hence, decomposition aims to analyze and depict very precisely a series of architectural features. This work can be regarded as research for the purpose of design⁴. Three scales of decomposition are investigated

1. 'The immutability of its architecture contrasts with the mobility of people and things' in Buchholz, A. (2002) 'The Used City', *Element 8* (Hoarders and Collectors).

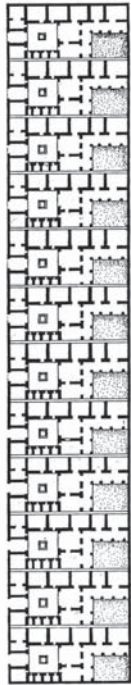
2. Ledent, G. and Komossa, S. (2019) 'Referential Types as Clues for Housing Design', *Urban Morphology*.

3. This posture relates directly to the Italian school of typology led by Saverio Muratori. Muratori, S. (1959) *Studi per una operante storia urbana di Venezia*, Roma: Istituto poligrafico dello Stato, Libreria dello Stato.

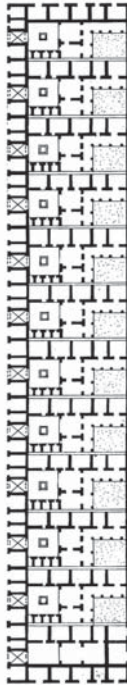
4. Bruce Archer, when depicting research in the Humanities, distinguishes three kinds of research: about, for the purpose of and through. In the case of the decomposition exercise, the second case is clearly at stake. Archer, B. (1995) 'The Nature of Research', *Co-design interdisciplinary journal of design* 2, 6-13.



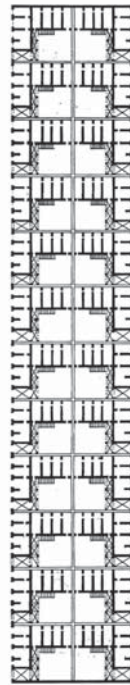
GREEK



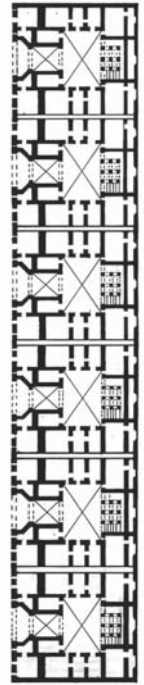
ROMAN



ROMAN/SHOPS



MEDIEVAL



RENAISSANCE

Evolution of the Neapolitan city blocks in relation to the building fabric - Author's drawing (based on C. Cirillio)

in the case of the Neapolitan *palazzo* in direct reference to Durand's triad⁵: elements - parts - ensembles. Second, once the dissection completed, a design process of composition occurs⁶. Again, it takes place on the three different scales listed above in a combination process that refers once again to the teaching of Durand or of Quatremère de Quincy⁷. In both the decomposition and composition phases of the work, a specific understanding of the character of Naples is brought to light.

Decomposition

Decomposition was considered as the primary step of the design process in the Naples Studios. It involves conducting research for the sake of a future design. Hence, prior to design, a series of thorough analyses were carried out or gathered by students in order to understand the domestic fabric of Naples. The Neapolitan *palazzo* was studied at three scales: urban setting, building typology and element constitution.

The Greek urban grid

Understanding the *palazzo* cannot be detached from its morphological scale. Hence, at a city scale, the setting of the *palazzi* was studied thoroughly, tracing it back to the first Greek settlement of Neapolis. The mediating means between buildings and the urban fabric are the city blocks. Their characteristics emerge from architectural and topographical influences.

From a topographical point of view, the street network is oriented according to the natural flow of water. The initial Greek network develops a grid of 22 by 3 roads.

From an architectural point of view, the dimensions of the blocks were defined by the traditional Greek housing, developing long and narrow rectangle city blocks (*insulae*) of 185 by 34 meters⁸. While some blocks were merged to accommodate institutional programs such as the theatre or the agora⁹, the regular *insulae* sheltered domestic architecture.

The evolution of the Neapolian palazzo

In Naples, the evolution of domestic architecture from the early ages to the archetypal *palazzo* from the 18th century can be summarised as follows¹⁰.

The early Greek settlement instituted the size and the shape of the *insulae*, arranging 24 back-to-back houses¹¹ on 16

5. Durand, J. N. L. (1809) *Précis des leçons d'architecture données à l'école polytechnique*, Paris: Ecole polytechnique.

6. Referring to Bruce Archer again, this process can lead to research through design if carried out in a systematic way. Ibid.

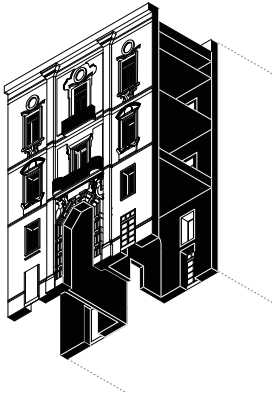
7. Lucan refers to the combination methods produced by both authors as the real invention in architecture. Lucan, J. (2009) *Composition, non-composition: architecture et théories, XIXe-XXe siècles*, Lausanne: Presses polytechniques et universitaires romandes.

8. Bartolommeo Capasso gives a clear view of the Antique plan of Neapolis. Capasso, B. (1905) *Napoli greco-romana esposta nella topografia e nella vita: opera postuma*, Napoli: Stab. tip. L. Piero.

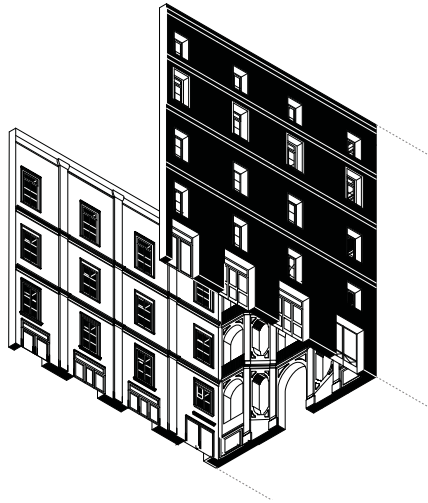
9. Later on, those double-blocks were used to accommodate religious programs (major churches, cloisters, etc.).

10. A thorough analysis of this evolution is given by Clelia Cirillio in Cirillio, C. (1991) "La lettura dell'isolato del Centro Antico di Napoli" in Ingegneria, P. I. F. d., ed. *Storia Architettura e Tecnologia dell'insula 34 del Decumanus Major*, Napoli: S.E.C.I.T. s.r.l. - Tuccillo s.p.a. Costruzioni

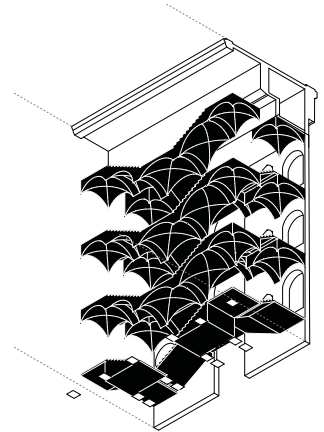
11. This housing form can be paralleled to the Hippodamian grid housing of the Olynthos colony.



ENTRANCE



COURTYARD



STAIRCASE

by 16 meter square plots. Within these plots, one- or two-storey houses are organized around a family *megaron*. The peripheral wall of the dwellings is closed off to the public space, with the exception of the entrance passageway.

Hellenistic housing developed on larger plots by merging two adjoining parcels. The layout remained centripetal around a private courtyard.

In late Hellenistic times, shops were added to the traditional plan, transforming the relation of the *insula* to the public realm. Public life enters the domain of the *insulae* for the first time.

During medieval times, the layout of the multi-storey houses echoes the societal organization: an intricate combination of domestic life and handicraft work at home. Craftsmen's workshops are positioned along the streets.

In the Renaissance, the *palazzi* acquired their more definite features: larger plots, a greater interior courtyard accessible from an entrance hall and a staircase leading to several floors as illustrated in the 15th century engraving by Antonio Lafrery.

One palazzo, a tryptic

The archetypal *palazzo* from the 18th century can hence be seen as a *palimpsest-palazzo*¹², an evolution of domestic architecture since Antiquity. From a compositional point of view, the *palazzo* displays a recurring threefold sequence deeply rooted in the Neapolitan ground¹³: entrance - courtyard - staircase.

First, the entrance arrangements are a direct consequence of a highly congested city, offering a transition from the urban frantic context. Entrances are constituted of two elements, a portal and an entrance hall. Given the narrowness of the streets, allowing no setback on the façades, portals are massive and lavishly decorated to attract the passer-by's attention, a distinctive characteristic of Neapolitan Baroque¹⁴. They lead into a hallway that is often a room in itself, creating a 'light-shadow-light'¹⁵ threshold between the street and the interior courtyard. Interestingly, entrances are left open during daytime¹⁶, allowing strangers in the collective domain of the *palazzo*. At night, the heavy doors are shut and the narrow streets become stone canyons.

Second, courtyards have been the core of the housing structures ever since the Greek settlements, providing the major share of air and light to the dwellings. However, compared to the *megaron* houses, the courtyard is a both a monumental and a collective space in the archetypal

12. Labrot, G. (1993) *Palazzi napoletani: storie di nobili e cortigiani 1520-1750*, Napoli: Electa.

13. Ever since the Antiquity, stone mines were exploited on the very ground of the city. Zerlenga, O. (2013) 'Memories in stone', in Gambardella, C., ed. *Heritage Architecture LanDesign, XI Forum Internazionale di Studi 'Le vie dei Mercanti'*, Aversa-Capri, La scuola di Pitagora, 13-15.

14. Labrot underlines this character as he refers to the architectural feature as an optical tool allowing an oblique reading of the facade in the narrow streets of the city. Labrot, G. (1979) *Baroni in Citta': Residenze e comportamenti dell'aristocrazia napoletana 1530-1734*. Pref. di Giuseppe Galasso, Napoli: Società Editrice Napoletana.

15. Zerlenga, O. (2014) 'Staircases as a representative space of architecture', in Gambardella, C., ed. *Le Vie Dei Mercanti, XI Forum Internazionale Di Studi*, Aversa and Capri, La scuola di Pitagora, 1632-42.

16. 'As with most other Neapolitan palazzi, the gate is opened from morning to lunchtime, closed during the siesta (2-4 PM) and is reopened from afternoon till evening.' Buchholz, A. (2002) 'The Used City', *Element 8* (Hoarders and Collectors).

17. Labrot, G. (1993) *Palazzi napoletani: storie di nobili e cortigiani 1520-1750*, Napoli: Electa.



palazzo. Its very scale seems to relate rather to the public realm than to domestic functions. As such, the *palazzo* courtyards are the largest open spaces in the city along with the religious cloisters. In addition, in view of the openness of the entrances, courtyards are an urban resource, a series of spaces shared beyond the communal uses of the *palazzo*.

Third, staircases become a decisive feature in the design of the *palazzi*. Indeed, as the city became denser, *palazzi* were structured on several floors. In addition, the *palazzo* no longer houses a single family but a variety of dwelling, manufacturing and storage functions (e.g. the *bassi*, the rented out storefront-level rooms). The noble apartments of the owner often only occupy the first floor of the building¹⁷. Those staircases are usually open, as a remainder of the indigenous antique staircases and usually run from two to five story high¹⁸. Staircases in the *palazzo* have two distinctive functions: the obvious vertical connection between floors and the statement of the owner's rank¹⁹.

Organizing those three elements in the *palazzo* becomes a key issue when moulding the sequence leading from the public to the private realm. A large variety of compositions can be found which can be classified into two main categories. The first one displays an alignment of the three elements in a progression with the staircase as a backdrop, attracting the view from the street. The second category positions the staircase on the side of the entrance axis, providing a sense of surprise once the visitor penetrates the courtyard.

Composition

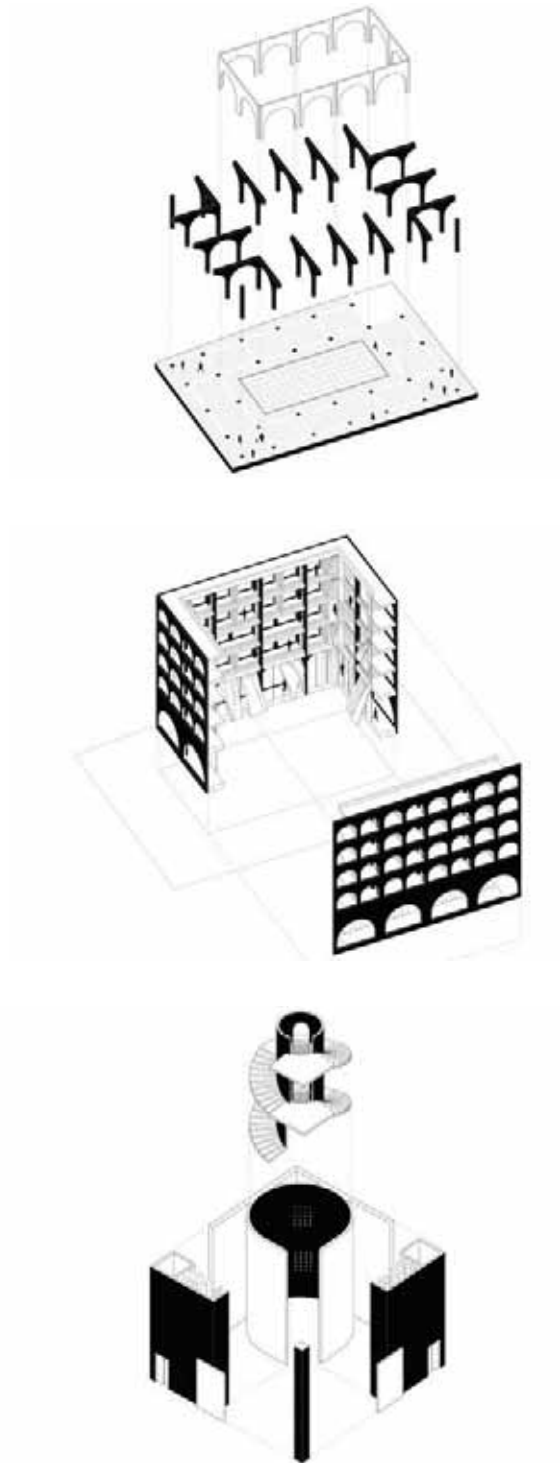
Parts

As part of the composition exercise, two scales were investigated: the *palazzo*'s tryptic (parts) and the *palazzo* as whole (ensembles). Those exercises were carried out either separately or simultaneously, providing an understanding of both the parts and the ensembles characteristics. Nonetheless, neither the urban setting nor the elements design were left out in those composition exercises.

Entrances are assessed in their ability to operate as thresholds. Designs vary from single monumental and impervious doors to transparent and permeable colonnades. Between these two extremes, the nature of the *palazzo* varies a lot, either very residential and private or completely public on its ground floor. While structured as a private room in the first case, it is designed as a genuine public plaza in the latter case. In all designs, the central issue is always regulating the

18. Blunt, A. (1975) Neapolitan Baroque & Rococo architecture, London: A. Zwemmer, p.138

19. 'While in pursuit of its main architectural function (the vertical connection between the different floors of a building), the open Neapolitan staircase is, at the same time, a reservoir of space representative of several factors which are produced in it and manifest themselves'. Zerlenga, O. (2014) 'Staircases as a representative space of architecture', in Gambardella, C., ed. *Le Vie Dei Mercanti, XII Forum Internazionale Di Studi, Aversa and Capri, La scuola di Pitagora*, p.1632



public penetration into the *palazzo*'s ground and providing a signal to state this quality. As a counterpart, the question of privately inhabiting the streets is also raised, based on the indigenous tradition of the *bassi*.

Courtyards are also a recurrent theme in the composition designs. Once again, those are interpreted very differently. On the one hand, courtyards become solely residentially oriented, manifesting a very private and intimate nature. In these cases, residential spaces are organized between two very different façades: a public and an intimate one. On the other hand, some courtyards are designed as utterly public spaces, affecting directly the nature of the neighbouring domestic functions. The scale of these latter spaces is also different from their domestic versions. Indeed, similarly to the traditional courtyards of Naples, those public courtyards seem to be made for giants, at the scale of the city and not of humans. The courtyard design also questions the notion of intimacy, implementing a series of devices such as curtains, lattice works, etc. but also various kinds of window openings. Finally, staircases are investigated in diverse ways. In some cases, they act literally as a promenade in the building, featuring a series of collective spaces along the way. In other cases, the staircases are designed as solitary objects. However, in all these designs, recurring issues arise such as filter, places to stop, scenery, light, introverted or extroverted space, etc.

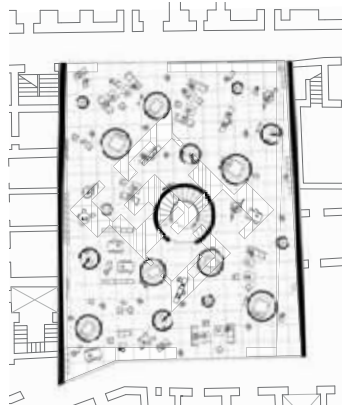
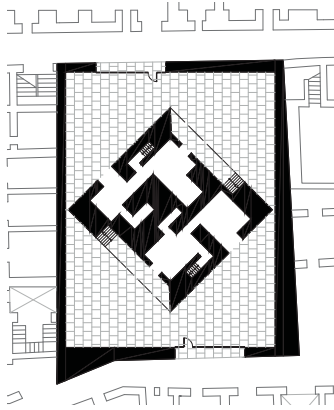
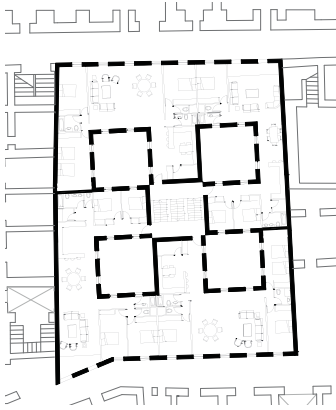
In addition to composing the various parts of the *palazzo*, several elements were studied in detail, to understand the construction techniques and its influences on the composition. Magmatic stone is ubiquitous in Naples. Hence, stereotomy becomes an important design issue, implementing the right stone for the right elements²⁰ (such as the dark *piperno*).

Ensembles

Alongside the singular parts compositions, the very type of the *palazzo* was reinterpreted combining the traditional entrance-courtyards-staircase sequence²¹. These combinations unveiled a series of possible *palazzo* layouts leading to a series of findings on the constitution of the type. First, all designs develop a minute attention to the relation between domestic spaces and the public realm both in terms of proportion and permeability. On the one hand, all designs include a degree of publicness in the interior spaces. None was purely domestic. Quite the contrary, various projects incorporate a series of entirely public functions within the

20. Zerlenga, O. (2013) 'Memories in stone', in Gambardella, C., ed. *Heritage Architecture LanDesign, XI Forum Internazionale di Studi 'Le vie dei Mercanti'*, Aversa-Capri, La scuola di Pitagora, 13-15.

21. This exercise also referred to Klaus en Caan's experiences on Klaus and Caan on Borneo island. 'The goal was to design an archetype suitable for the plots laid down by the master plan. The solution was found in a dwelling with two principal forms that allow many variations, different spatial configurations and combined front façades. The inside and outside separation is carried to extremes. As such, the architects' contribution is an impeccable realization of the master plan desire for an image of uniform clarity, without any dubious semi-public zones, obstacles or front gardens. Just houses and streets.' <http://kaanarchitecten.com/work/borneo-sporenburg/>



UCLouvain-Naples Intensive program March 2016 - *Stairs* - C. Massabni - G. Martin, J. Frasier - J. Hajjar, N. Vente - M. Ward - *Courtyards* - C. Massabni - G. Martin, N. Goubier, Y. Harda ; UCLouvain-LOCI-LBARC 2231 Travail Fin d'Etudes - *Stereotomy* - L. Moreau, June 2017

palazzo. Hence, the public-private proportion varies but there are always public spaces in the *palazzo*. On the other hand, permeability becomes a key issue to domesticate the relation between the public and the private realms in the building. Various features such as transition halls, windows proportions, and intermediate spaces are implemented to negotiate this essential relation. Interestingly, in the Neapolitan *palazzi*, this private-public relation not only occurs towards the outside world through the street façade, but also towards the inner world of the *palazzo* itself, the interior courtyards often being very open to the public. In these public-private compositions, the threefold sequence of the *palazzo* remains a central element, *'the portal and the staircase assume the task of attractor as if a piece of scenery where the portal is the proscenium and the staircase the backdrop'*²².

Second, complementary to the public-private discussion, the configuration of domestic rooms becomes in some designs a key issue. While some projects define domestic rooms as ephemeral and adaptable, others see in the privately occupied room the very structural core of the project. Two extreme cases were examined. When transitioning from private to public is utterly blunt, domestic rooms appear as solid nuclei completely closed off to the outside world. In those extreme cases, domestic rooms are designed as solitary islands in the middle of a collective ground. However, when proper thresholds are taken care of by the entrance-courtyard-staircase triad, room configurations become easier to deal with, and a series of light wall partitions are put in place.

Third, in addition to these two spatial attentions, specific focuses were made on the materiality of the project to sustain the needed transitions, proportions, etc. Once again, magmatic stone was used in contrast with very light veils or screens. Bringing together these two traditionally opposed architectural features can be paralleled with the Neapolitan contrast between the solidity, the sphynxness of architecture and the everyday life flowing into it.

Designing and Understanding

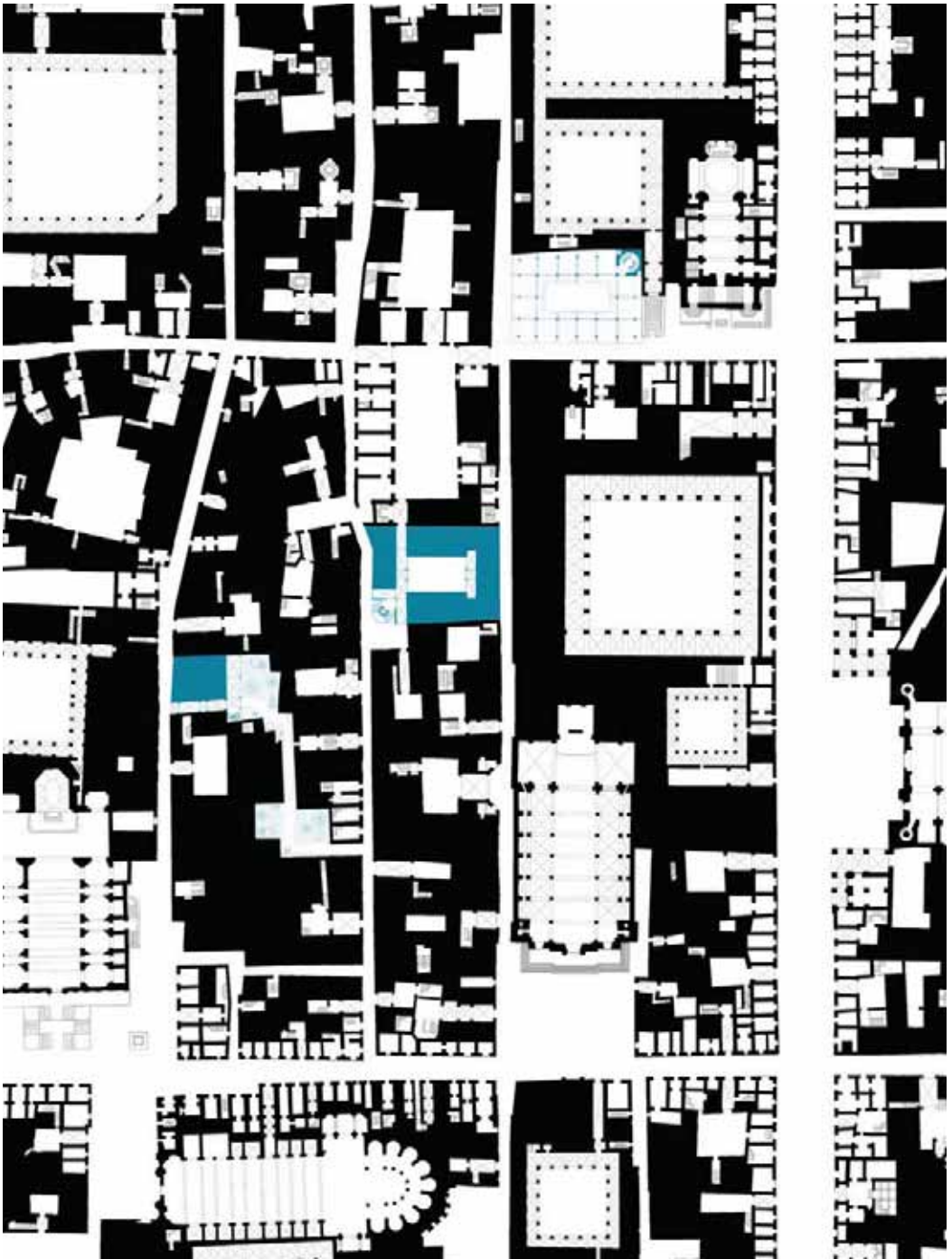
Design skills

The decomposition-composition method allows for developing a large range of skills. First, the decomposition phase helps students ground their design process in an architectural context. Building a critical design (pro)position cannot ignore this preliminary backdrop. Second, following Durand's take,

22. Zerlenga, O. (2014) 'Staircases as a representative space of architecture', in Gambardella, C., ed. *Le Vie Dei Mercanti, XII Forum Internazionale Di Studi*, Aversa and Capri, La scuola di Pitagora, 1632-42.
 23. Buchholz, A. (2002) 'The Used City', *Element* 8 (Hoarders and Collectors).
 24. Benjamin, W. (1978) *Reflections. Essays, Aphorisms, Autobiographical Writings*, New York: A Helen and Kurt Wolff Book.

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the decomposition process offers an understanding of the design's ingredients. Comprehending parts and elements is essential prior to designing an ensemble. Third, the 'catalog' obtained through the collective work of composition helps to identify the choices necessary in the act of composition.

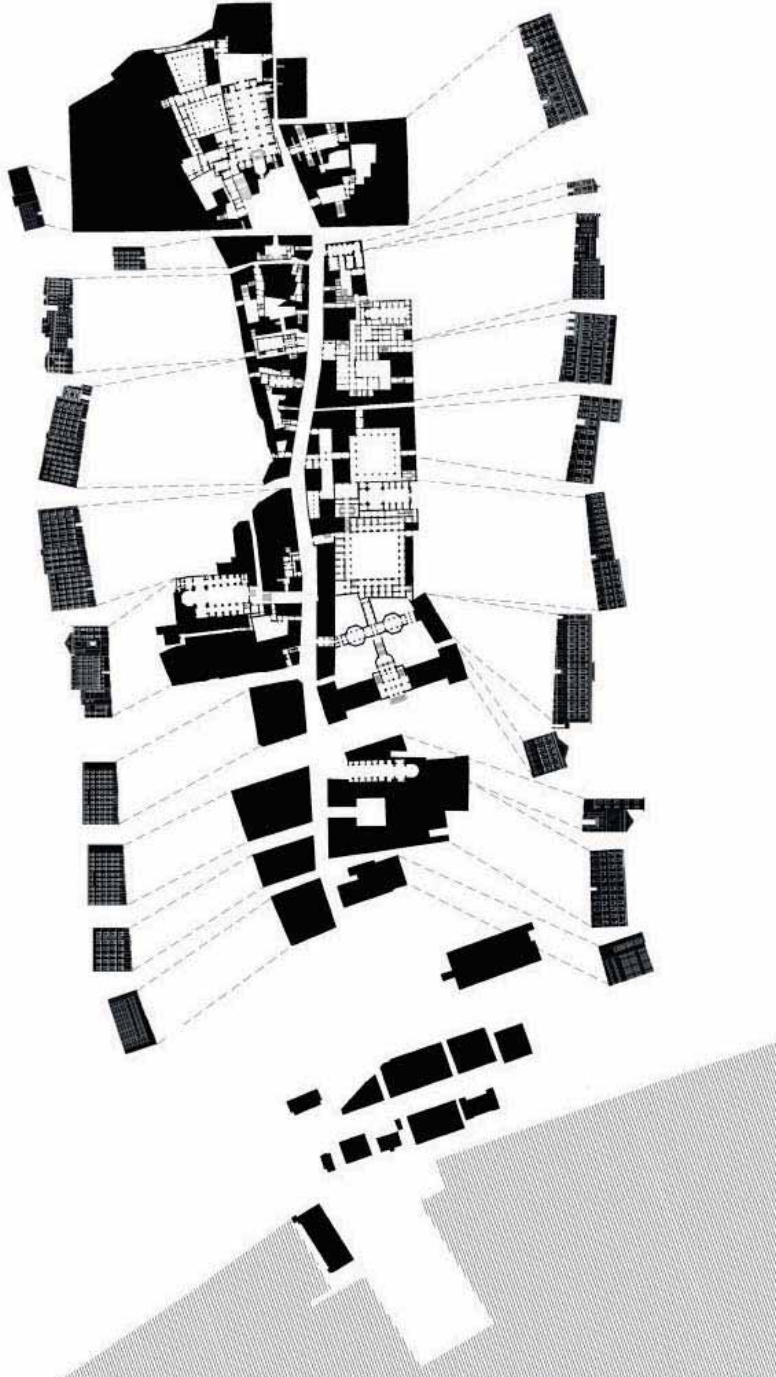
Understanding the identity of Naples

Eventually, both exercises shed light on a specific architectural programme, in this specific case, the Neapolitan *Palazzo*. Distinguishing the spatial constitution of the *palazzo* provides an understanding of the social character of the city. Once again, this position refers directly to Durand who believes the first purpose of architecture is social utility.

The decomposition-composition exercise illustrates a recurring feature of the *palazzo* triad: its monumental character, as if it was built for someone bigger than men. Indeed, a man cannot but feel humbled by the proportions of the *palazzi*'s entrances, courtyards and staircases. The scale of these architectural features refers to communities rather than to individuals, allowing uses beyond domestic life. Monumentality is also used as eye-catching features on the portals in the narrow streets of the cities where minute detailing proves inconsistent. Once again, those portals refer to the community rather than to the individual.

Second, the *palazzi* work as '*permeable membranes*'²³, modifying the usual delineation of the public realm. This becomes very clear when the traditional Duca di Noja map (1775) displaying the accessible courtyards in the city is supplemented by the entrances and the stairs of the palaces. Indeed, the limits of the public space are no longer the street façade, but the public realm can literally flow into the *palazzo* through the entrance-courtyard-stair sequence according to the time of the day. Reversely, the uttermost domestic life takes place on the public ground as *bassi* open up onto it without any thresholds. This tidal movement refers to the porous character of Naples described by Walter Benjamin: '*defying any clear demarcation, spaces are separated and simultaneously connected by porous boundaries*'²⁴.

Domestic and public boundaries are blurred as public and private life flow into each other. In this absence of a clear separation of public and private space, the entrance-courtyard-staircase plays a decisive role, separating and joining private and public life in one movement.



Voids, Elements and Uses

Christine Fontaine

UCLouvain, Faculty LOCI, Belgium

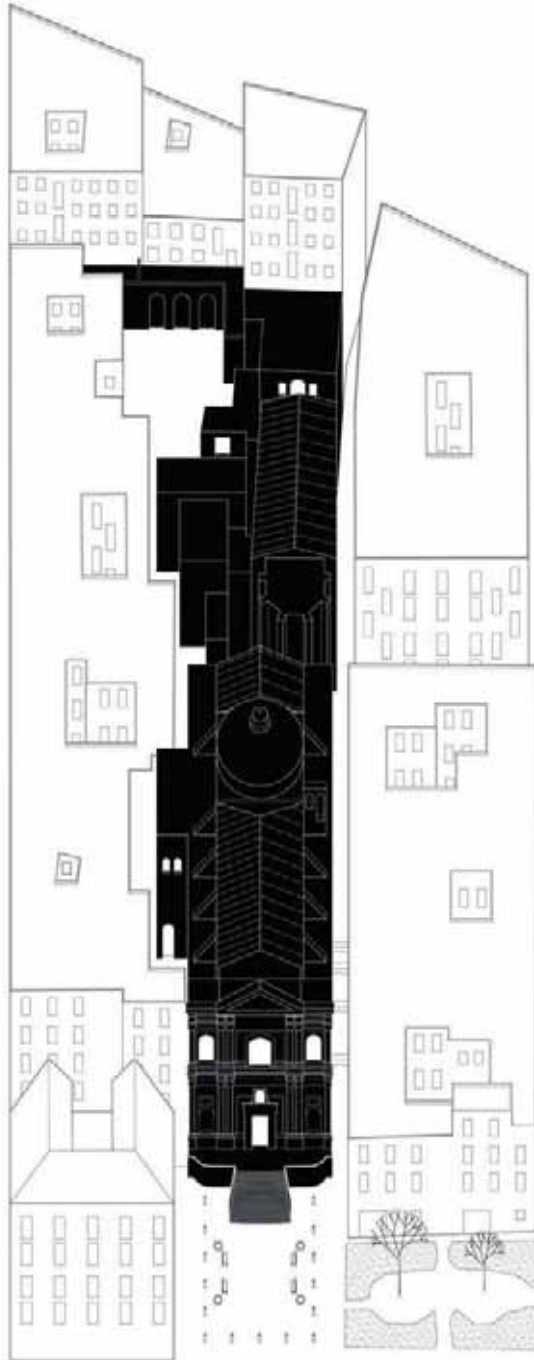
Neapolitan Specificity

To understand the specificities of Neapolitan architecture, one has to puzzle out the way elements fit into one another at different scales. This is the objective that we aimed at, trying to understand how the types of edifice, architectural elements and architectural styles adapt themselves to become singular by adopting the context of Naples. This pedagogy allows us to highlight the specific Neapolitan voids and elements. An architectural element, a priori generic, becomes specific in the light of its comparison to other examples in time or space. Producing the catalogue of these elements has allowed us to reveal the originality of the Neapolitan making-of, including its local construction techniques. Based on this research, composition becomes an act of taking part in the understanding of disciplinary production of the spaces studied.

Cartography of voids

By framing a type of morphology and analysing it, students revisit the type through contemporary constraints and take a position. These voids, stable a priori, are all components of a changing environment. They are recognized among the tools of composition, of which architectural and landscape project is the finality. Their reasoned comprehension becomes a real echography of the place.

Extracting and observing the remarkable voids and the elements that constitute specific edifices and by reporting them in a catalogue of similar voids, leads to an understanding of their mutation in space and time, in their materiality, use or symbolic way. Then come the deductions of future mutations



subject to contemporary constraints and programming. The collages illustrate these visions.

The students involved in this work produce a collection of voids that, extracted from their site and manipulated as singular elements, constitute levers for reflection and compositional tools that they can seize in the rest of the work. The introduction of specific contemporary programs to the context brings out built hybrid types, because of the mutation of uses.

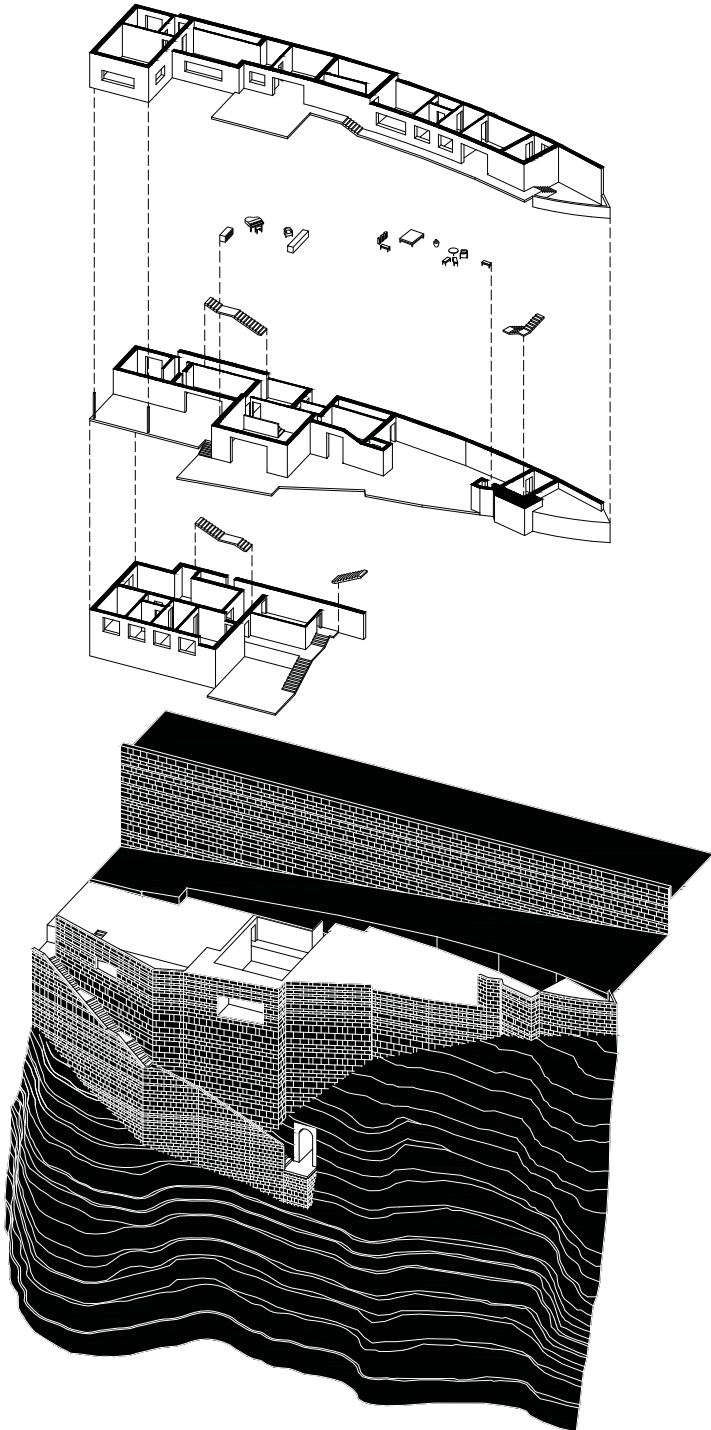
The voids at different scales - architectural, urban and landscape - are part of a whole. They interact with one another and characterize a definition of uses, participating in a cultural representation of the cultural context. The study intends to reveal the mutation of a universal form in a specific architectural and landscape production varied according to the cultural, social and economic practices.

This is how the drawing of a built empty space fills itself with the daily life of its users like a sponge, as described by Walter Benjamin and Asja Lacis when they talk about the porosity of Naples. In the end, the empty drawings, filled with the uses observed, acquires a cultural singularity tinged with the context in which they fit.

Therefore, students who extract significant voids from the site (balcony, entrance, courtyard, street, boulevard, dock, etc.) understand what constitutes them and how they are composed. The framing and mapping of a type of void to understand the contextual, cultural and program issues allows one to deduce a relevant contemporary question. This possible contemporary interpretation of the type under study is then illustrated through a vision by a speculative collage. Concomitantly with this subtraction of voids of the same type, the student is led to question the graphic means to account for the typo-morphology and its understanding; knowing that the choice of framing and the means to represent it is in itself a narrative position on the one hand, but also a speculative position on the other hand.

The elements of Naples: from Sanfelice to Cosenza (or local adaptations of International styles)

Baroque and modernism are among the styles found in Naples. However, whereas in Europe, these particular styles find fulfilment or a radical expression, in Naples, the topographical and morphological context twists and changes the fundamental forms. Naples remains stronger and imposes its specificity on the style. While the baroque finds its



magnificence through the expression of Bernini's colonnade at Saint Peter's in Rome, in Naples the monumentality of this style has to fit in the narrow Greco-Roman grid, finding its expression through singular elements: a staircase crossing the difference in topography, a high monumental entrance, a colonnade designed in cloisters and courtyards.

Naples presents therefore an original Baroque. The case of Ferdinando Sanfelice (1675 – 1748) is here shown as an illustration of this specificity. In his work, too, the Neapolitan Baroque finds its expression in architectural elements such as the entrance gate, the courtyard and the staircase, which usually form the invariants of the *palazzo* and allow the expression of monumentality in a compact way.

The scenography through 3 elements 'entrance-court-staircase' has been studied in the context of our courses. The drawings reveal Sanfelice's composition in this system of sequences to magnify space.

The Baroque, which requires a development covering the thresholds of the buildings up to the public space, has adapted itself to the context of Naples by synthesizing itself to some monumental elements. The piazza comes down to a retreat from the street, the monumental staircase takes advantage of the slope of the city in the plinth of the churches and the back of the palaces' courtyards. The entrances are also places of Baroque stylistic expression. Their monumentality allows riders to enter the courts on horseback. Smaller openings drawn in the large openings allow entry to the domestic scale.

Finally, the courtyards are the breathing spaces in the historical centre. They allow points of visual links towards the gallery stairs or gardens at the end of the plot. This entry sequence of entrance-courtyard-staircase is thus the typical reflection of the expression of monumental Baroque palaces in Naples.

The same observations were made for the Modern style in Naples, through its confrontation to the slope. Modernism is also submitted to the same contextual constraints. Casa Oro folds itself to follow the cliff and its topography.

Casa Oro, by architects Cosenza and Rudofsky, sees its modern expression influenced by the strong inclination of the ground. Here the three specific elements studied as resilient are floor-wall-ceiling. By only expressing these elements of composition, the drawings highlight the anchorage to the ground, the attempt to lighten the building, and the capacity to frame the openness to the bay of Naples.

«Ridotto»

Un aparté existentiel



In the case of Casa Oro, it is the figure of the fisherman's hut that is aimed at by the architects. Its structure, its morphology and its relation to the water make it a reinterpretation of the fishermen's houses of Corricella village on the island of Procida.

The walls of the house merge with the rock from which they emerge.

Here, local built type and modern international vocabulary mingle.

This inspiration comes from a desire to stand out from a style with anonymous forms to be contaminated by local construction expertise. For this *casa*, it is the ways of life that inspire the creation of places, where one no longer knows if these are inside or outside.

This experiment of highlighting architectural composition through three elements reveals how in time, elements have adapted to the strong Neapolitan context. The sedimentation of Naples's composition modes constitutes a robust basis for any new architecture or new interpretation. Between modernity and its context, Naples shows resilience.

The act of composition and decomposition, developed in this series of Naples Studios, allows us to understand architecture as a cultural production, to witness the socio-cultural challenges, the techniques of construction, the typological definition, and a particular symbolism.

From the study of buildings, sometimes banal, sometimes singular, but still with an original architectural quality, these studies aim to produce shareable knowledge, understanding the additional dimension of architecture.

This production of knowledge through drawing¹ enriches the discipline and our contemporary understanding and critical reading. It highlights works that ground the discipline with our contemporary point of view to better situate our compositional action today. Classical modes of representation are used but these are also inscribed in a history of representational knowledge.

1. Inspired by Gauthier, M. P. (1818) *Les plus beaux édifices de la ville de Gênes et de ses environs*, 1790-1855, Paris: P. Didot l'aîné.

References

Gauthier, M. P. (1818) *Les plus beaux édifices de la ville de Gênes et de ses environs*, 1790-1855, Paris: P. Didot l'aîné.



Going underground. Projects for the caves in Naples' Cristallini and Sanità quarters

Dirk De Meyer

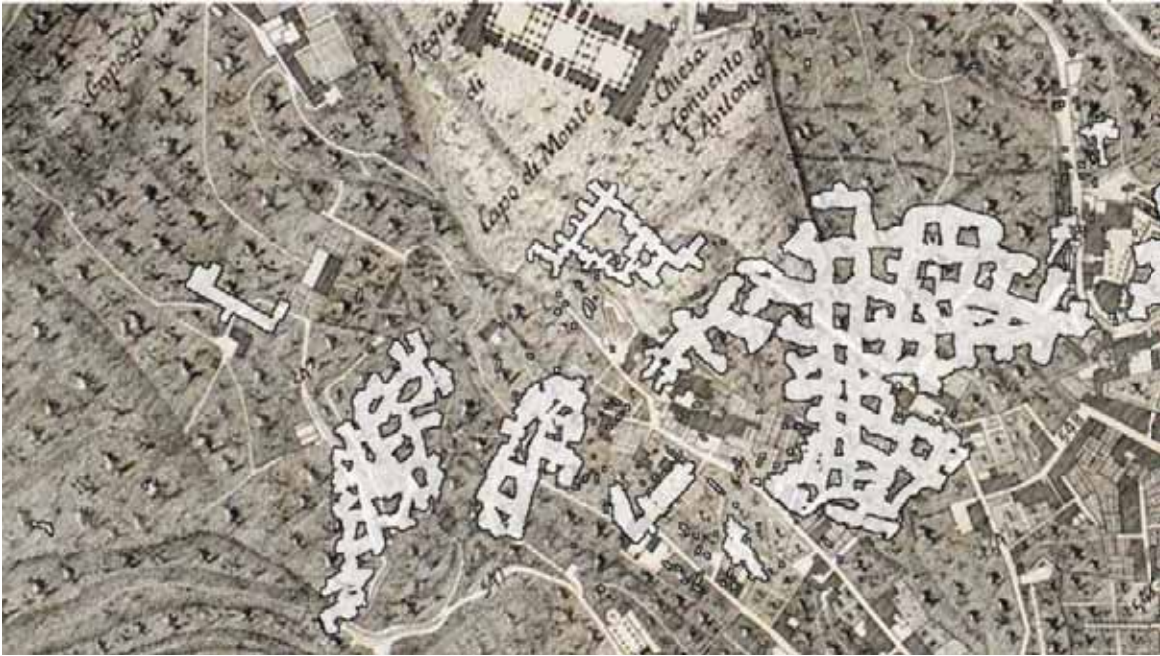
Ghent University, Belgium

Underneath the dense fabric of Naples there is a 'negative' of the city: to a large extent, the stones of which the city has been built have been carved out of the tufo stone underneath, leaving magnificent underground caves. The rare public spaces of above-ground Naples, are compensated by these immense caves few meters below. Only one third of this underground world has currently been mapped. Its estimated total surface is 3,000,000 square meters. Between the present-day urban structure and this underground world lies Naples: the layered, palimpsestuous city, where "l'épaisseur de la modernité" (Marc Augé), the thickness of modernity, is omnipresent. It is here that the city exposes its historical 'thickness' in the most material way.

These general observations formed, during the academic year 2013-2014, the basis for our international workshop in Naples and for a master thesis project at Ghent University. Both projects were interrelated: the master thesis on the Naples underground, initiated in the Summer of 2013 and in particular during a study trip in October, laid the groundwork for the in situ international workshop in March 2014.

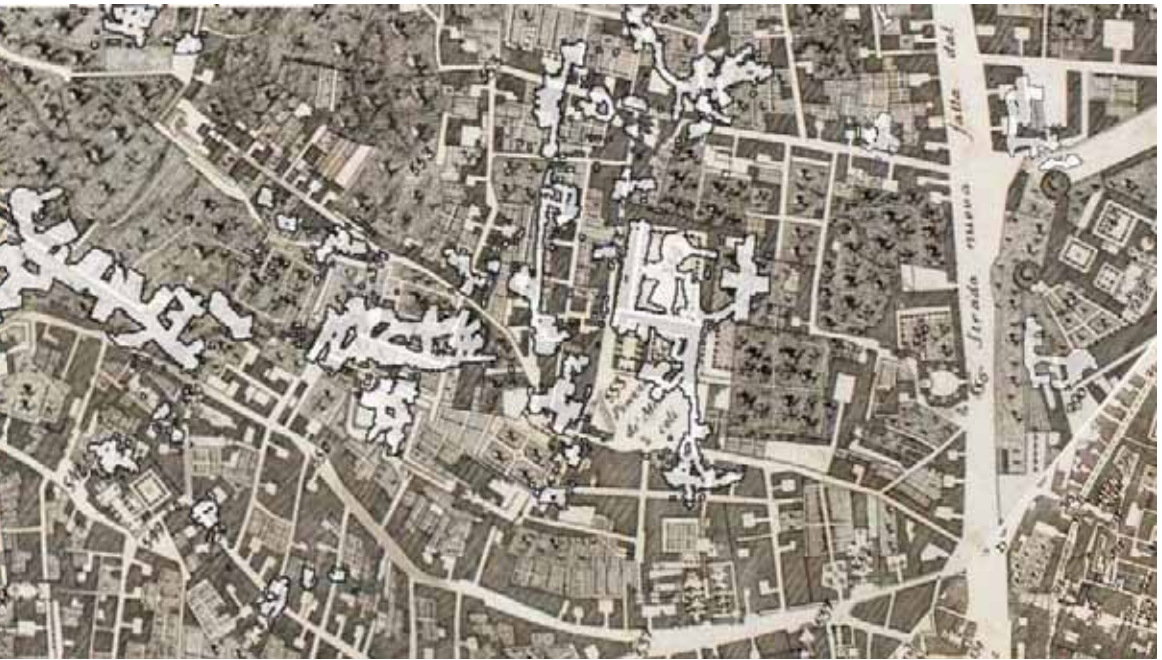
Figure 1: *L'épaisseur de Naples*, International workshop, final project, cross section through the caves, from Capodimonte to Porta di San Gennaro.





Cartographical and other material was gathered or produced, so that during the workshop we were able to test hypotheses on site and develop design strategies. Afterwards, the Naples studio results were followed up by further investigation in the master thesis, which was finally presented, to a Ghent and Naples audience, in the Summer of 2014.

In the pages that follow we will first show the outcome of our international studio, followed by a selection of work from the master thesis. Both are the result of intense and fruitful collaborations between the architecture departments at both universities in Naples and our department in Ghent, alongside the other partners in the international programme. Our Naples experiences could not have been successful without the generous and enthusiastic help of the Naples staff, and in particular of prof. Renata Valente and prof. Anna Giannetti. The master thesis was jointly supervised by myself and prof. Carlo Donadio of the Department of Earth Sciences at the Università di Napoli Federico II, and received essential input from the Section of Soil Defence and Hydrogeological setting of the Municipality of Naples. Christine Fontaine, of UCLouvain-LOCI was among the jury members.



**'L'épaisseur de Naples'.
Geology, porosity & urban life**
An international workshop

The project we developed during the two weeks of the international workshop in Naples interrogated three levels — the urban fabric, the territory, and the underlying geology — and was, in particular, aimed at the interaction between them. This interaction between underground and urban landscape is manifest in various areas of the city, and in particular in the Cristallini and Sanità areas. There, the cavernous, underground world comes to the light, in the middle of more conventional urban structures. This leads to fascinating situations, typical of Naples, where the visitor is confused between what is rock and what is architecture; or between what is a cave and what is a building.

The workshop project intended to show the potential of this underground world by developing a series of different, possible uses. They would add public space and improve the quality of life for the inhabitants of these extremely dense city quarters.

Figure 2 : *L'épaisseur de Naples*, International workshop, final project, Duca di Noja map (1775) with caves inserted, from Capodimonte to Porta di San Gennaro.

As a case we studied the slope between the royal hunting lodge of Capodimonte, with its extensive green park and woodland areas, and the Porta di San Gennaro, in the northern wall of the old and dense city centre, which is devoid of any significant green public space. The studied area cuts through the the popular Sanità and Cristallini quarters. In addition to showing various potential uses of the caves, and their possible interaction with the above ground, we also showed the potential of developing a linear park. This park is both geological and green, and will link the dense city centre with the hidden green areas just north of Sanità and with the vast park of Capodimonte — all within walking distance from the centre.

The four projects study different types of caves, with different connections to the surface. All projects aim at responding to both practical and poetical needs. They try to do so by way of light interventions, avoiding the use of 'hard', and expensive, infrastructure. In this way they preserve the magnificence and the poetical quality of these spaces.

The first site, the Cave Reichlin, closest to Capodimonte, will combine a technical and picturesque quality. Underground, the higher areas are organised as parking space in order to lighten the pressure of parked cars in the surrounding neighbourhood. The lower areas are used as a large cistern, a buffer to collect the rainwater during moments of torrential rainfall, in order to protect the lower parts of the city from flooding. Above these caves, unused (now private) wasteland is turned into a public landscape park, and a footpath links



Figure 3 : Rock/palace: private palazzo with street access through the rock. Naples, Salita Capodimonte.



Capodimonte with Sanità. Through large holes in the ground pedestrians get a glimpse of the technical infrastructure below, which acquires a poetical quality.

With a few small interventions the second site, the Cava Lotti, becomes permeable: a new public space and an underground street. In the cave, stairs connect the street level with a hidden and unused green area beyond the cave, transforming it into a park space for neighbourhood use. The new public status of the cave and park will encourage new uses, while in some areas parking remains possible.

The third cave has yet another typology: at present it is a dark closed parking space. By reopening an existing corridor, it becomes an underground shortcut between two parts of the Sanità quarter. While some areas are kept for resident parking, others are opened up for youth activities, such as a skate park and wall climbing.

On the last site, the piazza dei Miracoli, a new staircase built into an existing entrance to the caves, link a new project for the square to the underground. The caves are opened for use by the school and, outside school times, by the Sanità community.

All together, these projects not only add public space to the dense city, but they bring urban life into the underground. Neapolitans are encouraged to explore these more Dionysian urban sites and follow in the footsteps of Virgil, who centuries ago already had Dante explore the wonders of the underworld.



Figure 4 : *L'épaisseur de Naples*, International workshop, final project: Gustave Doré's Vision of hell with Dante and collaged view on Capodimonte and Cristallini.

Figure 5 : *L'épaisseur de Naples*, International workshop, final project, detail of the cross section through the caves.



Addition through subtraction.

The case of Naples

A master thesis

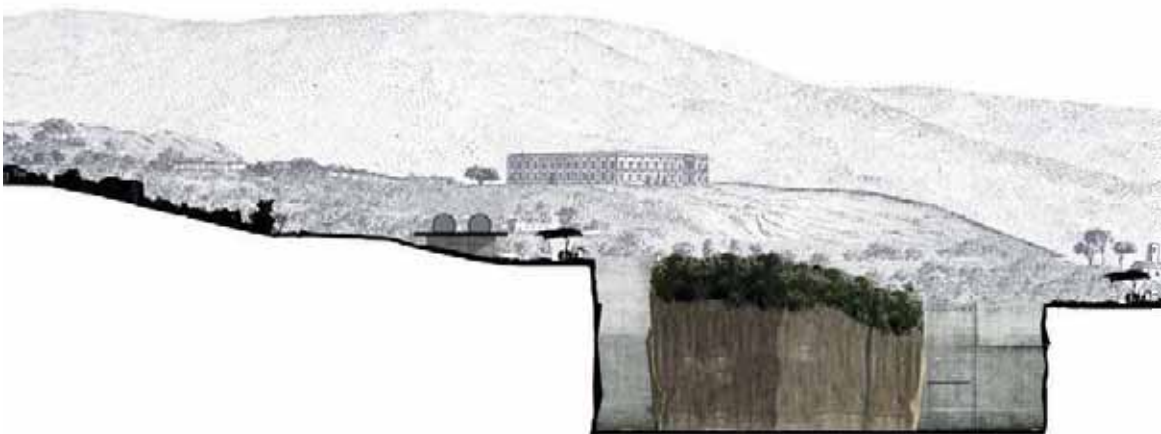
Based on original historical and geological research this master thesis presents three design case studies for the underground of Naples. It takes the form of a book and an installation of large scale models in different materials.

The first part, developed before and as a preparation to the international workshop, contains a principal innovation: the making of an overall map of the Neapolitan underground. The work is based on literature study in various scientific fields and on (cartographic) documents — some of them with very restricted access due to security concerns. It results in a map that did not exist before as a (public) document. This part furthermore presents historical and geological facts, and tries to make us understand the human interactions in the making of these underground caverns, and their ecological importance and potential.

From this investigation the students develop two case studies situated in or within walking distance of the historic centre of Naples. One of the two architecture projects also involves landscape design. In both, they address real and urgent issues in Naples, and elsewhere: lack of dwellings close to the centre, lack of public green and parks, and ecological problems such as flooding caused by uncontrolled sprawl.



Figure 6 : Pieterjan De Bock and Sébastien Holvoet, *Addition through subtraction. The case of Naples*, master thesis, Ghent University, 2014; cover.



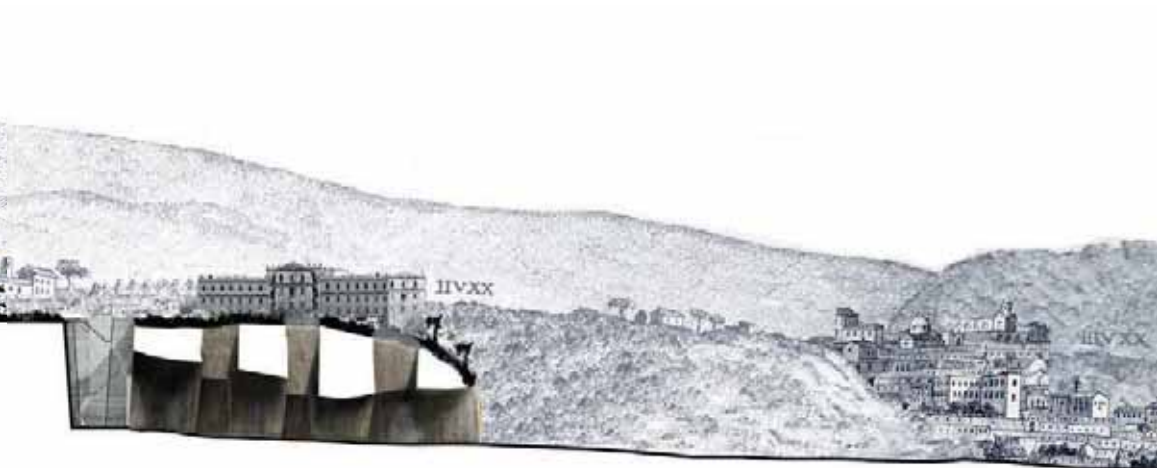
The first project is for new cliff dwellings in a former tuff stone quarry. It shows a potential of near oxymoronic nature: troglodyte dwelling offering outstanding panoramic views. The starting point is building by excavating: in the same way, and with the same techniques, as excavating a quarry. The project adds dwellings and green spaces to the Northern border of the old Neapolitan Sanità quarter, which is lacking both. The strength of this case study is its strategy to transform an inhabitable and currently unused dramatic landscape into a housing project.

The second project, of which we present parts on the following pages, is the Hydro Park project. Here the students have taken on complex and urgent questions of urban sprawl and pollution in Naples, and developed an ecological proposal. While more specific scientific hydrographical data for this area would be needed to develop it further, the project makes a very good case for the use of geological and topographical knowledge in an architectural project, and for the potential to transform a technical operation and engineering project into a high quality landscape design and social infrastructure.

On a methodological level, the presented work aims at combining elements of scientific research, cartography, architectural project, artistic project, and graphic design. It proposes architectural design tools that come out of a poetics of engineering.



Figures 7-8 : Pieterjan De Bock and Sébastien Holvoet, *Addition through subtraction. The case of Naples*, master thesis, sketched plan and section through the caves.



L'épaisseur de Naples :
Geology, porosity and urban life

Text from the master thesis, various pages.

**'L'épaisseur de Naples'.
Geology, porosity & urban life**

International Workshop, March 2014

prof. Dirk De Meyer, with David Schmitz and Eef Boeckx (Ghent University), and Giovanna Russo Krauss and Alberto Calderoni (Università di Napoli Federico II)

Students: Anna Loreau, Arthur Bocard, Géraldine Fontaine (UCLouvain-LOCI), Alfonso Letizia, Anna Avolio, Marco Di Martino, Martina Barbato (SUN), Lidia Salvati (Federico II), Justine Pelissou (ENSA Marseille), Pieterjan De Bock, Sébastien Holvoet (UGent), Andrea Califano, Christophe Colombo, Christina Lambrou (ENSAS), Aline Mattar, Elie Habre, Nelly Bitar (ALBA)



**Addition through subtraction.
The case of Naples**

Master thesis by Pieterjan De Bock and Sébastien Holvoet, Department of Architecture and Urban Planning, Ghent University, 2014. 123 pp.

Supervisors: prof. Dirk De Meyer (Ghent University) and prof. Carlo Donadio (Earth Sciences, Università di Napoli Federico II); counsellor: David Schmitz (Ghent University).
Jury members: Christine Fontaine (UCLouvain-LOCI) and Eef Boeckx (Ghent University)

Text from the master thesis, various pages.



Figure 9 : *L'épaisseur de Naples*, International workshop, complete final presentation poster.



On following pages: 134-159
Pieterjan De Bock and Sébastien Holvoet, *Addition through subtraction. The case of Naples*, master thesis, Ghent University, 2014; various pages.











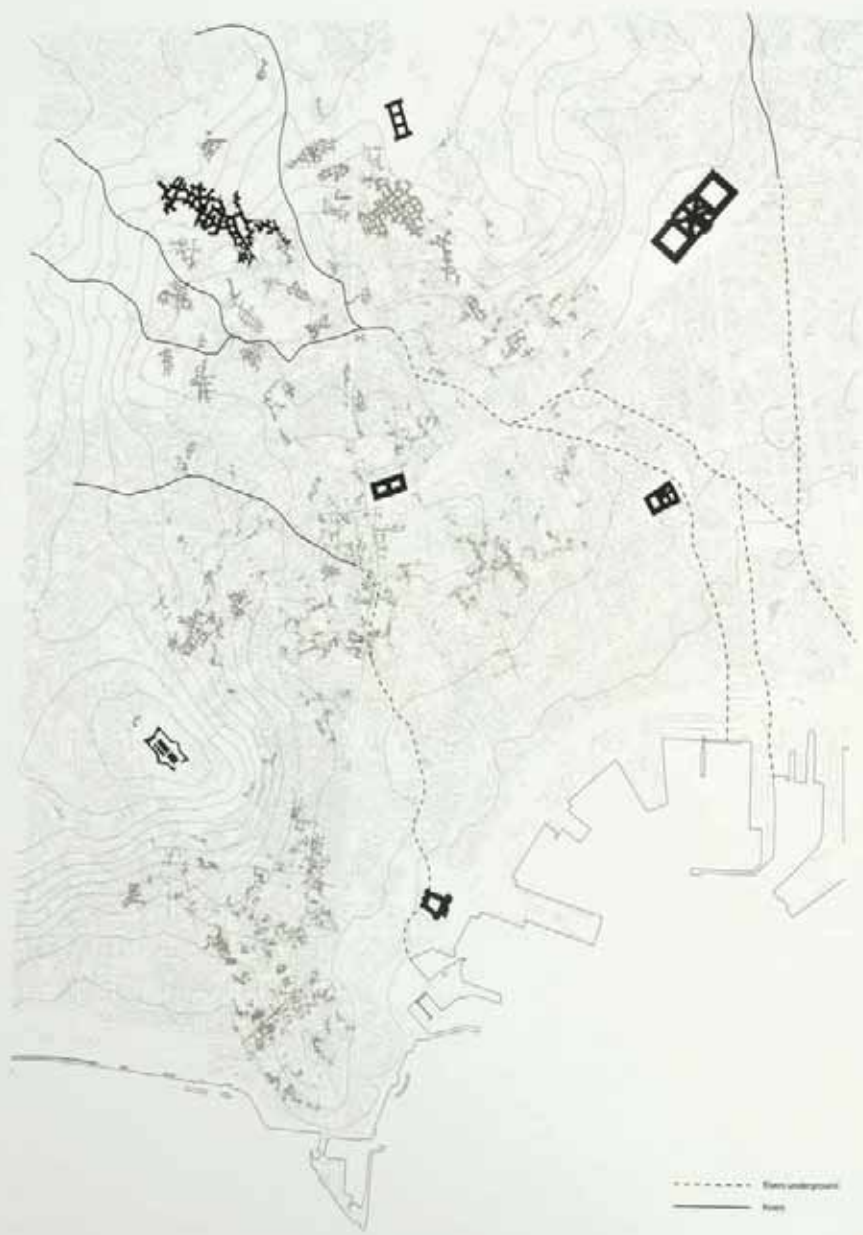
Image
Snapshots showing the process of sculpting the model



Image
The tools that helped to shape the limestone. Sunscreen and a dust mask were very helpful too.







----- Dotted line
_____ Line

HYDRO PARK

Italy, and the Campania region in particular, has been the casualty of landslides and floods for centuries. Large parts of the country are defined as *hydrogeological instable* which means that 'natural and anthropogenic processes, related to slope, soil and water bodies, determine hazardous conditions on the territory.'¹ Due to the combination of complex geological conditions and wild urban development, Campania is one of the most vulnerable areas of Europe when it comes to geological hazards.² For years, climate changes and anthropogenic activity have been the main triggering factors causing numerous tragedies all over the country. Measures, - in terms of (town) planning, law making, funding and maintenance - have only been taken the last two decennia. The following project takes into account this theoretical background and aims at bringing new ideas into this complicated matter.

The section, *aqueducts of Naples*, has briefly pointed out the hydraulic hazards the Neapolitans had to deal with apart from the threats posed by the aqueducts. In this study further explanation on the occurrence of flood events will be given, as well as a proposal for a possible solution.

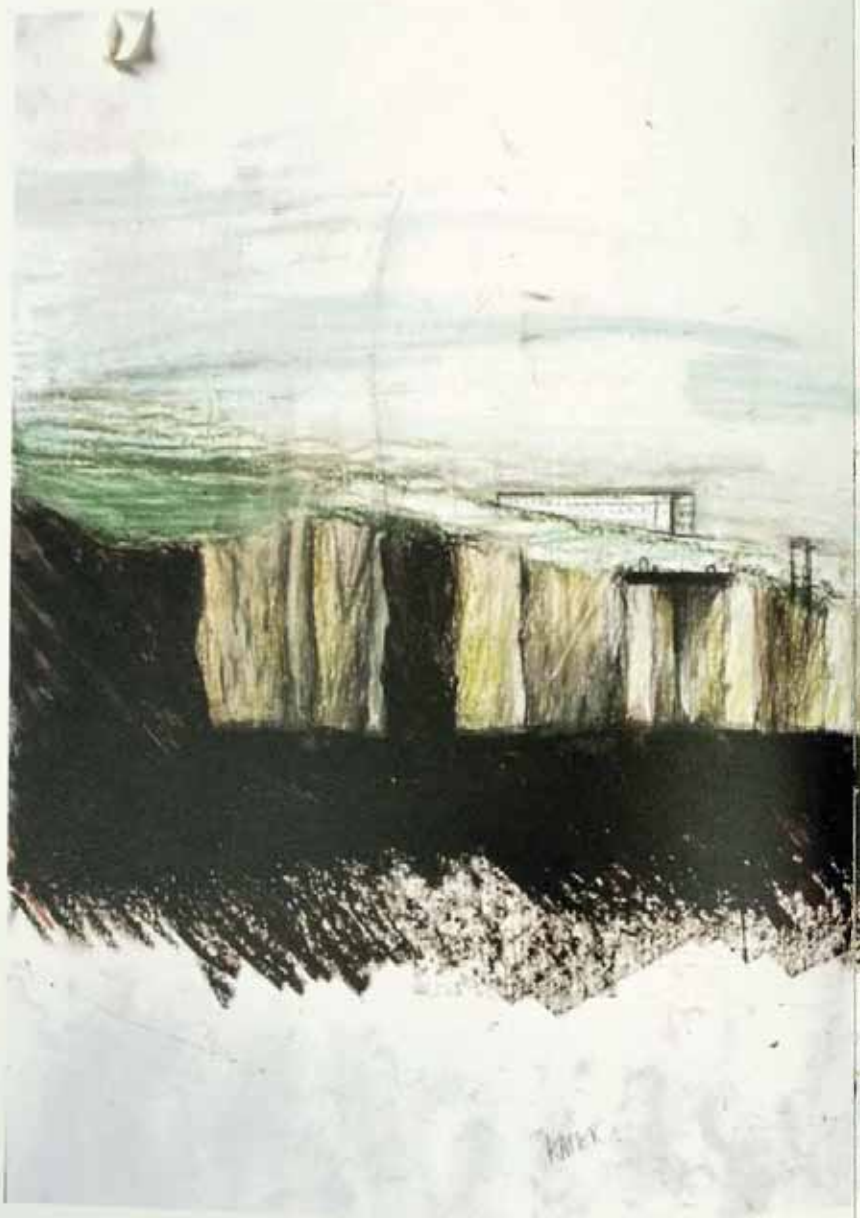
Geological aspect

The city of Naples is situated east of the Phlegrean fields, a volcanic area in the Campania plain which is particularly known for its Phlegrean Caldera and volcanic edifices.³ Since 130.000 years b.p. consecutive volcanic eruptions formed the subsoil of this area. When looking at Naples in particular, four different types of formations can be distinguished: the oldest one (35.000 years b.p.) is the Campanian Ignimbrite; followed by the Pre Neapolitan Yellow Tuff (35.000 - 12.000 years b.p.); the Neapolitan Yellow Tuff (12.000 years b.p.); and a cover of pyroclastic soils (> 12.000 years b.p.)⁴ The latter sequence is characterized by 'a repeated alternance of pumice, ashes, scoriae and paleosols, usually stratified, with a thickness ranging from a few to some tens of metres', thus forming a loose pyro-clastic top layer - with high water permeability - often leading to a high degree of saturation.^{5,6}

Rainfall events

The rising instability risk of the subsoil is not only due to its structure but is always a combination of multiple factors. Urbanization of hilly and unfavourable land, larger rainfall events and, nowadays, to a more limited extent, seismic activities trigger the appearance of natural geohazards.⁷ In its history, landslides, debris-flows, sinkholes and floods have struck the city of Naples several times. As mentioned in the opening text, the first Greek-Roman town was already hit by a mudflow at the end of the fifth century as a result of a flood which moved down parts of the Caponapoli hill.⁸ However, it lasted until 1986 for researchers and government to finally pay attention to the issue because of landslides in the whole of the Phlegrean area after a period of heavy rainfall.⁹

1-6: page
Fig. 1
The cave where the project is working on superimposed on the map of the old riverbeds in Naples. The site is situated along two rivers, as well as many other tuff gallees.





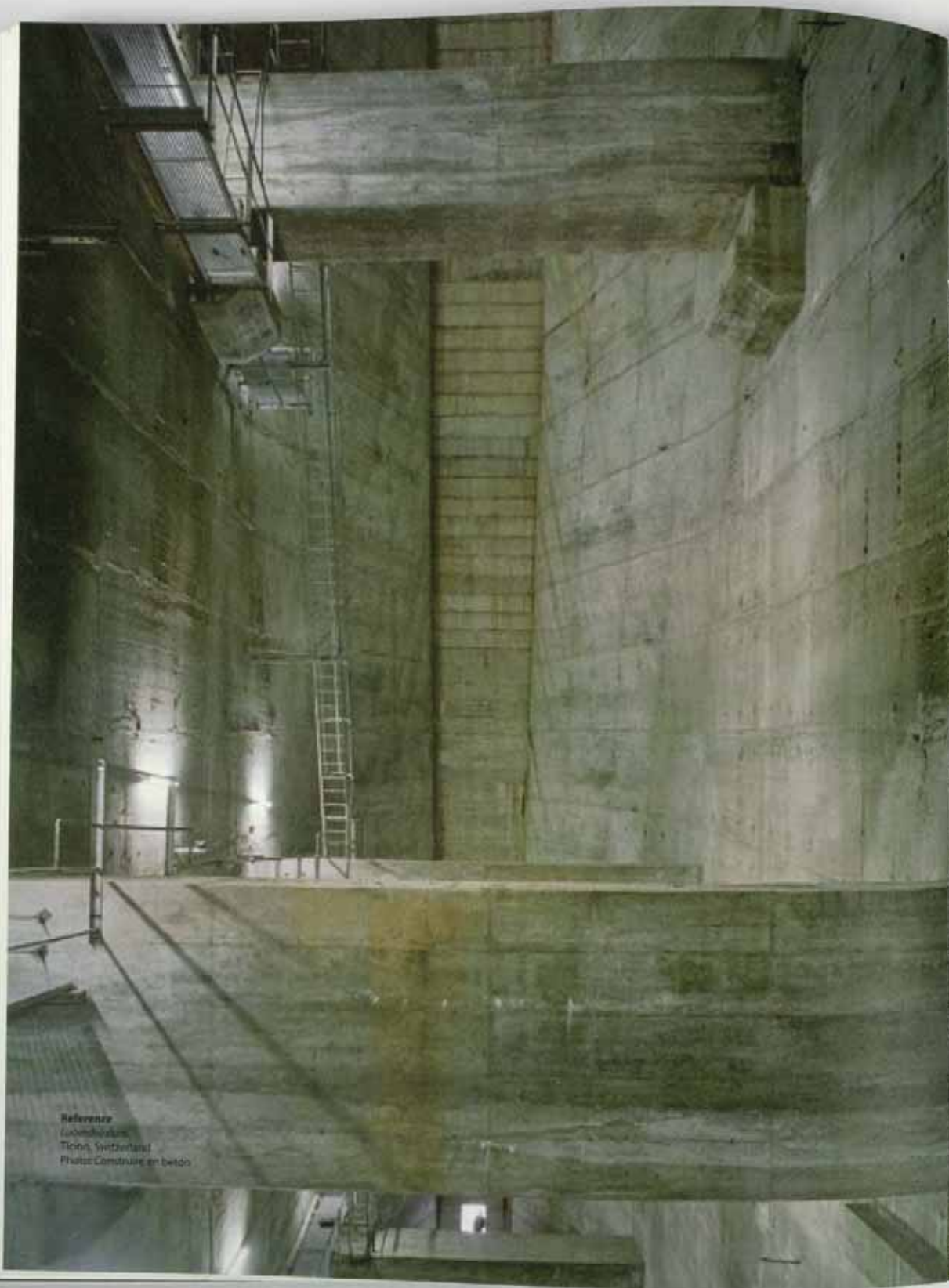
Sketch
Section of the park using pencil, wax
crayon, pastel and charcoal. Inspired
by the artworks of Christo.



Collage
The figure of the park embedded in
the hilly landscape.



Reference
Double negative
Artist: Michael Heizer
1969

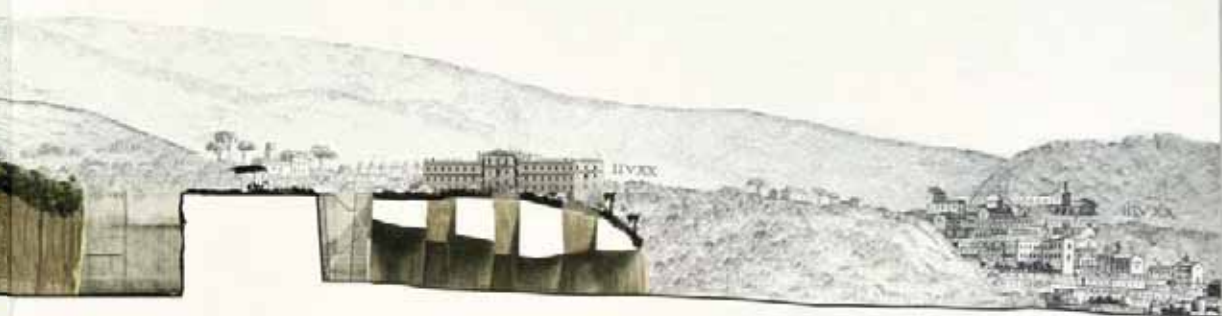


Referenza
L'ombelone
Ticino, Svizzera
Foto: Construire en béton

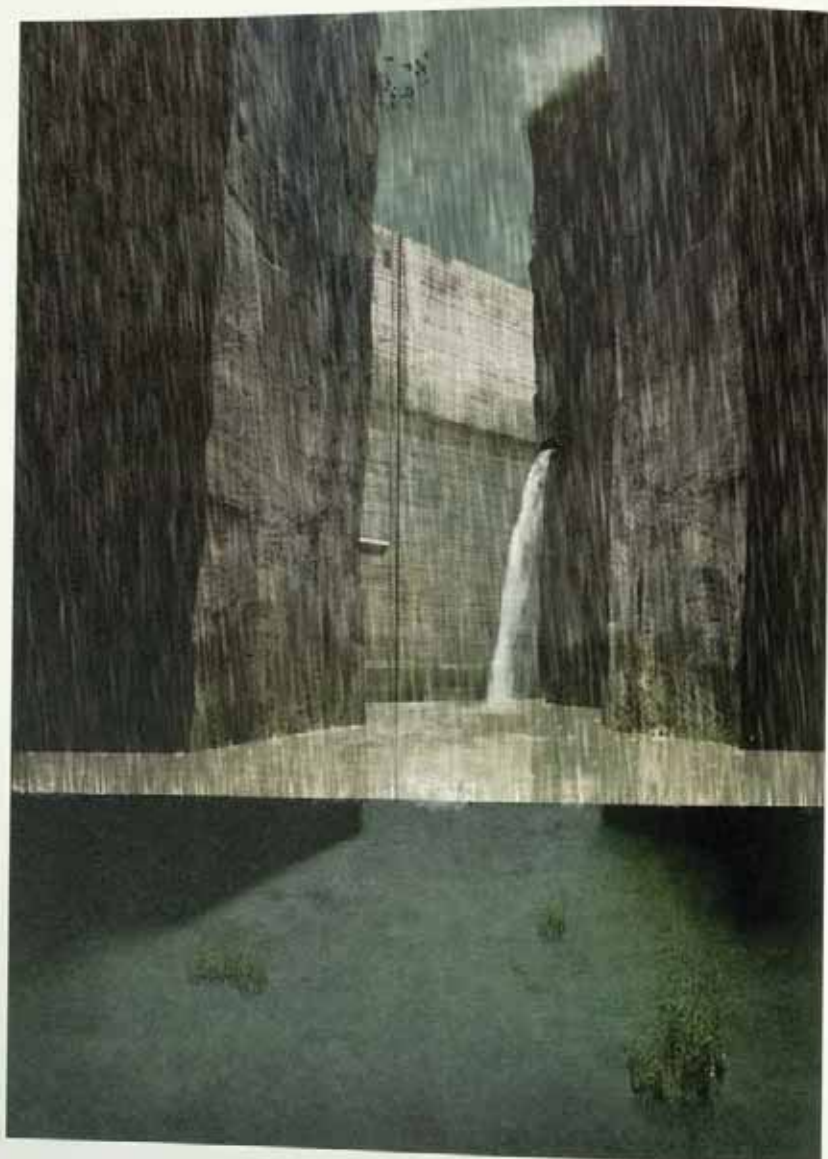


Reference
Concrete poured over the hills in order to
stabilize them.
Hong Kong, China
Photo: Georgaermi.ch

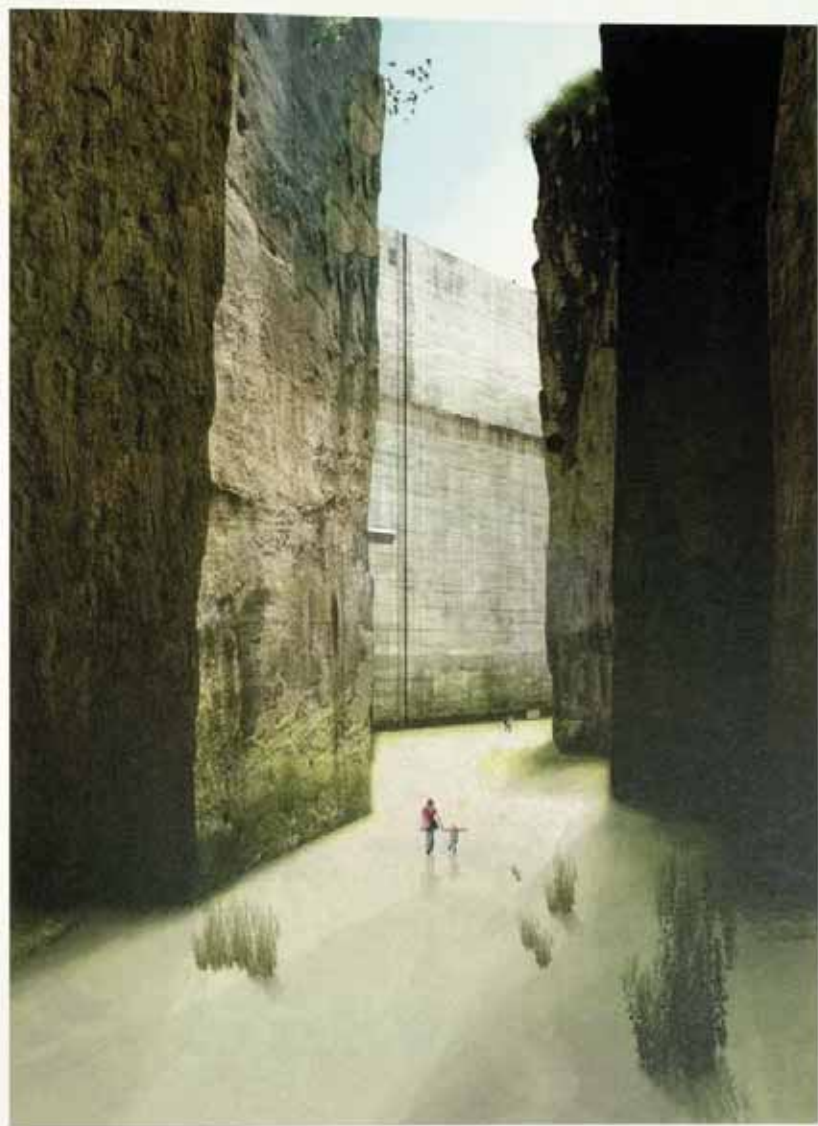




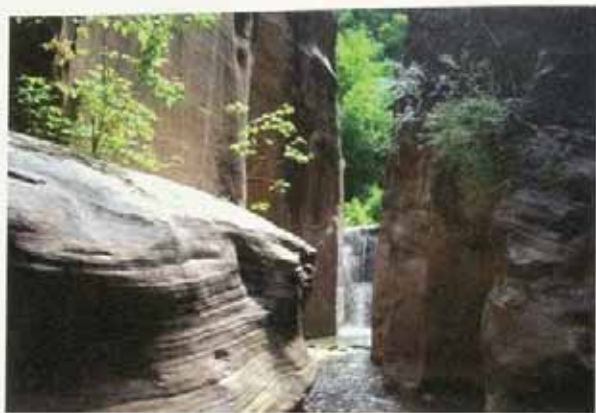
Drawing
Section
Longitudinal section along the pathway
that links Fontanelle and Parco del
Poggin.



Collage
Impression of the park during winter.



Collage
Impression of the park during summer.



Reference

Top: *The Zion Narrows*

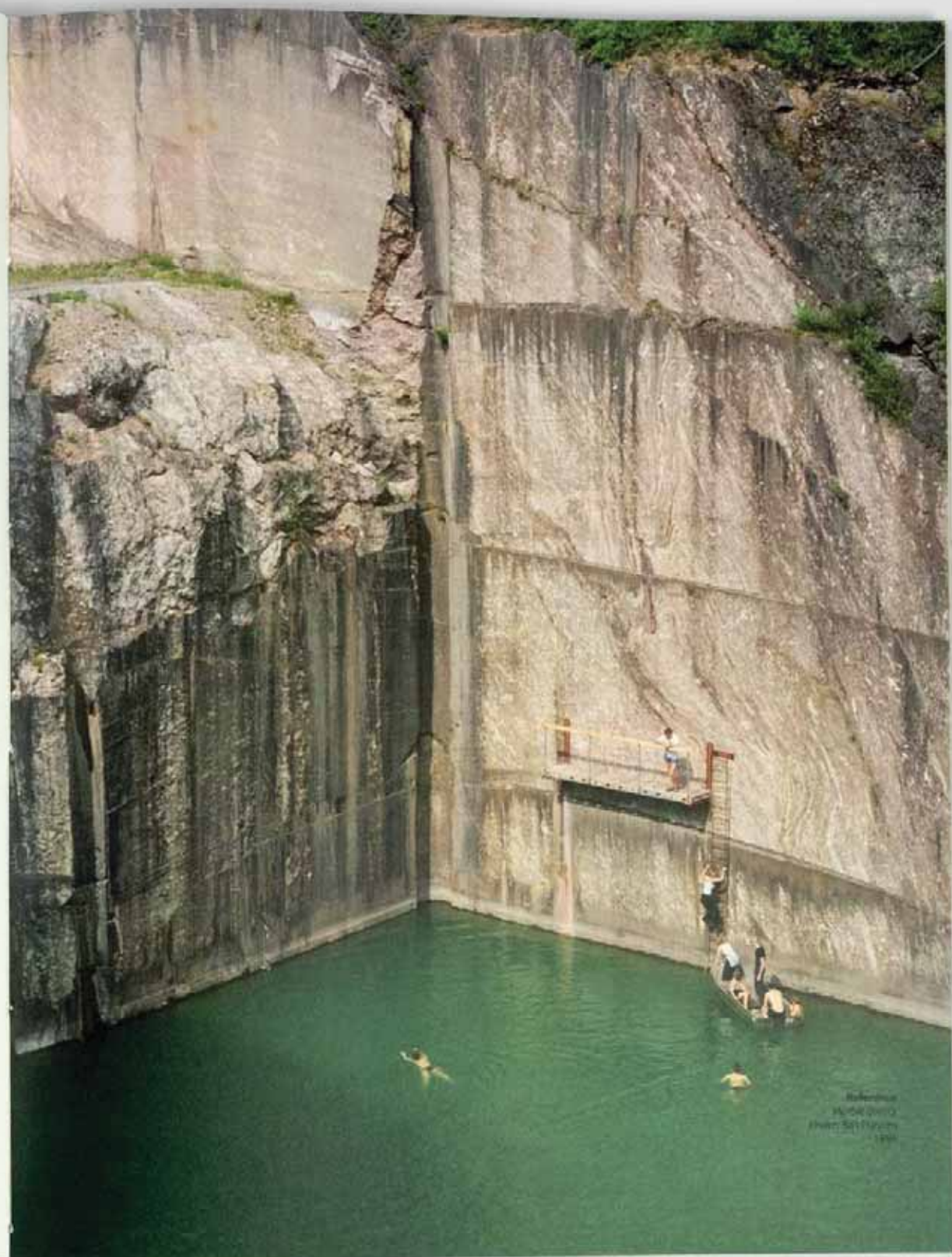
Utah, USA

Photo: *Jilloutside.com*

Bottom: *Surya Kund (stepwell)*

Modhera, India

Photo: *Google Images*



Swimming
pool built into
the rock face
at the
1990s



Images

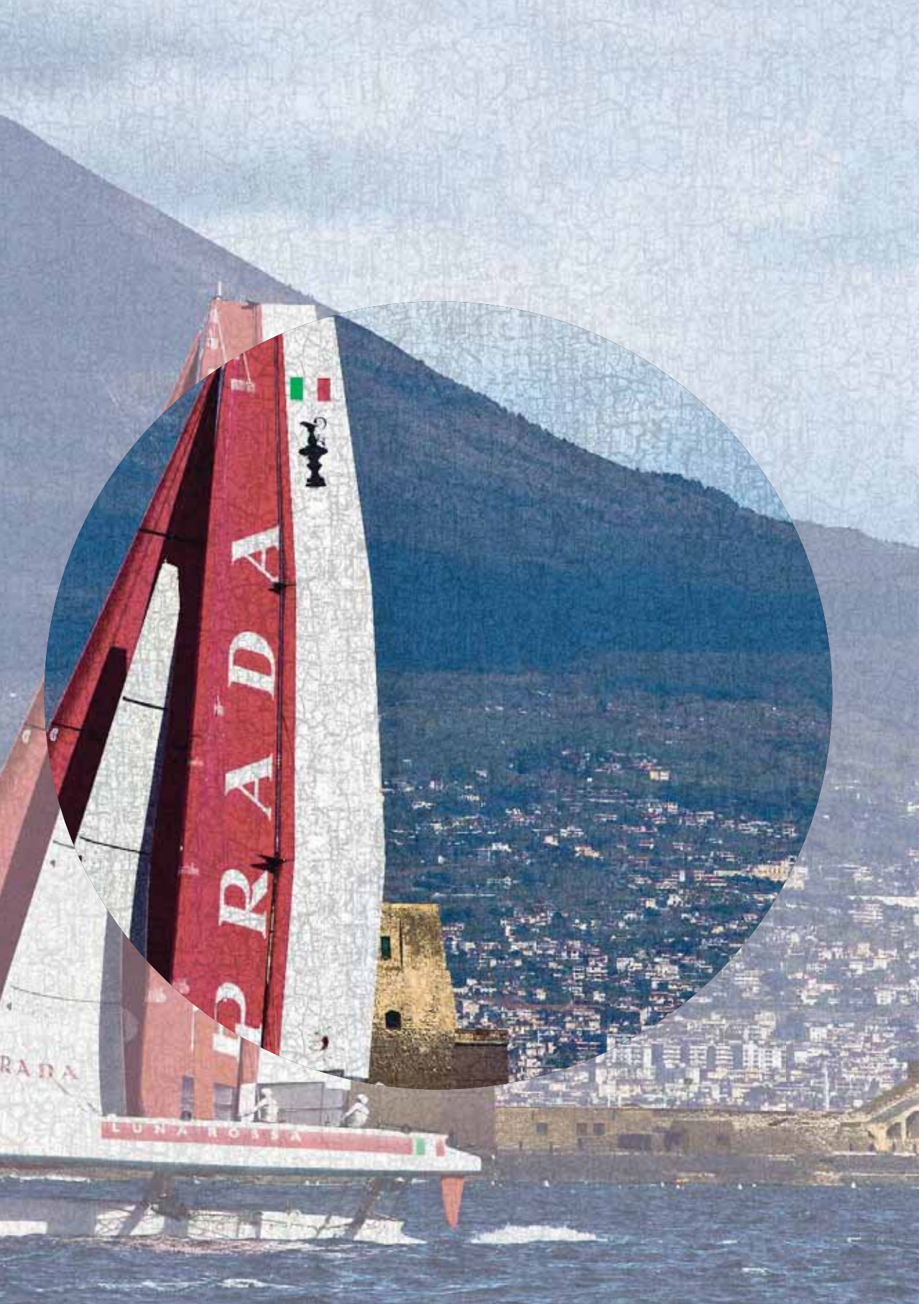
Several photos showing the built-up of the model corresponding with different level curves of the landscape.



Image
Isolated islands of
the hydraulic park.







Comme une odeur de soufre...

Georges Heintz

Ecole Nationale Supérieure d'Architecture de Strasbourg,
France

Lorsque j'accoste l'idée de Naples se télescopent en moi la Baie et le volcan, l'architecture et sa fantaisie, Malaparte et Brigitte Bardot, le peuple de Naples et sa musique, les nuits de Naples et sa proliférante littérature.

Mais qu'en est-il de notre position dans l'iconographie architecturale Napolitaine qui recouvre l'épaisse histoire urbaine ?

Naples appartient au centre de la Méditerranée, c'est son tuf friable, son nombril volcanique et sismique.

Sous la croûte brûlante de la plus haute densité humaine d'Europe s'étendent des cavités gigantesques, résultats de l'extraction des matériaux pierre qui ont contribué à son édification depuis la période phocéenne.

La ville s'étend ainsi sur les chambres d'air d'une immense ruche.

C'est ainsi que nous est venue l'idée d'imaginer une porosité verticale, une exploitation fonctionnelle et poétique de cet espace, pour doubler et compléter l'urbain dans ses strates inférieures.

De réaliser des programmes absents ou insuffisants en surface, sous la ville et qui émergent ponctuellement en surface, affranchis de la trame urbaine; mais contraints par les réseaux d'infrastructure, les flux hydrauliques, électriques, et de transports sous-urbains.



Naples comme un Léviathan

Le Léviathan, BOSSE Abraham, (dans le livre *Léviathan* de Thomas HOBBS), 1651

Territoire palimpseste, chaque peau d'époque est gorgée des traces archéologiques, typologique et de son état passé. Ces mille feuilles constituent l'épaisseur de la ville d'aujourd'hui et chaque geste révisé ce calendrier architectural perpétuel. Comme Venise est bâtie sur l'eau, Naples est bâtie sur le vide. Ceux-ci affleurent la superficie, se manifestent parfois en précipices spontanés et imprévisibles.

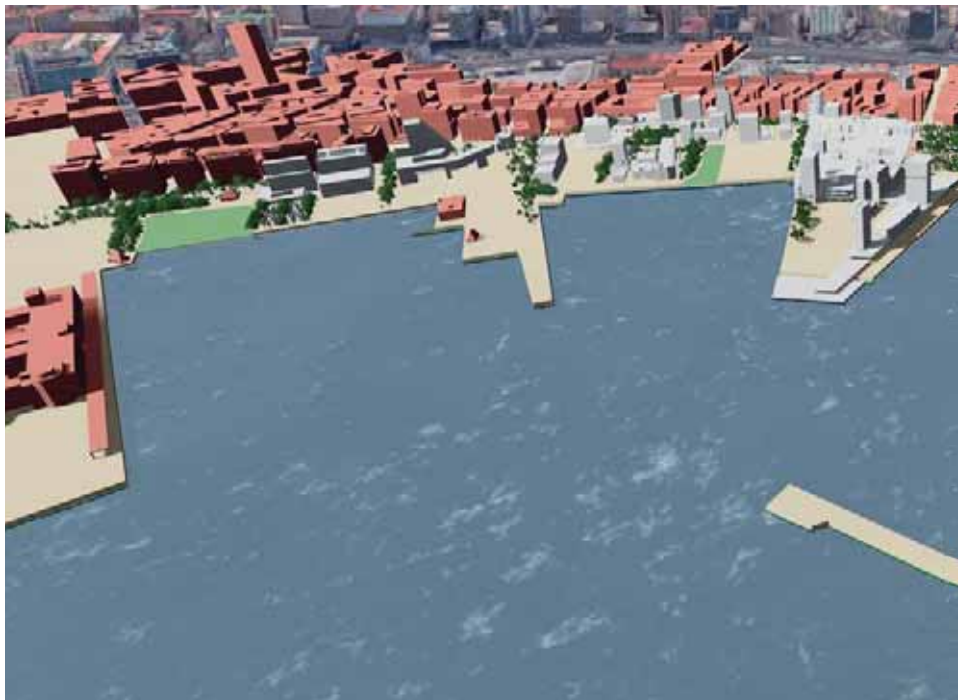
Imaginer comment dans la ville ces points d'accès public vers le bas vont s'inscrire dans le tissu et dans la modénature actuelle. Ce travail a réinterprété parfois le Palais Napolitain pour inventer ces nouveaux lieux et leur esprit d'interface. De haut lieu privé celui-ci se métamorphose en haut lieu public. Nous avons aussi imaginé le nouveau quartier du front de mer comme ouverture de la ville vers sa baie, libéré de son ancien port barrière.

Il est formidable pour de jeunes étudiants en architecture de se confronter ainsi à l'histoire de l'Architecture.

En effet, dans les tissus parthénopes de la ville parenthèse, les styles et les traces de l'histoire, seront comme nulle part ailleurs présentes et lisibles, pour peu que l'on regarde le plan de la ville et ses souterrains.



Carte antique de Naples,
BRAUN et HOGENBERG, 1572-1624



Dessus : *Plan de Naples au Moyen-Âge*,
B. Stopendaal, 1663.



Notre proposition pour le nouveau bord de mer urbain, qui permet de prolonger les perspectives de la ville historique vers sa baie exceptionnelle en un stream boulevard balnéaire, alternant en staccato le minéral et le végétal.



Il mare non bagna Napoli

Veduta Panoramica

La Romancière Maria Ortèse titre ainsi son illustre roman en 1953. Au delà des célèbres polémiques, ce titre met en évidence que privée de beaucoup, depuis son faste de capitale des 2 Siciles, la ville est aussi privée de son front de mer.

Dès 1945 en pleine reconstruction d'après guerre, Luigi Cosenza architecte rationaliste des années trente, tente de redessiner dans un style moderniste le front de mer le long de la via Marina grand boulevard urbain est-ouest qui facilite la connexion entre Garibaldi et Posillipo en regroupant les grandes enseignes hôtelières.

Cette tentative reste un échec commercial et esthétique retentissant encore emprunt de désolation aujourd'hui.

Ce boulevard agrémenté est bloqué de tout accès au perspective vers la Mer.

Une grille de 4m de haut ferme l'accès au port commercial qui, sur une bande linéaire de 100 à 200m de profond, ferme littéralement la ville à la mer. Cette zone infranchissable et impénétrable constitue pendant 60 ans une zone interdite aux Napolitains.

Le port-lieu technique de transbordements est donc dangereux et est le territoire de tous les commerces, échanges, mais aussi trafics. C'est un état dans l'état ou plutôt une île dans la baie.

Enjeu principal des négoce et contre bandes en tous genres et patrie de la corruption contrôlée par la Camorra, célèbre mafia locale objet de nombreuses séries et films à succès.



"Napoli sehen und sterben"

Voyage en Italie - Goethe, 1787



"Il mare non bagna Napoli"

A.-M. Ortese, Naples, 1953
Bianco-Valente, Museo Madre, 2015



De gauche à droite :

Vedute,
G. Van Witell, 1701.

*Piano di ricostruzione dei quartieri Porto,
Mercato, Pendino*,
L. Cosenza, 1946.

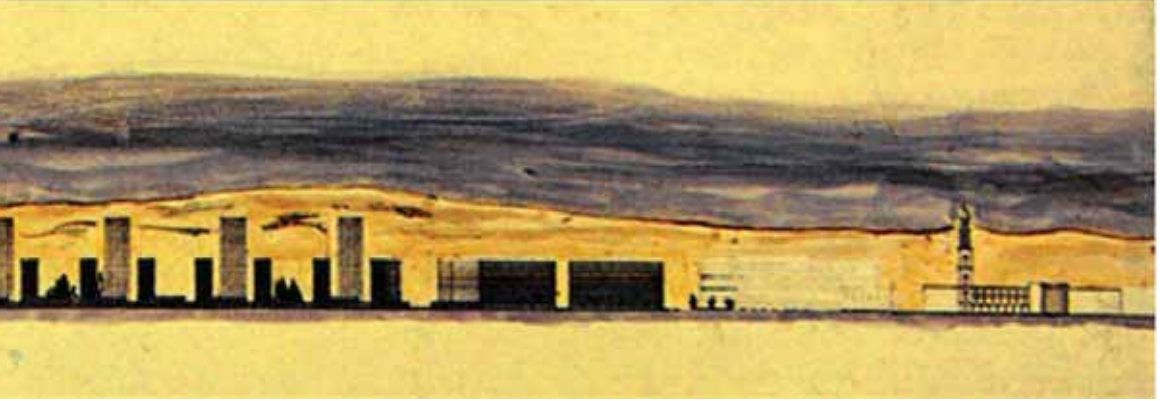
Naples et sa baie, vue depuis le château
de Sant'Elmo. Au premier plan, la chapelle
de San Martino



La mondialisation, dont le container est l'instrument implacable a eu pour conséquence de réorganiser dans le monde entier les ports maritimes et fluviaux, ainsi que leurs infrastructures.

Ceux ci, étant donné la nécessité de rationaliser de vastes étendues de stockage ont globalement tendance à se déplacer sur les fronts de mer, laissant de vastes territoires obsoletés et en déshérence, à la disposition des villes, quant elles sont limitrophes.

Pour Naples, cette situation est exceptionnellement favorable et autorise une reconquête des rives perdues. Elle nécessite donc une réflexion et une projection urgente, totalement nouvelle qui va profondément transformer la ville. Si les projets balbutient, les visions pertinentes sont absentes !



Sur la double-page suivante:

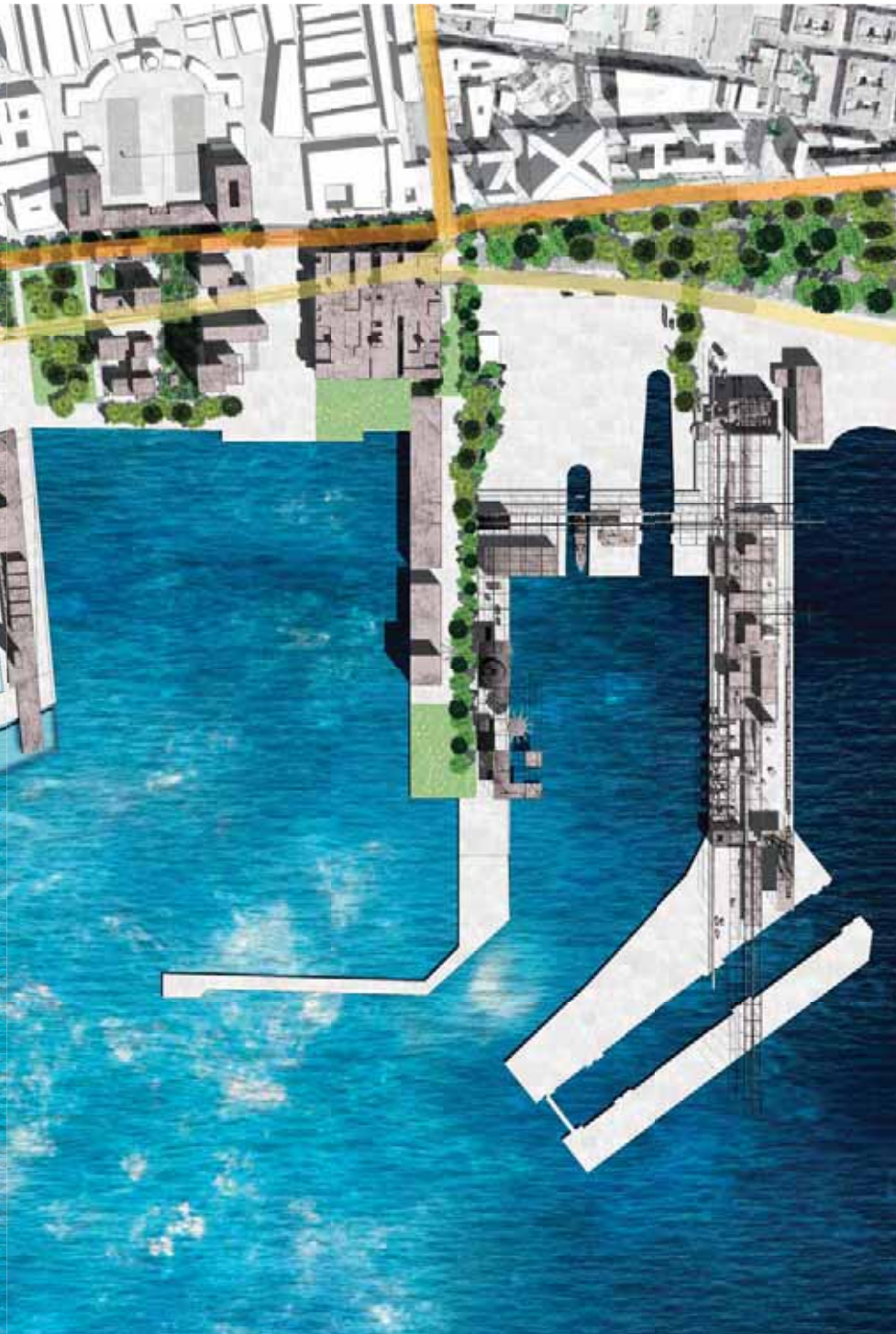
Notre nouvelle bande urbaine permet à la continuité de la typomorphologie napolitaine de se prolonger sur l'ancien port depuis la vieille ville.

En dégageant des respirations variant entre végétales minérales, le dispositif permet une alternance Est-Ouest faite de pleins et de vides ménageant des places aux caractères et programmes diversifiés, propres aux tempéraments spécifiques de Naples.

Des plus populaires aux plus contemplatifs, capables d'accueillir une multitude d'événements quotidiens ou exceptionnels : marchés, concerts, manèges, kiosques à musique, promenade, bals, foires, etc...

Seule la réalisation du projet de Alvaro Siza à Municipio, vers la gare maritime se réalise. Historiquement lieu du port antique romain et glacis de mise à distance entre le château Angevin du Castel Nuovo (1279/1287) résidence de Charles d'Anjou et où la ville prend forme dans l'idéal d'un parc structurant qui plonge vers la mer et les paquebots géants de croisière qui accostent leur flots de touristes nourriciers... dans les bras ouverts des commerces de bibelots, pizzas et cartes postales opportunes.







Une morphologie urbaine très lisible, qui revendique chaque période de construction



Figure 1 : La grande nappe multi-programmatique finit par une piscine municipale en pleine mer, au milieu des ballets de cargos et de paquebots.
A.Badillo, I.Montanaro

Figure 2 : Une nouvelle promenade balnéaire urbaine ombragée.
A.Roman

Figure 3 : Un zoo structurel architectural porte les dalles d'ombre des plateaux urbains multi-usage.
A.Badillo, I.Montanaro



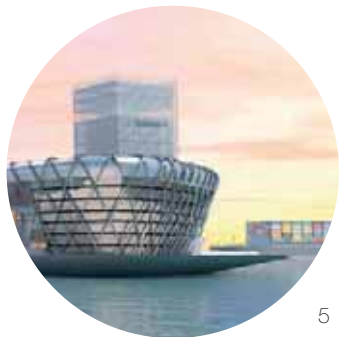
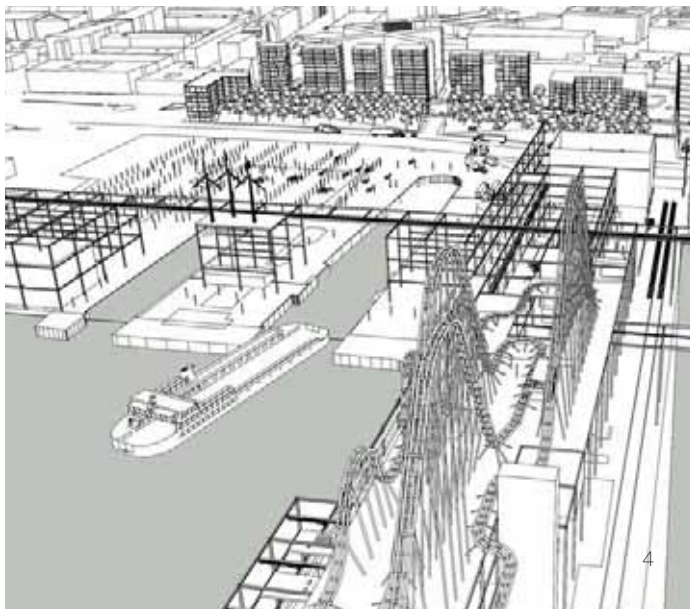
Figure 4 : La méga-structure échelonne les chantiers navals et les 95 entreprises en bas et la foire kermesse foraine aux étages. La grande place minérale, véritable plateau technique reçoit les cirques et galas de passage le long des saisons. N.Picaper

Figure 5 : Une scène flottante reçoit les concertistes et peut se déplacer auprès des programmations sur le port et vers les îles. A.Daubon, V.Pétré

A.Daubon, V.Pétré

Figure 6 : Sur les larges toits terrasses plantés du front de mer, des jardins de cédrats et agrumes citronnés ornent les promenades perchées. C.Garvia

C.Garvia



5



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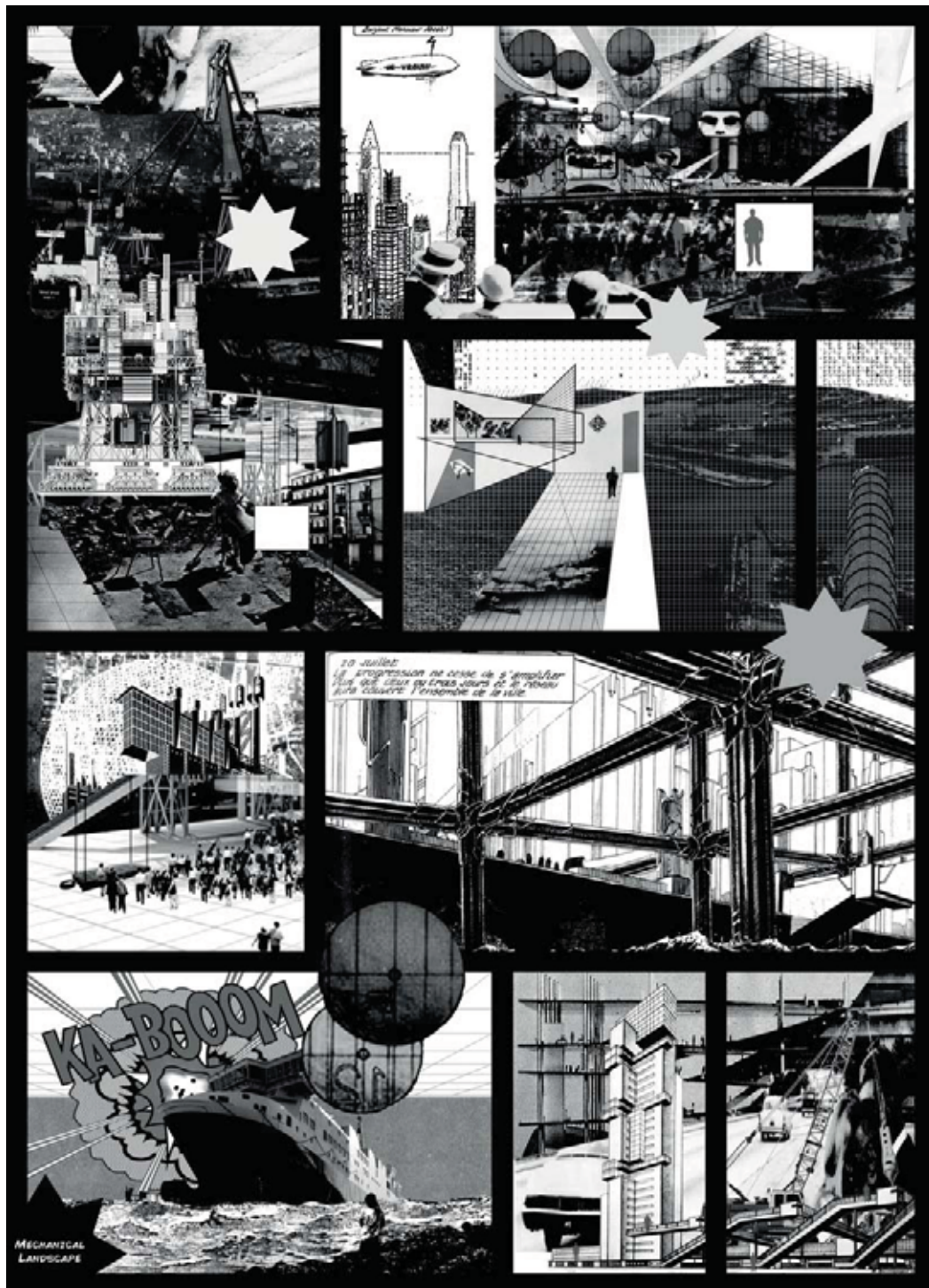


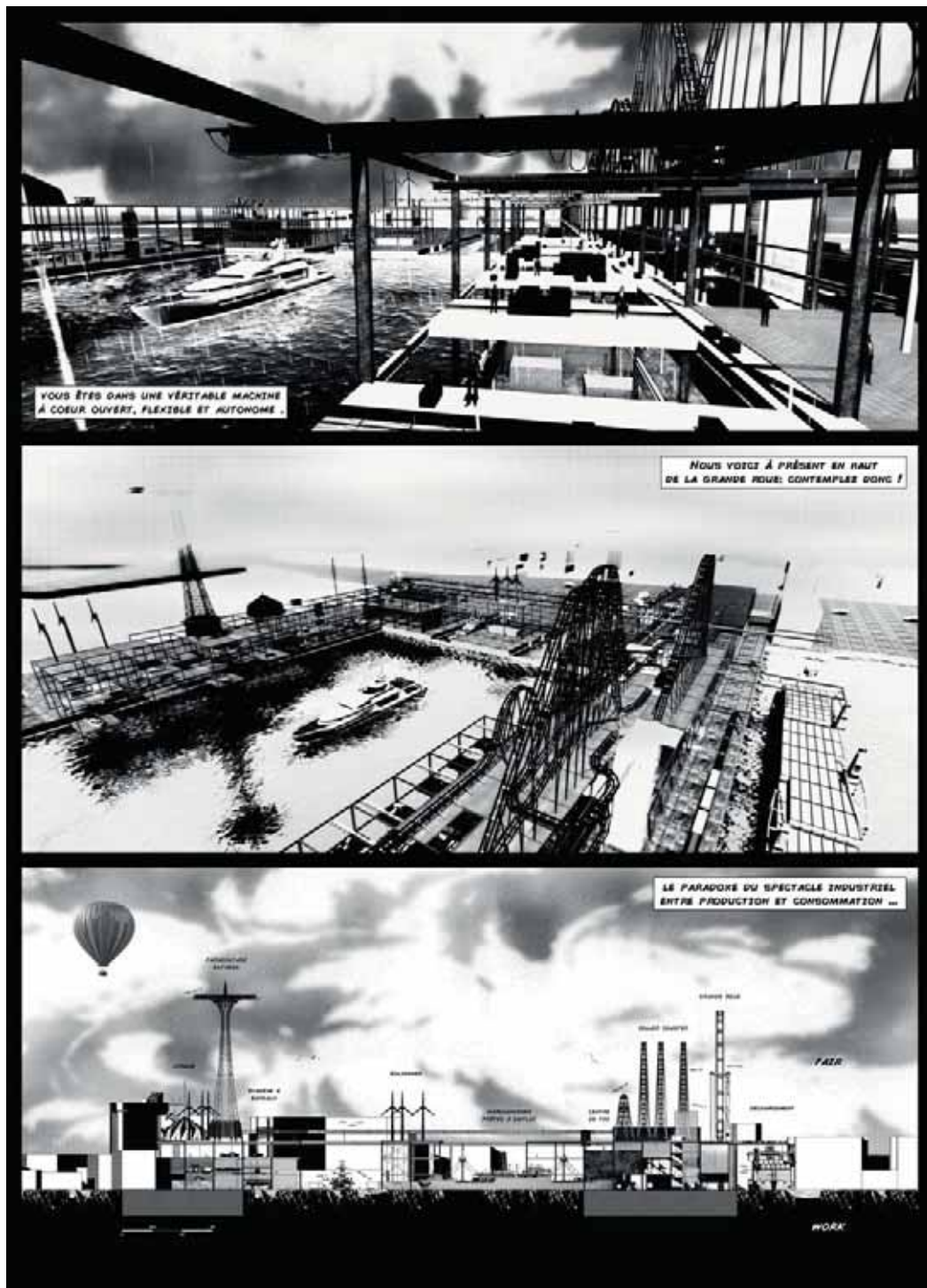
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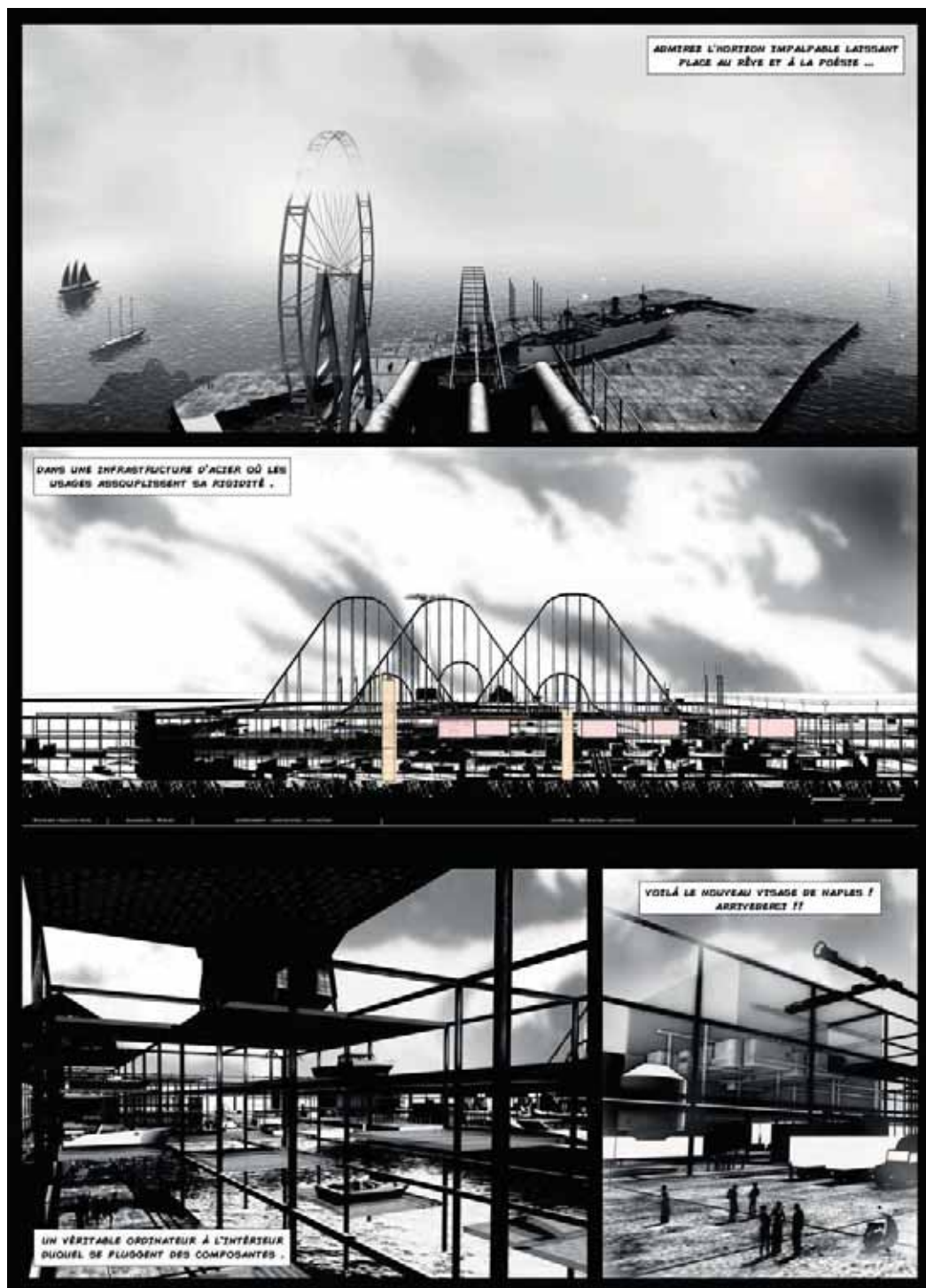
Figure 7 : Entre le port et le boulevard Loreto Mare, une colline artificielle plantée abrite le parking d'accès aux ferrys vers Palerme, Athènes et les grandes destinations méditerranéennes. La méga-structure se finit en immeubles urbains, bureaux et commerces sur le grand boulevard. Ombre, services et files d'attente à profusion sous ce parc Napolitain qui reproduit le cliché de la côte Amalfitaine.
S. Van Arcken

Sur les 4 pages suivantes. Au débouché du Corso Garibaldi et au croisement de la Nuova Marina, boulevard du front de mer réorganisée, une large place minérale reçoit les événements les plus variés de la multi-programmation, et donne accès à la méga-structure, qui au sol réorganise les chantiers navals et leur multitude de pôles hyper spécialisés. Alors que les étages regardent la foire festive permanente de Naples, ses stands et manèges, grande roue et montagnes russes, dans leur ballet cinétique perpétuel, reflété par les flots et les carènes.
N. Picaper











Cette situation urgente et exigeante constitue en terme de renouvellement urbain une occasion extraordinaire de réinventer la relation de la ville à son horizon maritime et très directement à ses rives. Une bande de 5 km de long et 400m de profond , dégagé de ses entre entrepôts obsolètes et autres barrières industrielles portuaires s'offre aux neurones visionnaires.

Notre parti pris, après de complètes et nombreux analyses a été d'organiser un boulevard urbain est/ouest accompagnant le tram, vecteur de transport collectif prioritaire ainsi que l'ensemble des flux, vélos, piétons et véhicules en observant complémentarité et distinction, vitesse des flux et ponctuations liées au croisement des programmes et quartiers traversés.



Ce boulevard relie Garibaldi, la gare ferroviaire centrale et Posillipo, par la gare maritime, le port des ferry et le tunnel della Vittoria. La nécessité est de distribuer l'ensemble des nouveaux points forts du port, qui alimentent la baie mais l'organisent aussi, la baie de Naples est un territoire de déplacements comme celui d'une ville terrestre. Nous déplaçons et construisons la gare des Ferries vers Capri, Ischia et Procida mais aussi la Sicile et des destinations plus lointaines, la gare maritime des grandes destinations méditerranéennes et ses obligations douanières, et tous les équipements nouveaux, les parkings, nécessaires, les parcs et les animations urbaines qui agrémentent la nouvelle bande.

Dans ce nouveau quartier linéaire voulu mixte en origines sociales et tranches d'âge, les Napolitains, plutôt que ceux issus de la spéculation de défiscalisation ou de privilégiés pouvant s'offrir les vues du front de mer, ont été privilégiés dans un montage savant, capable de financer de tels enjeux pour une ville partagée et réussie.

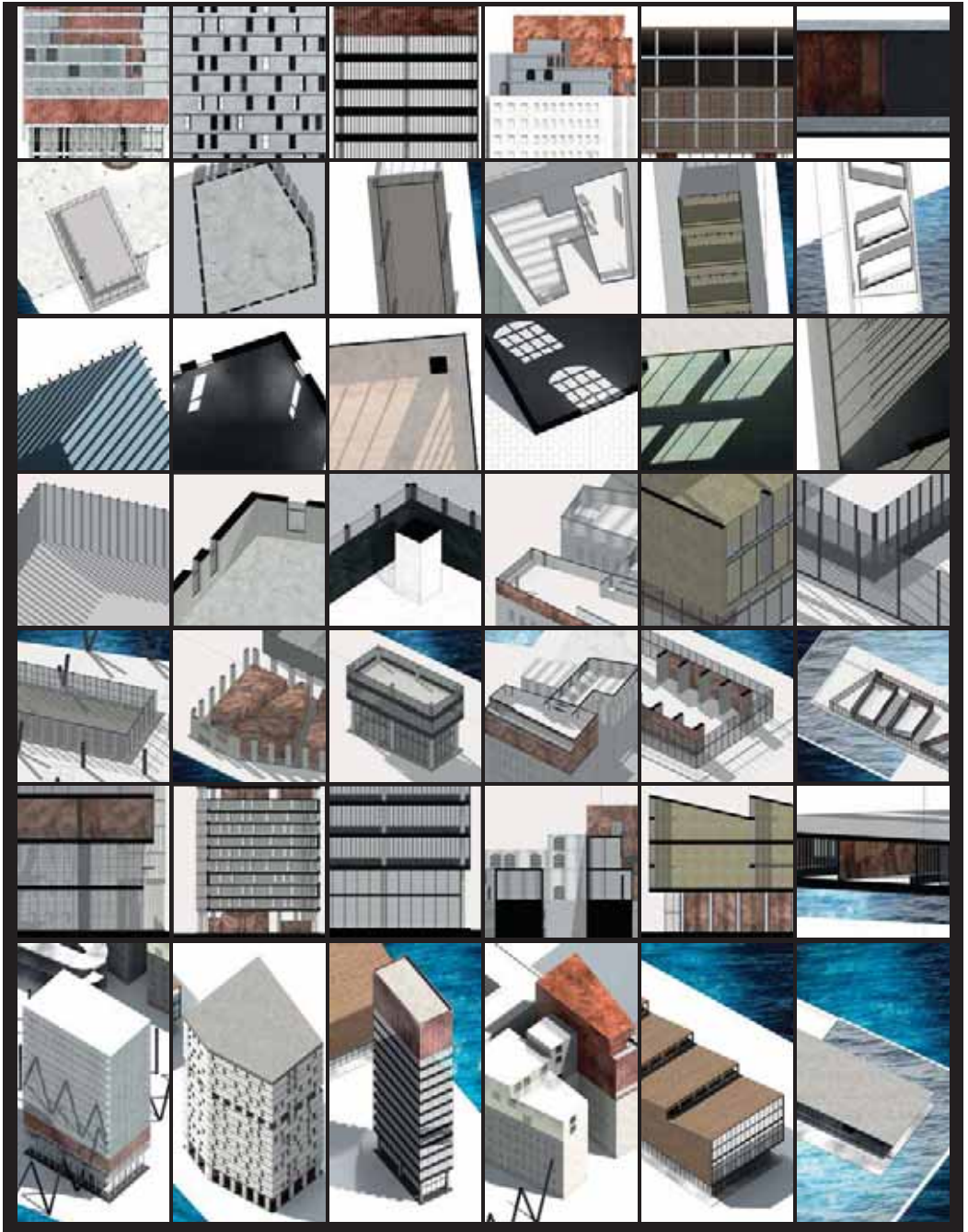
Figures 8,9 et 10 : Vers Municipio et son nouveau parc redessiné par Alvaro Siza, bordé par le château angevin du Castel Nuovo, le nouveau quartier balnéaire

débuté par une série d'édifices massifs qui accueillent des hôtels, centres de congrès, médiathèques et centres sportifs mêlant Napolitains et touristes dans une mixité multi-programmatique bénéficiant des plus belles vues vers la baie. La promenade est agrémentée de kiosques, restaurants et lieux courus tout de son long.

A. Badillo, M. Grigoras, I. Montanaro

Figures 11 et 12 : Objets trouvés, parcs végétaux et squares minéraux alternent agrémentés de centres commerciaux et de services accessibles au public. Une nouvelle promenade

Sea Side de grande facture.
B.Sheng





La notion Napolitaine de *Belezza* et de *Grandezza* ont été mises en avant dans cette prospective visionnaire mais opérationnelle de cette nouvelle page essentielle au renouveau complet de la vie de la cité et de sa nouvelle audience dans le monde.

Dans le développé de cette bande épaisse; nous avons donc positionné les axes structurants Est-Ouest à la façon d'un stream boulevard dont les bandes s'écartent et se resserrent selon les opportunités comme les bras d'un fleuve naturel au tracé organique.

A l'extrémité du mole de la capitainerie transformé en musée zoologique et combiné au mille-feuille multi-programmatique, est construite une immense piscine d'eau douce à niveau dans la mer abritée du port. Nouvelle place municipale balnéaire, elle apporte le plaisir des plages amalfitaines et des îles du golf à 5 minutes dans l'axe de la Via Duomo et du Corso Umberto avec dans l'axe, Capri !

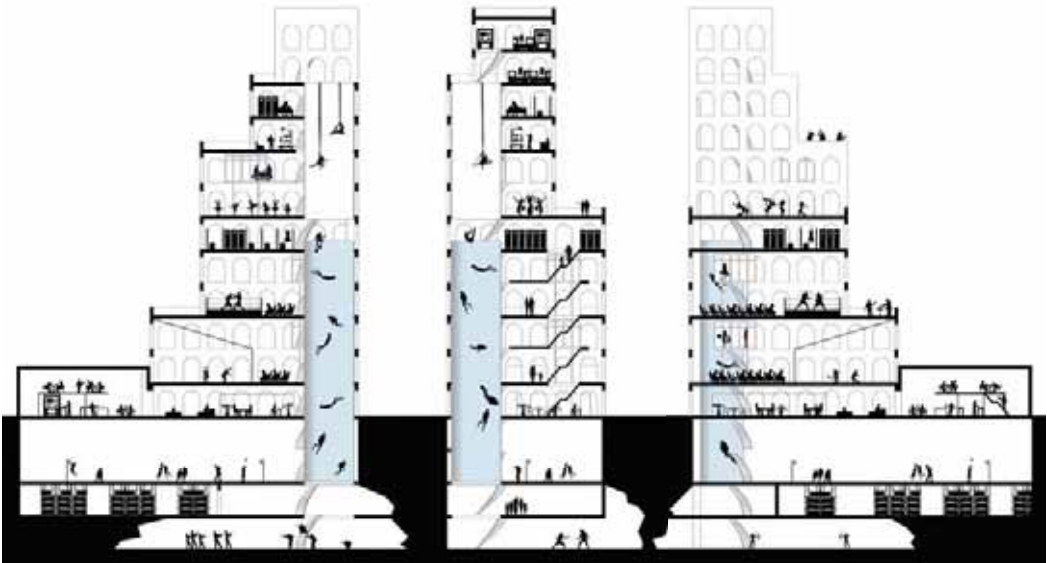
A. Badillo, I. Montanaro, M. Sava



Toutes les expressions architecturales sont acceptables et bienvenues dans la diversité artistique et stylistique de Naples.

De nouveaux édifices multi-programmatiques étonnants reprennent la vitalité et l'incroyable énergie et fantaisie du peuple Napolitain, comme inspiration pour renouveler et agrémenter les dents creuses, les parcelles en ruine ou le nouveau quartier littoral.

L.-P. Schmitt



Et l'avons découpé en prolongeant les axes Nord/Sud , ceux de la colline, de la ville vers la mer comme autant de perspectives qui créent des ouvertures à congestion urbaine incroyable de l'hyper dense et suffocante Naples, vers ses horizons lointains enfin révélés et dégagés. Cette respiration a pour conséquence d'organiser par le croisement de ses axes naturels que sont le bord de mer et perpendiculairement les rues comme la rue du Duomo qui descendent vers la mer, une ouverture spectaculaire de la ville vers la mer et sa baie.

Cette proposition est possible car le port devrait se déplacer vers l'Est où il pourra bénéficier d'espaces de stockage bien plus conséquents avec accès direct vers les autoroutes et accès principaux hors agglomération.

De fait, l'alternance Végétal-Minéral crée un staccato d'espaces urbains, places, parcs, squares, édifices complexes et vides structurants le long des rives réaménagées en promenade balnéaire .

Cette ville parc qui s'appuie sur la prolongation de la structure morphologique historique de la ville en la réinventant, s'ouvre à la mer et permet à nos étudiants d'inventer de nouvelles typologies architecturales fondées sur des programmes inventifs et originaux.





Les alternances minérales et végétales sont aussi des alternances de programmes destinés à la population. Complexes cinématographiques et théâtraux, piscines et gymnases municipaux, restaurants, bars, cafés, cantines et médiathèques universitaires, centres commerciaux, kiosques divers, mobilier urbain, manèges, bals publics, pavillons littéraires, baraques à frites, bancs à l'ombre, food trucks, carroussels pour enfants, sous face des bâtiments, entresols et jardins suspendus, etc ...
G. Breitenhuber, P.Fares, I.Lorem, B. Sheng



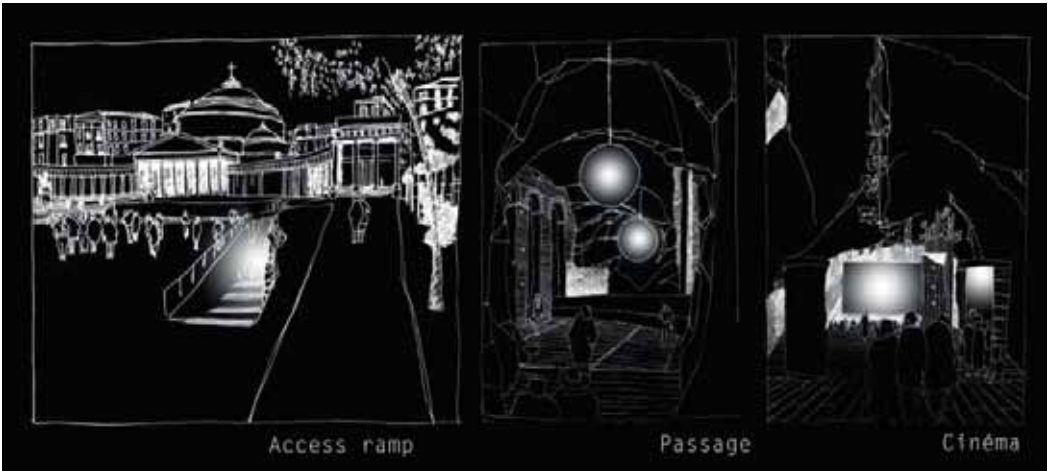
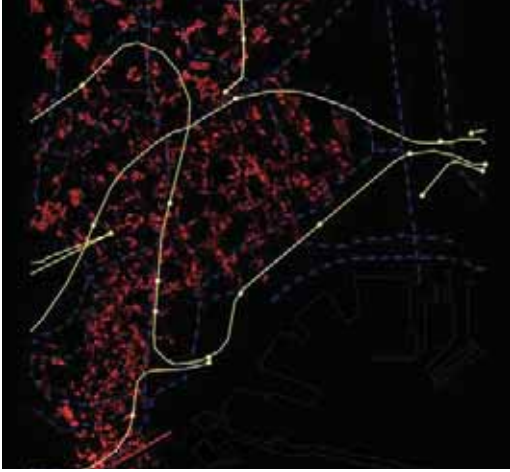


Sur les deux pages suivantes.
 Nolli Plan, Gianbattista, architecte et
 cartographe, né à Côme en 1692 et
 décédé à Rome en 1756.
 Fantastique plan où les édifices religieux
 sont représentés comme des espaces
 accessibles au public, comme les rues
 et les places. Cette idée pertinente
 transforme radicalement le poché noir et
 blanc de l'équilibre parcellaire.
 O.Wartelle-Collard

Nous avons produit l'assemblage des
 plans des cavités, réservoirs et carrières
 souterraines (rouge) au plan de la ville.
 Géométrie morphologique de surface et
 géométrie organique des souterrains se
 croisent en permanence avec fantaisie et
 caprice.







Le réseau de métro est la couche mécanique souterraine qui se dessine aussi sous et à travers les cavités permettant de connecter les nouveaux programmes à l'échelle territoriale du métro.

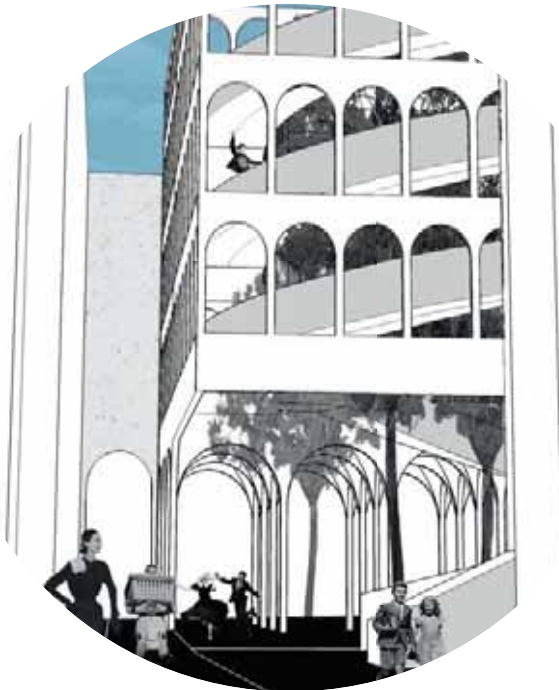
Les cavités investies de nouveaux programmes constituent un réseau gigantesque connecté verticalement aux places et nombreux édifices dégradés et vides en surface qui constituent autant de portes publiques d'accès au nouveau réseau aménagé ici sous l'immense Piazza Del Plebiscito.



Walter Benjamin et la porosité verticale piranésienne

Nous avons trouvé pertinent étant donné l'incroyable labyrinthe (120 km) de cavités (+ de 700) qui courent à plus ou moins 40m sous la ville de révéler ce palimpseste extraordinaire non pas comme ressource touristique archéologique, mais comme une possibilité extraordinaire aussi, de repenser la ville dans sa totalité et en particulier, non pas dans sa forme puisque ses cavités sont souterraines mais dans son fonctionnement et dans le quotidien des Napolitains.

Étant donné que cette ville est d'une extrême densité, qu'elle est l'exemple parfait de la congestion urbaine chère à Rem Koolhaas, que cette densité très ancienne empêche de répondre aux nécessités de la vie urbaine moderne et empêche de recevoir dans son tissu déjà saturé de nouvelles fonctions et afin d'éviter aux habitants de toujours se rendre en périphérie pour accéder aux cimetières, équipements sportifs, salles de concert ou de loisirs, supermarchés, piscines, bowlings, discothèques, etc...



Palazzo Mastelloni
Via Toledo
Niccolo Tagliacozzi Canale



Palazzo Trabucco
Via Santa Liborio
Niccolo Tagliacozzi Canale

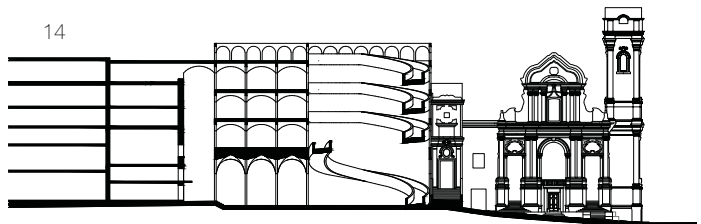
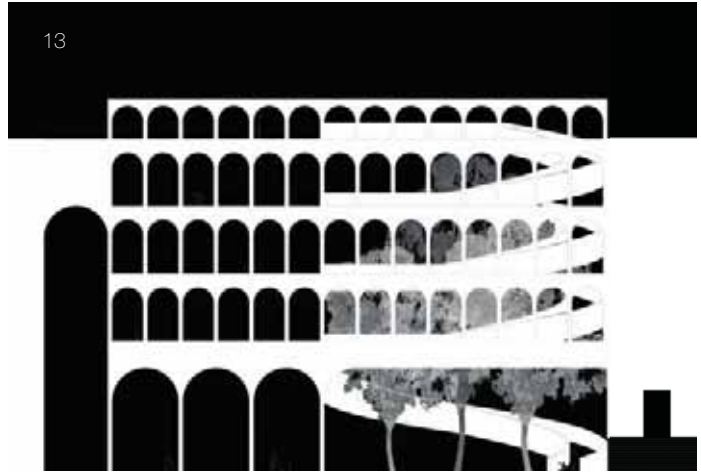


Palazzo dello Spagnolo
Via Vergini
Ferdinando Sanfelice

Figures 13,14,15 et 16 : Projet à l'angle de Via San Apostoli et Via San Petrillo.

La réinterprétation du type, celui du palais napolitain, et ses escaliers extravagants, pensés comme des jardins suspendus, ici conçu comme une rampe, transforme la vie sociale du quartier.
Workshop 2017-2018

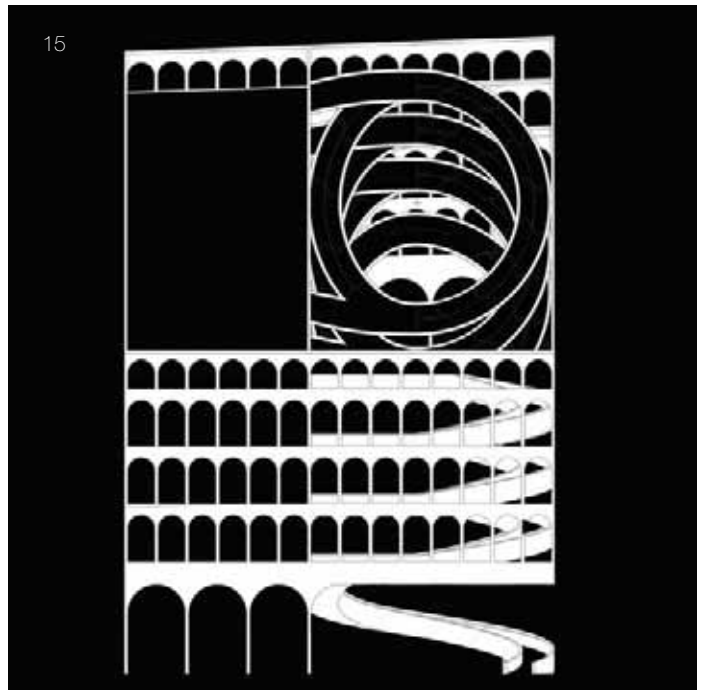
Figures 17 et 18 : Restructuration du Complesso Monumentale Santa Maria Donnaregina Vecchia en centre artisanal et marché quotidien relié aux cavernes existantes réservées aux concerts et spectacles de quartier.
O.Wartelle-Collard



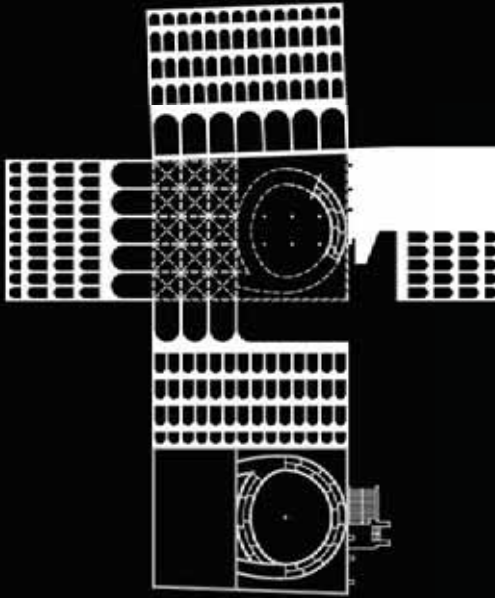
Nous avons imaginé de sous-perposer à la ville, dans ces villes souterraines qui ont construits ces pleins en surface, l'ensemble des programmes qui faisaient défaut au centre du fait de sa densité historique.

Cette extravagante possibilité nous a permis d'imaginer les nouveaux lieux publics que constituent les nombreux accès et sorties de ce nouveau réseau de services et activités souterrain vers la surface.

Ces entrailles diverses et de tailles souvent gigantesques nécessitent des logistiques conséquentes aux débouchés émergeant tantôt sur

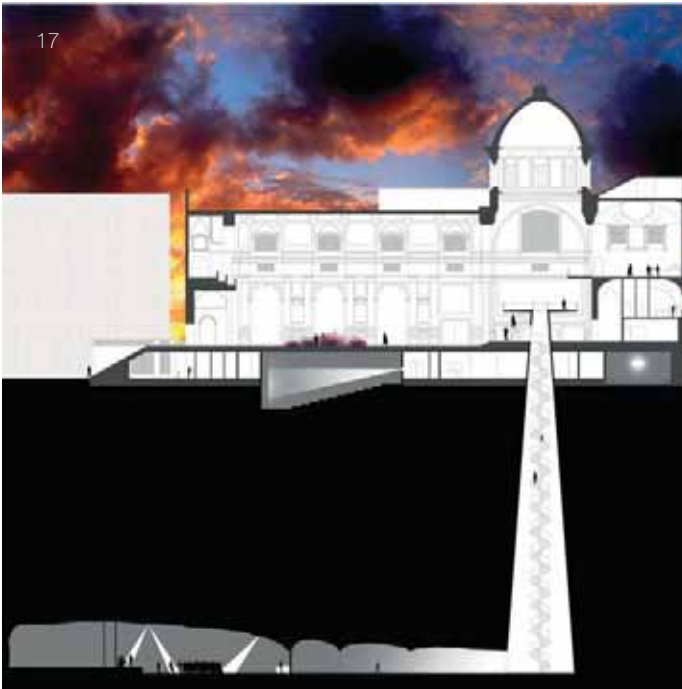


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Déplié du Palais-Jardin

17



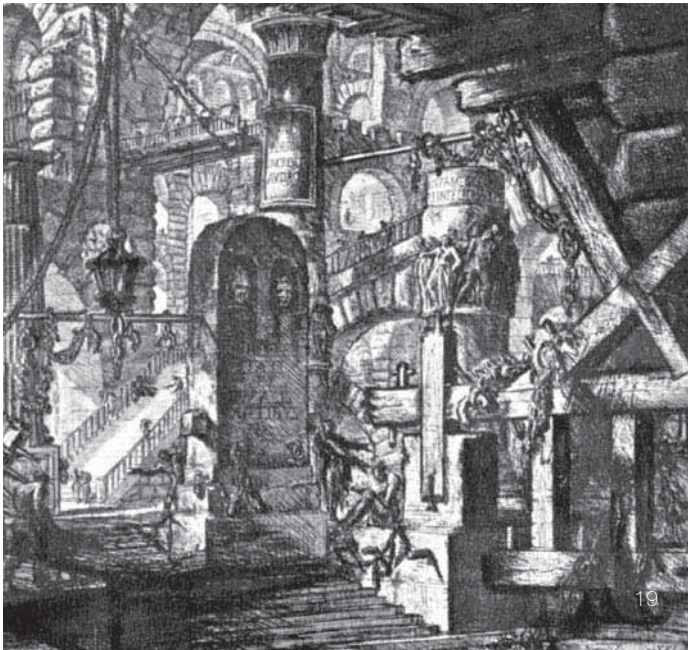
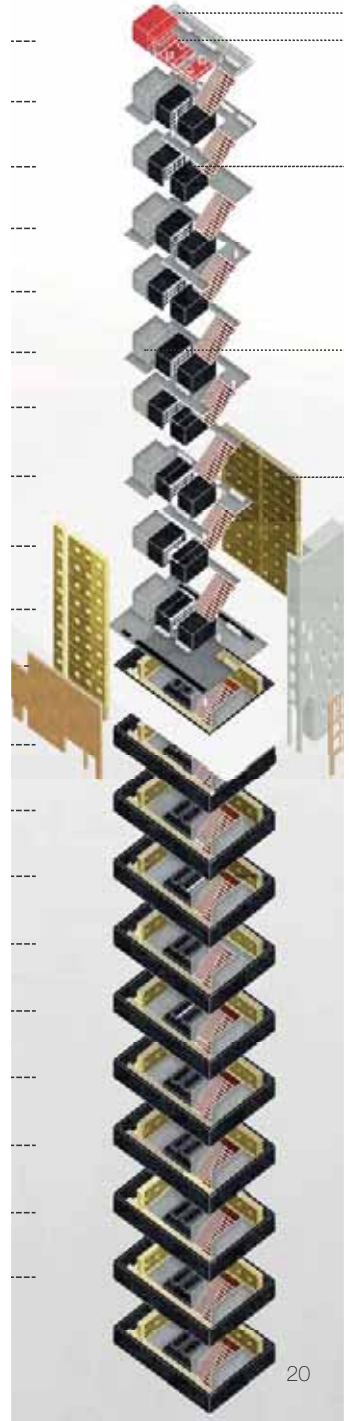
rue ou place, mais souvent aussi dans de nombreuses parcelles ou il est opportun, voir urgent de restructurer ou rebâtir des édifices en ruine.

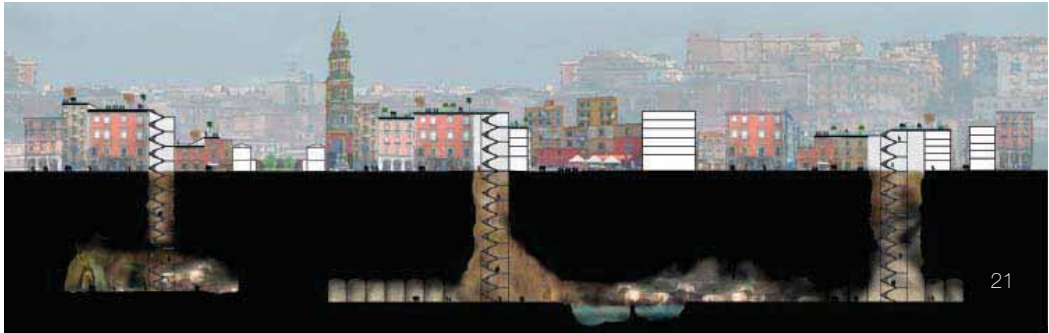
Cette cartographie d'accès constitue sur le plan très dessiné de la ville comme une nappe de points un traité d'acupuncture urbaine qui relie des points à d'autres selon les parcours aléatoires et souterrains, comme le font les nerfs sous la forme apparente des muscles, des organes et des membres.

Elle s'apparente aux bouches de métro comme celles dessinées par Guimard mais peuvent prendre toutes les formes, en particulier être une solution aux rez-de-chaussée des immeubles et revitaliser de façon incroyable des quartiers isolés ou en désuétude grâce à ces nouveaux programmes qui génèrent de l'activité économique et de service.

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Ces émergences ont été développées après avoir étudié le modèle du Palais Napolitain. D'une certaine façon ses escaliers fantaisistes sont l'expression de ce que leur cour est l'extension de l'espace public déjà compressé et insuffisant dans la ville historique, ou des portes de 8m de haut donnent sur des rues qui font à peine 2,5m. Ce lieu de l'histoire, au type et au modèle illustre notre attachement au «Génie local» d'un Manfredo Tafuri et d'un Aldo Rossi, au régionalisme critique de Kenneth Frampton et la totale conscience des étudiants de composer leurs projets avec la liberté créative qui guide l'intelligence dans des lieux saturés par le passé.

Notre récit napolitain a suivi l'horizontale de la Vedute portuaire, la vertical du labyrinthe piranesien et la ponctuation des palais et immeubles sur cour. Ainsi un nouvel archipel Napolitain, piranesien cette fois, transforme Naples vers une hyper modernité chaleureuse, festive et inventive.

Georges HEINTZ et Léo-Paul SCHMITT

Figure 19 : Piranesi sublime l'antiquité et dramatise les sous-sols dans sa série des prisons imaginaires entre 1750 et 1761. Source d'inspiration pour notre porosité verticale.

Le Carceri d'Invenzione,

PIRANESI Giovanni Battista, Rome, 1761

Figure 20 : Sur l'angle face à la basilique San Lorenzo Maggiore et l'église San Gregorio Ameno.

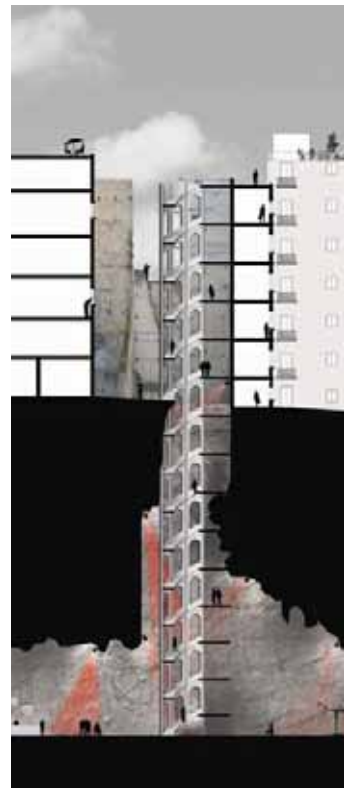
Au sein des murs d'une bâtisse en ruine, une tour cinéraire relie le ciel et les entrailles de Naples. Le colombarium émerge au coeur du dispositif urbain et permet aux habitants de visiter leurs morts à proximité.

N. Vente

Figure 21 : Les dents creuses ou ruines du cadavre exquis Napolitain donnent accès aux habitants vers les souterrains et cavités géantes du sous-sol qui accueillent les programmes que la surface hyper dense ne peut accueillir.

La ville construite par sa pierre des carrières souterraines se retourne comme un gant pour y recevoir dans son réseau labyrinthique géant les fonctions manquantes en surface.

Workshop 2013-2014



Les dessus et les dessous
Napolitains.

L'hyper-densité de Naples
très peuplée justifie de
construire ses nombreux
labyrinthes afin de
concentrer et optimiser
l'espace manquant en
surface.

Le réseau souterrain
aménagé se sous-perpose
à celui de la ville.

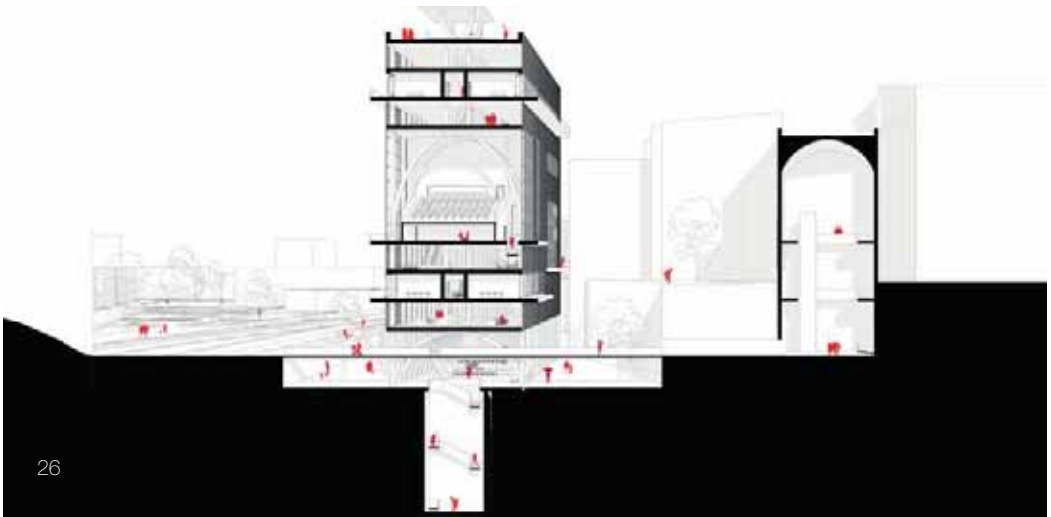
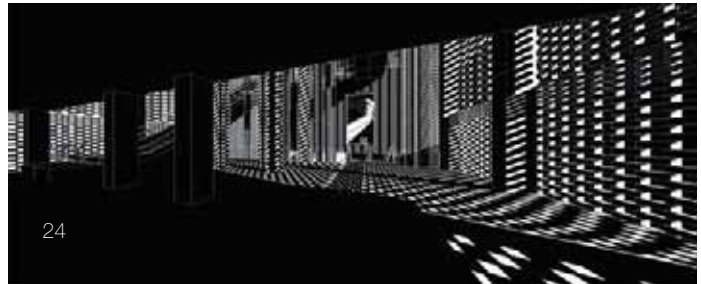


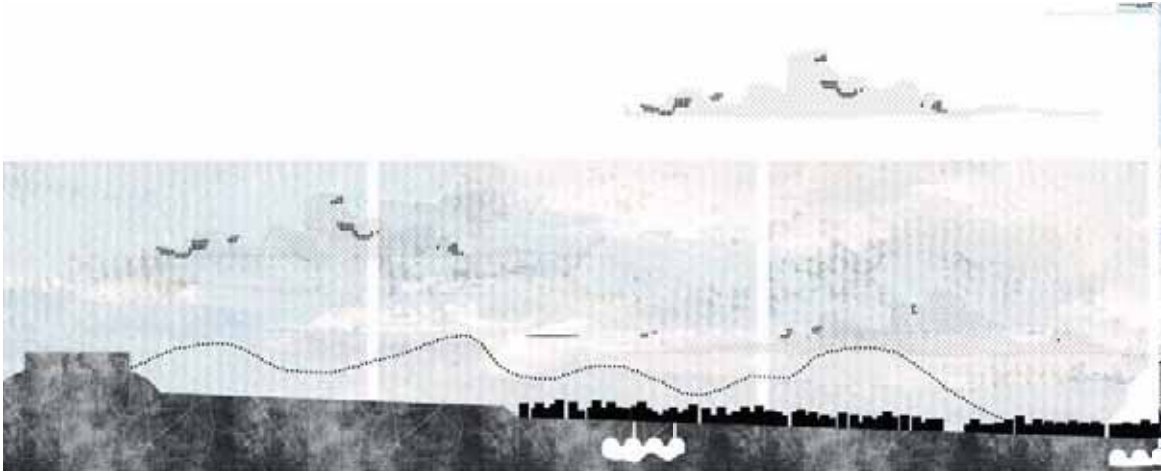


Figure 22 : La nouvelle station de Chiaia relie le métro (-50m) la rue commerçante (0m) et Monte Di Dio (+25m) en un parcours commercial et océanographique exceptionnel. Elle permet aussi de dessiner la nouvelle place de Falcone.
Y.Jiang

Figures 23,24,25 et 26 : Piazza Cavour, l'ancien hôpital vide est réinvesti par de nombreux programmes éducatifs, culturels, artistiques, commerciaux et connectés à la station de métro et aux cavités de la colline où il s'adosse.
I.Houssairi

Illustrations des programmes installés dans les cavités existantes souterraines. Sports, concerts, restaurants, cafés, bars, bains mais aussi parcs et production agricole par remote skylight (lumière téléguidée).
Workshop 2013-2014





Franchissement - Workshop 2013-2014, groupe de Jean-Marc Chancel & Gilles Sensini.

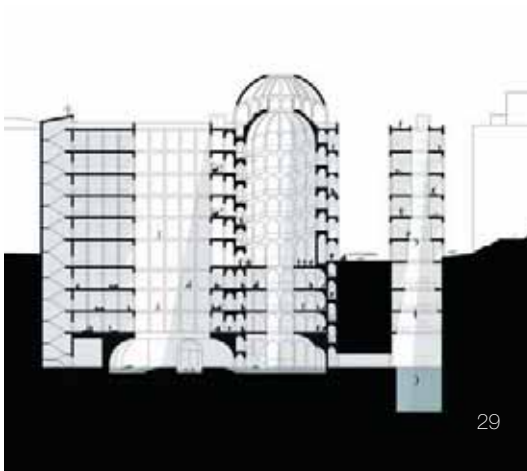
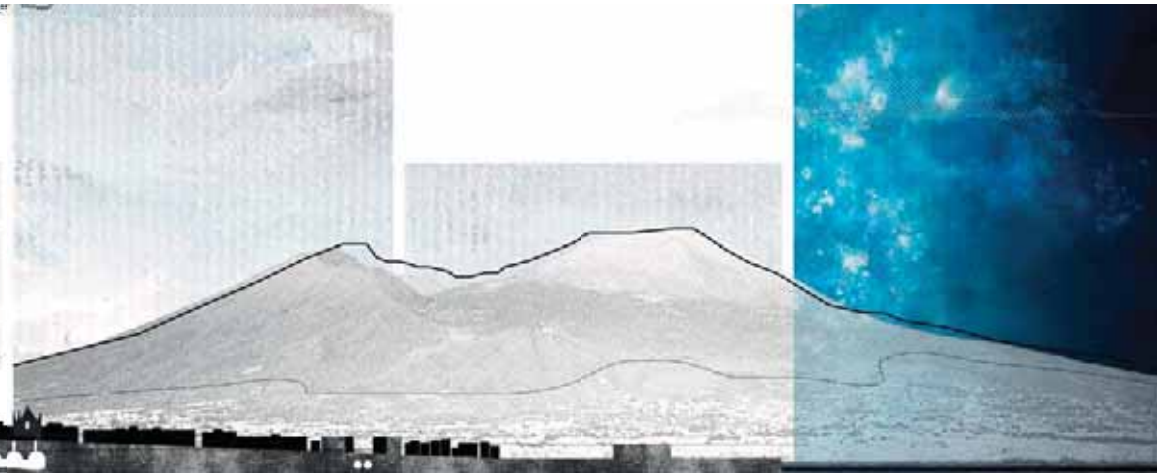


Figure 27 : A l'angle de la Via Forno Vecchio, face à la faculté d'Architecture de l'Université Federico II, le nouvel édifice exploite les cavernes souterraines avec des équipements dédiés aux étudiants et au quartier.
Z.Haouach

Figure 28 : Sous la chartreuse San Martino, sur la colline qui mène à Vomero, une résidence universitaire complète l'université des Sciences Suor Orsola Benincasa, en réinterprétant le modèle de la villa jardin avec vue.
S.Barajas

Figure 29 : Dans le quartier Espagnol, l'hôpital Dei Pellegrini spécialisé en orthopédie n'a pas de service de rééducation. Les sous-sols et cavités naturelles sont aménagées pour recevoir les bains chauffés par la thermique naturelle qui couronne en sous-sol le Vésuve.
J.Jung



Bigness versus *Grandezza*

Jean-Marc Chancel

Ecole Nationale Supérieure d'Architecture de Marseille,
France

« Plus loin des marches mènent à la mer, à des bistrots de pêcheurs installés dans des grottes naturelles. Une lumière trouble, un filet de musique montent de là bas le soir. Poreuse comme cette roche est l'architecture. Edifices et actions s'enchevêtrent dans des cours, des arcades, des escaliers. En tout on préserve la marge qui permet à ceux ci de devenir le théâtre de nouvelles constellations imprévues. On évite le définitif, la marque. Aucune situation n'apparaît, telle qu'elle est, prévue pour durer toujours, aucune figure n'affirme: "Ainsi et pas autrement". »¹

L'évidente actualité des propos de Walter Benjamin sur Naples ne doit rien à la modernité de l'auteur. Sa description vaut parce que Naples ne change pas. L'étendue immense de la banlieue n'y fait rien. La main basse sur la ville si bien filmée par Francesco Rosi n'y fait rien. La terrible construction du centre directionnel par Kenzo Tange n'y fait rien. Le vaste et étrange trou bardé de métal de Perrault n'y fait rien.

La peau de Naples est comme celle du grand et vieux pachyderme marin, scarifiée des combats, incrustée de coquillages parasites. Mais la bête demeure là, immense, immobile, vivante.

Ailleurs, architecture et urbanisme réussissent peut-être à faire croire qu'ils réalisent une transformation du monde. A Naples non. L'architecture et l'aménagement du territoire y apparaissent dans leur vérité, simple sur-édification, selon la belle expression de Pierre Caye².

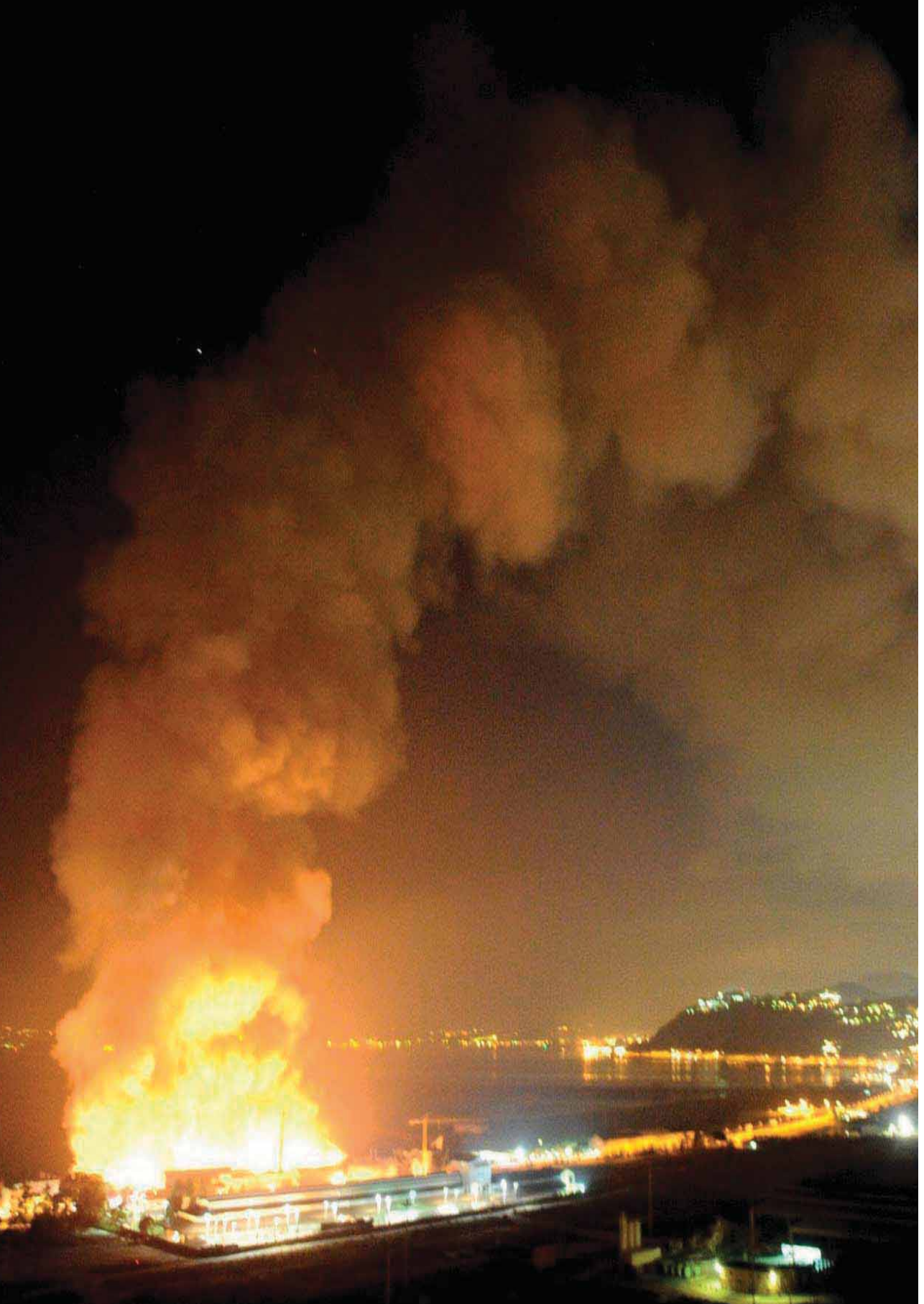
Surédifier c'est s'installer à la surface du monde, sachant qu'on peut à tout le mieux l'embellir.

Les grands repères de Naples le font tous.

San Martino couronne le Vomero, comme la caserma Nino

1. Walter Benjamin et Asja Lacin "journal de Naples", 1925 in Walter Benjamin, *Images de pensée*, traduit de l'allemand par Jean-François Poirier et Jean Lacoste, collection Titres n° 138, Christian Bourgois éditeur, 2011 [1998].

2. Caye, P. (1999) *Empire et décor*, Vrin.



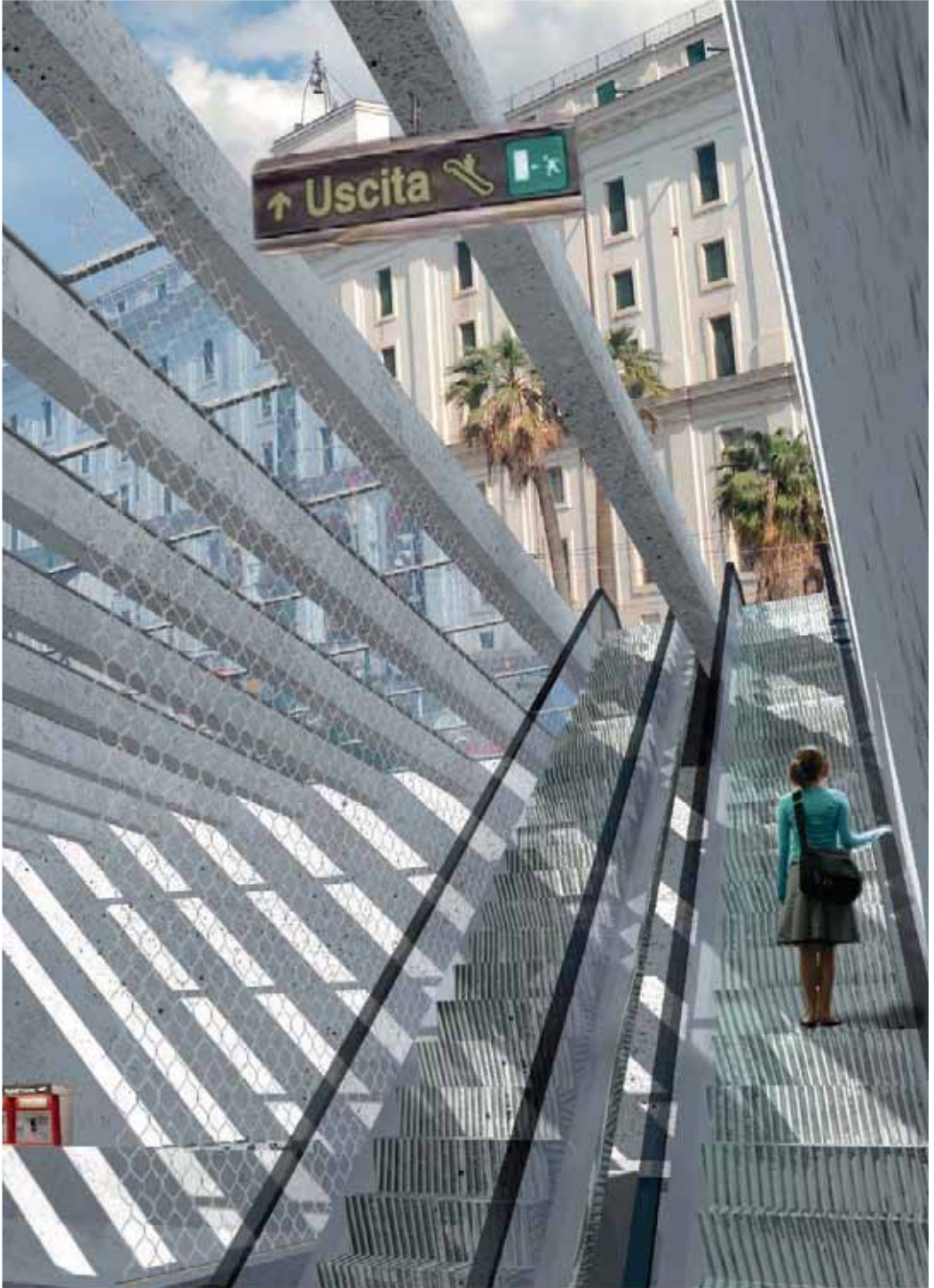
Bixio le Parthénope, Castel d'ell Ovo extrude l'île qui le supporte, le Palais Royal prolonge la falaise du vieux port, l'Albergo dei Poveri accompagne la ligne de piémont de Capo di monte couronné lui aussi par un palais Royal.

Les habitants des quartiers espagnols ont la colline dans leurs jambes, ceux de la ville romaine autour de leurs épaules le tuff, tiré du sol même des maisons qu'ils habitent, creusé en labyrinthe. Les longs traits languides des villas du millo d'Oro, aujourd'hui noyés dans la banlieue, suivent les coulées du Vésuve vers la mer. L'architecture de Naples circonscrite, accompagne et exalte une géographie. Elle surédifie l'œuvre des dieux grecs.

Dès lors travailler à Naples – y faire des projets- c'est y apprendre que l'architecture n'a rien de démiurgique et que l'architecte ordonnateur divin est une légende.

Presque par jeu, nous avons suscité la sur-édification de la sur-édification. Mis un stade, ou un funiculaire, ou des jardins dans l'albergo dei Poveri, sorti un escalier a Falcone de ses cours sombres pour l'adosser au contreforts du Parthénope, fait du site d'Ital sider à Bagnoli un jardin ou une grande façade nouvelle.

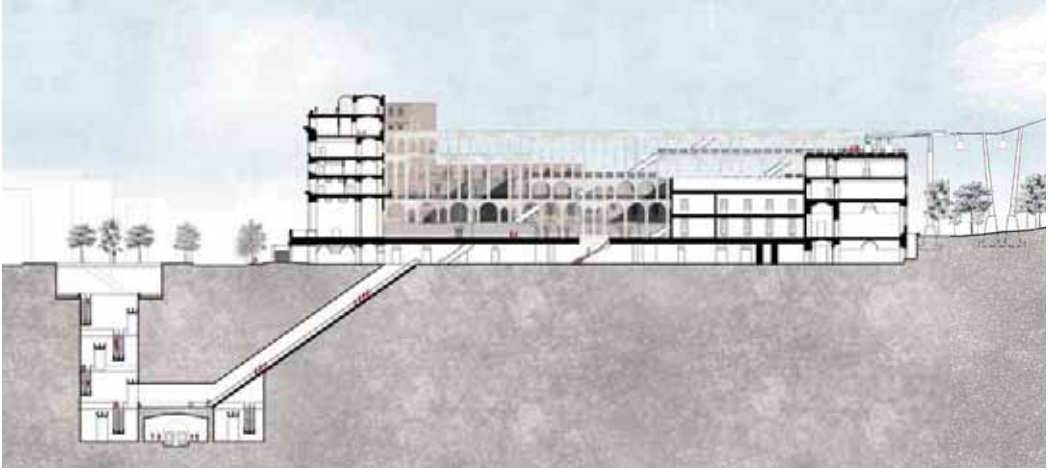
Ces projets d'étudiants, parfois habiles, parfois maladroits, sont tous napolitains. Ce sont des coquillages, ternes ou brillants, posés sur la peau du grand pachyderme.



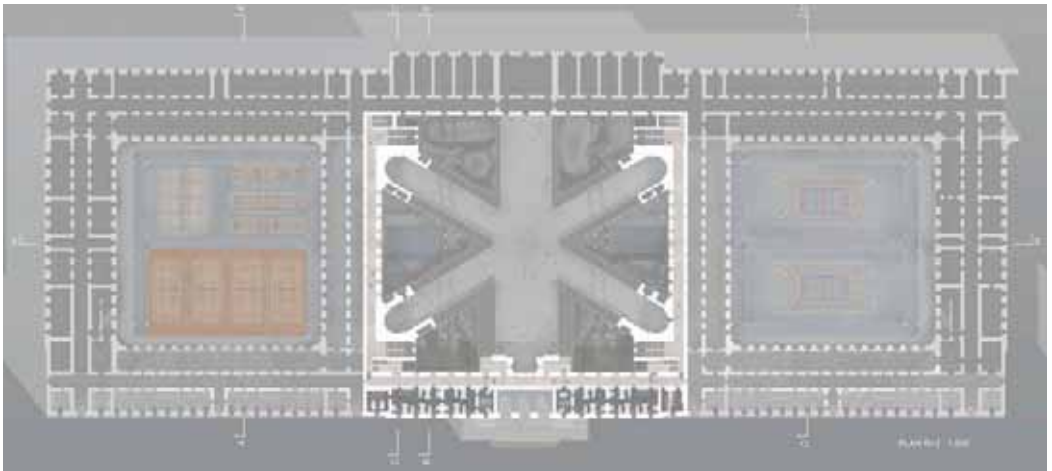
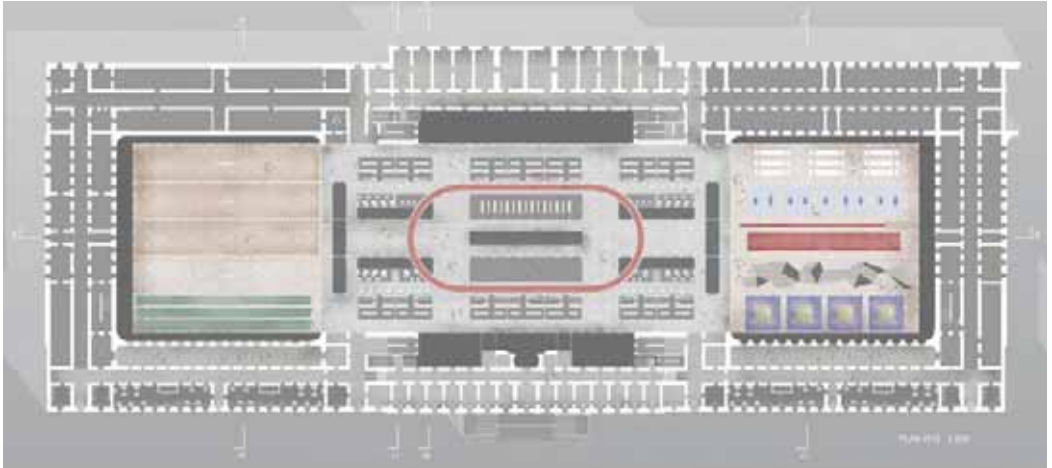
Linea Albergo/Capo di Monte

Raphaëlle Doucet & Alix Pellegata

Ecole Nationale Supérieure d'Architecture de Marseille, France



scheme from IP March 2016
S. Raphaëlle Doucet, S. Alix Pellegata



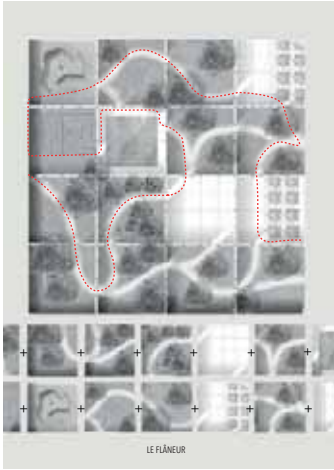
scheme from IP March 2016
S. Adrien de Faria, S. Augustin Grave

Le Colisée Orthogonal

Adrien de Faria & Augustin Grave

Ecole Nationale Supérieure d'Architecture de Marseille, France

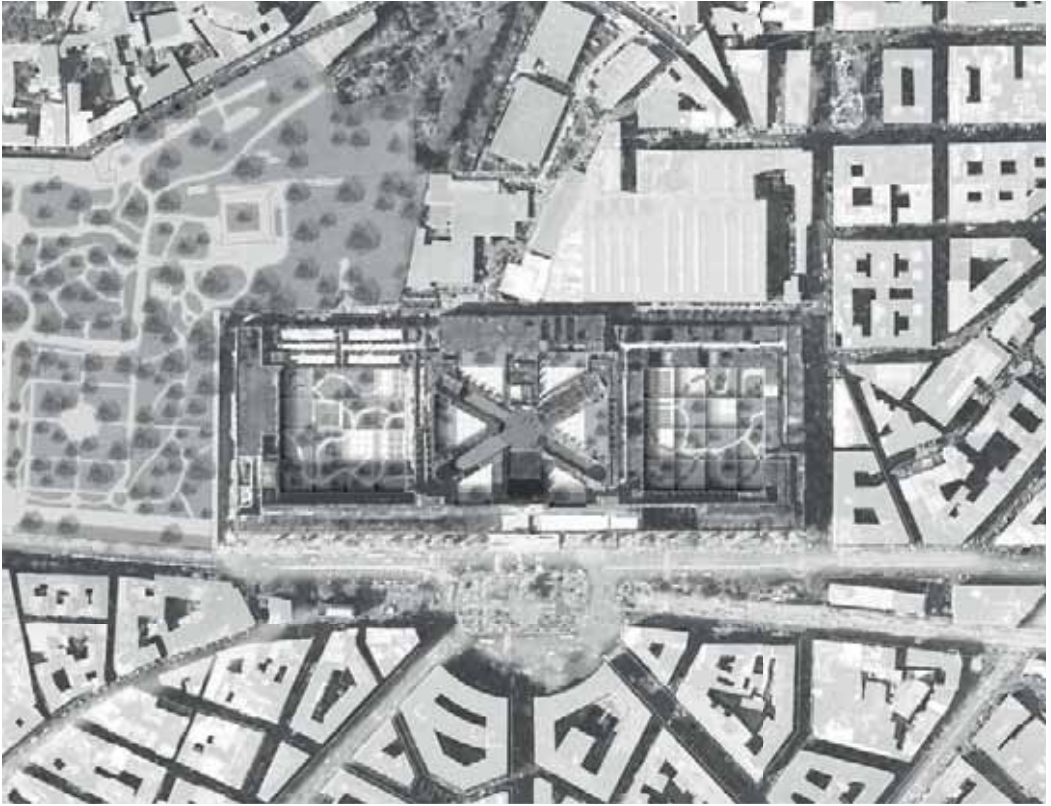




Le Jardin Secret

Julien Milesi & Aloys De Salves

Ecole Nationale Supérieure d'Architecture de Marseille, France

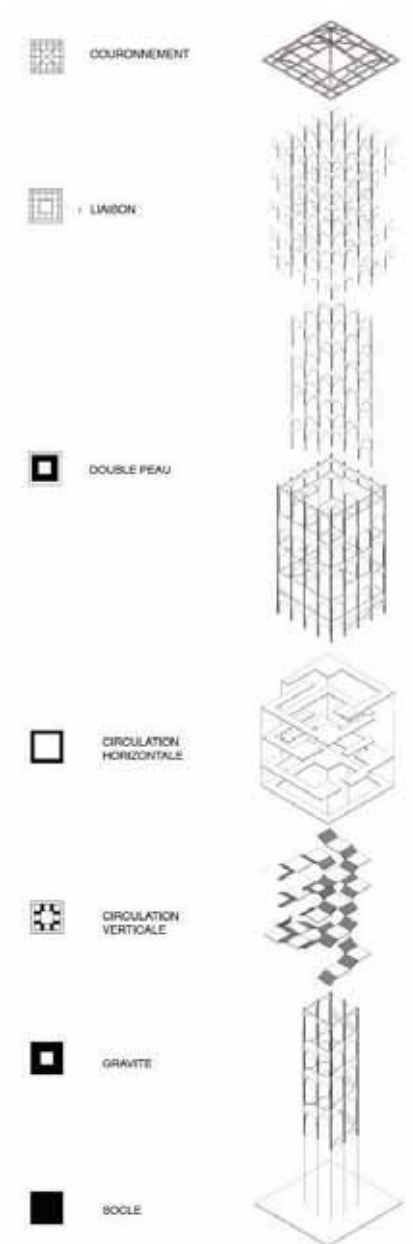




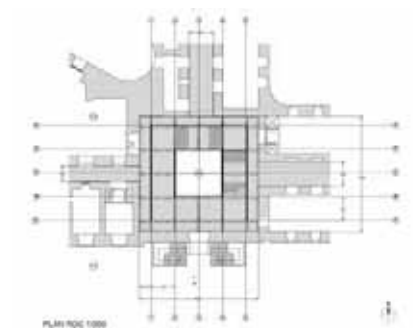
scheme from IP March 2016
S. Justine Belin, , S. Luce Gugnard, S. Charline Toulet

Escaliers

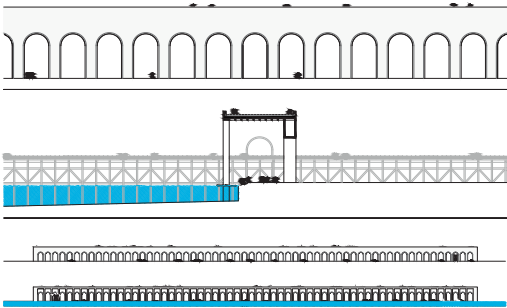
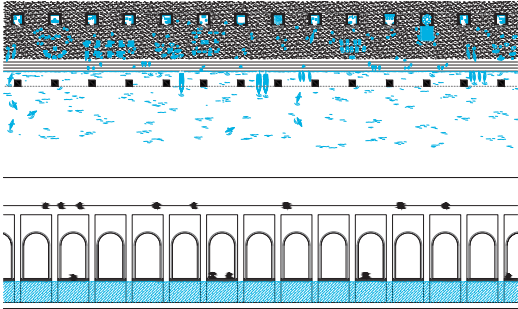
Justine Belin & Luce Guignard & Charline Toulet
Ecole Nationale Supérieure d'Architecture de Marseille, France



PLAN MASSE 1/5000



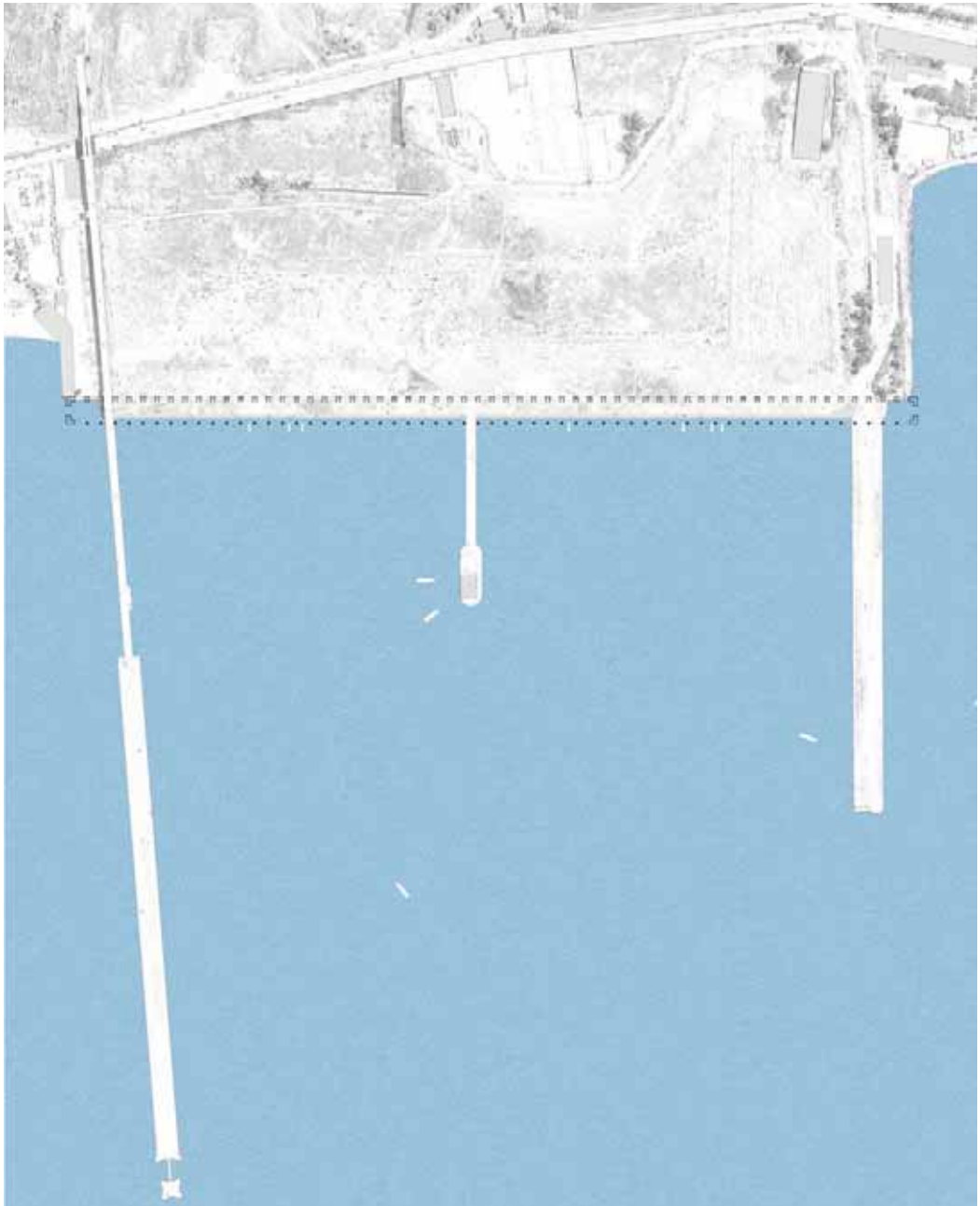
PLAN N°01 1/500

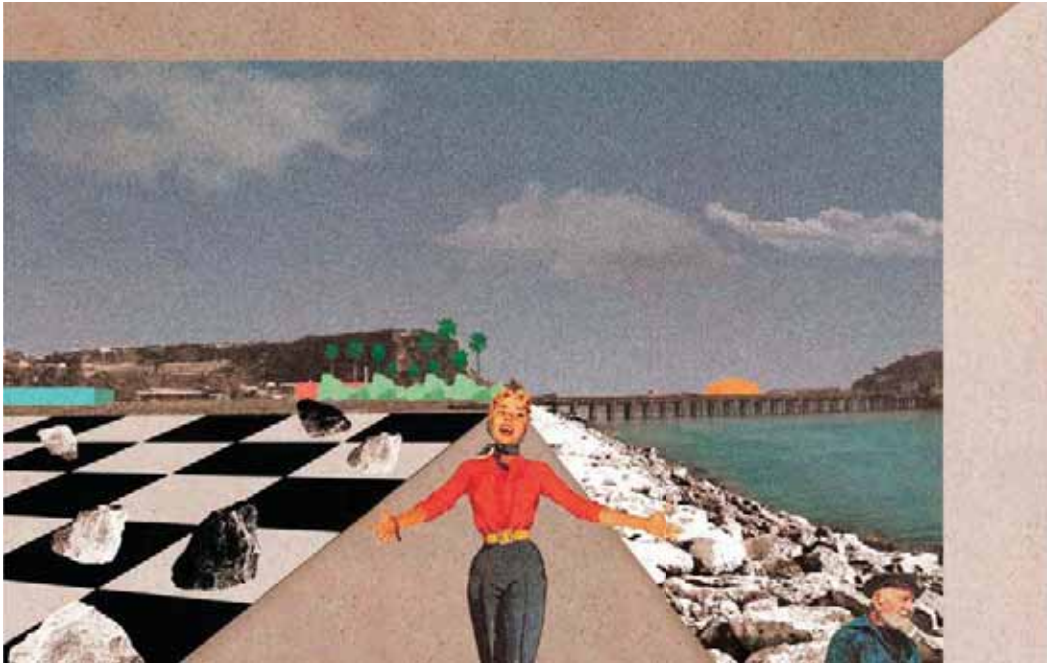


scheme from IP March 2016
S. Justine Belin, , S. Luce Gugnard, S. Charline Toulet

La Colonnade de Bagnoli

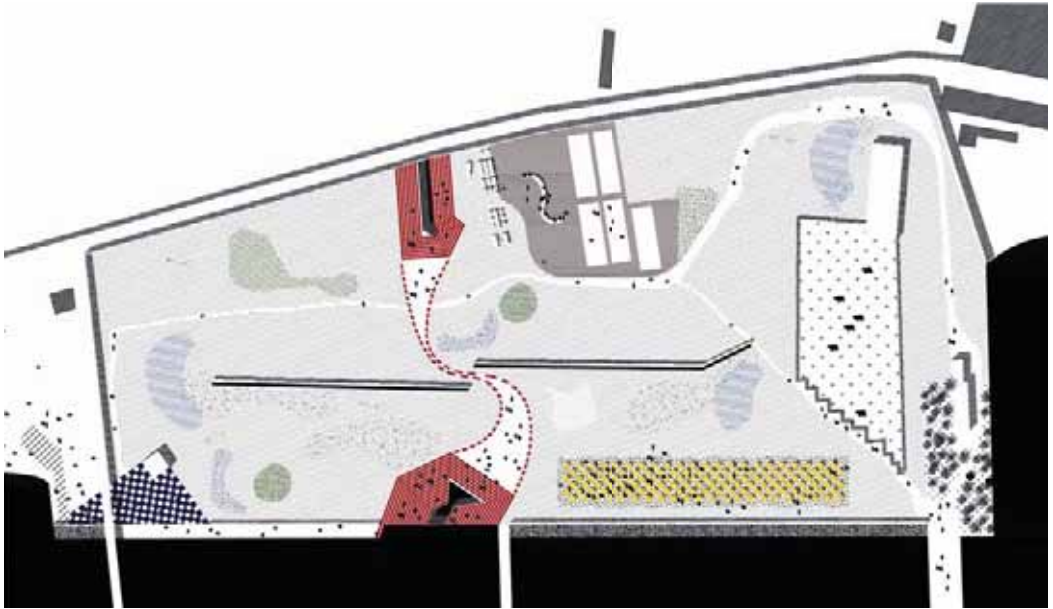
Cazembe Henri & Léa Metlaine & Cecile Pilarczyk
Ecole Nationale Supérieure d'Architecture de Marseille, France

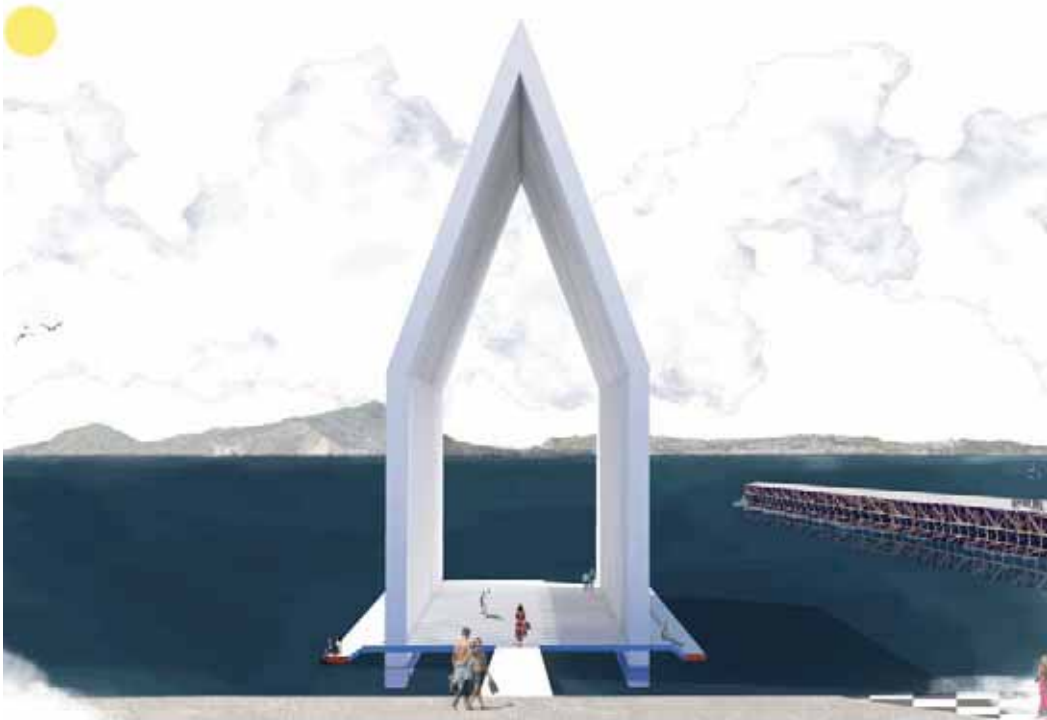




Campo Nuovo

Ecole Nationale Supérieure d'Architecture de Marseille, France



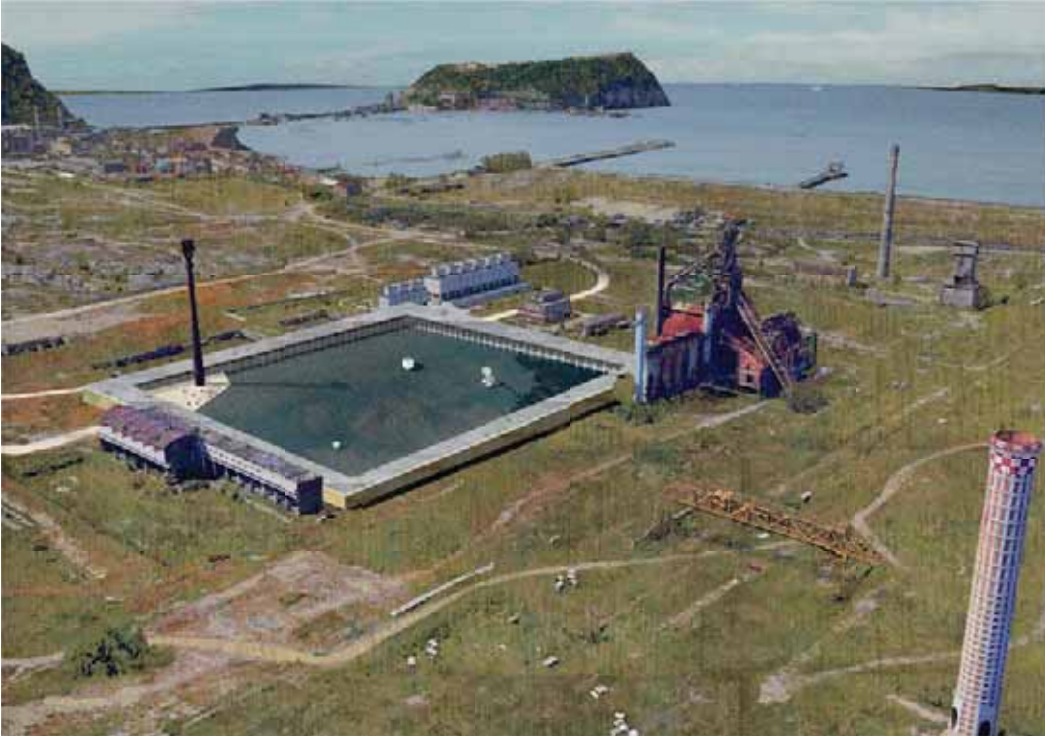


scheme from IP March 2017
S. Soukaina Echchiguer, S. Megane Jolivet, S. Angelica Laventure

Jetées

Soukaina Echchiguer & Megane Jolivet & Angelica Laventure
Ecole Nationale Supérieure d'Architecture de Marseille, France





scheme from IP March 2017
S. Soukaina Echchiguer, S. Megane Jolivet, S. Angelica Laventure

Hortus Conclusus

Soukaina Echchiguer & Megane Jolivet & Angelica Laventure
Ecole Nationale Supérieure d'Architecture de Marseille, France





The perforated wall of the old city of Naples

The rebirth of Piazza Mercato

Chadi Saroufim

teaching at the workshops with Fadi Chiniara, Alessio Paoletti,
Léon Telvizian and Serge Yazigi
University of Balamand, Académie Libanaise des Beaux-Arts,
School of Architecture, Beirut, Lebanon

The wall

The city is multiple accumulations of relics and people in constant interaction, producing different architectural and urban forms in time and space.

This multilayered and multifaceted space is the reflection of social, economic and technological dynamics at a given time in space.

The same relics could produce spatial cohesion and unity and could produce just the opposite, social fragmentation in different time frames. One of the main powerful remnants in a space are walls or enclosures; we are all surrounded by walls in our cities.

Most fundamentally, architecture is the enclosure of space, the distinction between what is inside and outside, what is private and public. The wall is the moment at which that changes; the edge of what is built and what is something else.

Walls have several functions and roles in our lives and are of different nature and scales. They act as enclosures, borders or barriers in some cases while can be limits in others. However, in constant renegotiation with their surroundings.

In terms of identity, walls define who we are as societies and individuals. As architects and planners we are constantly redefining walls in our works.

Walls help us transit from one environment to another, from public to private, light to dark, enclosed to open...

Throughout history, architectural walls - gateways, doors and windows - have been appropriated as classic metaphors for the creation of new beginnings, connectivity and transitions. A wall or an enclosure in a city could be physical, virtual, psychological, social, symbolic, even bits or remnants of walls, or could be a combination of all these.

The manipulation of the relationship between spaces is the story of relationships between people and their environment. Through design, such interfaces send messages as to whether spaces should be viewed as public or private, reassuring or intriguing.

For architects and planners this situation paves the way to rethink the walls and enclosures in the city and its landscape. Inherited 'walls' present themselves as subject of reflection and as an opportunity for urban regeneration and creative re-appropriation of their imprint (physical, symbolic, in bits and pieces, etc.) in the name of inclusive public spaces and architecture.

In Naples the famous footprints and the palimpsest bits of the rampart surrounding the historic center and its multiple historical enclosures.

Our workshop has invited its students to rethink and revisit, on one hand, the virtual and symbolic walls which the ramparts and the multiple enclosures have become in their historical inscription and social context, and on the other hand, to reflect upon modernity or post modernity and future heritage, in terms of public space and inclusive architecture. They were asked to dissolve both the physical and more cerebral barriers that the original entrance seemed to impose. They had to reimagine the possibility of exchange between multiple environments.

Opening up our institutions and cities and encouraging students to appropriate them is a start in reminding people of the vital importance of culture in our fragmented society. We need to celebrate culture because this above all else has the ability to break down walls and transcend borders.



Students involved in the workshops

March 2014

Amir Faek Abillamaa, Mélia Abs, Nelly Bitar, Charles Bou Moussa, Elie Haber, Jaber Jaber, Palig Kéchichian, Aline Matar, Nadim Matta, Jad Nehmeh, Rachad Salem, Michael Skaf

March 2015

Jad Choueiri, Ralph Dagher, Rachelle Dibe, Zeina Farhat, Hala Habr, Nour Hannoun, Nicole Kazma, Imad El Khoury, Jean-Michel Maatouk, Karim Najem, Leyla Nasrallah

October 2015

Abou Mansour Joy, Acoury Henry, Bou Saleh Elsa, Ghannem Angelo, Hamouche Sarah, Hannouch Christian, Jaber Abbas, Mechleb Perla, Najjar Georges, Nehme Aya-Maria, Rechmani Naja, Rizk Rawad, Salorian Naré

October 2016

Caline Matar, Myriam Mouawad, Emilio Nasr, Gabriel Rouphael, Maissa Sader, Wael Saïel

March 2017

Joseph Abi Jaoude, Cybelle Akiki, Gabriel Andrea, Claudia Bejjani, Ahmad Rami Dabliz, Tamara Michèle Mahmoud, Georges Naba', Elie Ghattas, Leila Osseiran, Sandi Sarkis, Ingrid Bali, Antoine Berberi, Wissam Daoud, Maya Nasreddine, Jennifer Christian Hajjar, Celine Massabni, Richard Mecarsel



The workshops

As part of the “Projet Urbain” pre-requisite course at the School of Architecture, the students are invited to participate in one of the international workshop in partnership with the Università della Campania Luigi Vanvitelli (former SUN) and Università di Napoli Federico II, that was focusing on the urban renewal and environmental design in a Mediterranean city.

Taking advantage of the achievements of the Naples trip and in-situ group work, a diagnosis and intervention intentions are developed to answer the fundamental questions relating to the potential problems of the Historical Center.

An operational urban project is set up, taking into account all the urban logics of the “Centro Storico” and its interfaces with neighboring districts by defining a scope of action.

Back in Beirut, work continued in groups of students to develop their intervention proposal on a specific sequence of the perimeter of action.

This article will mainly focus on the outcome generated on the remains of the Piazza Mercato and the proposed design guidelines that will regenerate it.

Figure 1 : left page
Naples church, Gesu Nuovo
Photo credit of Chadi Saroufim

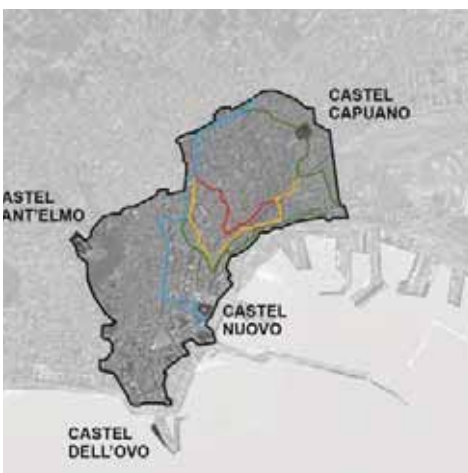


Location of Naples

Naples is a Mediterranean city in the south west of Italy, 230 km from Rome. The city, capital of the Campania region is the third largest in the country after Rome and Milan with an agglomeration of more than 3 million inhabitants and the development of many industries.



Naples is halfway between two volcanic regions, the Vesuvius and the Phlegraean Fields. Located at the edge of the sea, the city has long been a Mediterranean crossroads must where the port of Naples, still nowadays, is the starting point for many ferries and cruise ships itineraries.



Naples is a palimpsest city, made up of strata. One the workshop's intervention focused on the limit of the intramural city which was spreading over an area of 370.000 m² during its foundation to the Greco-Roman period, to reach 1.880.000 m² during the Spanish era before the final destruction of the wall.



The remains

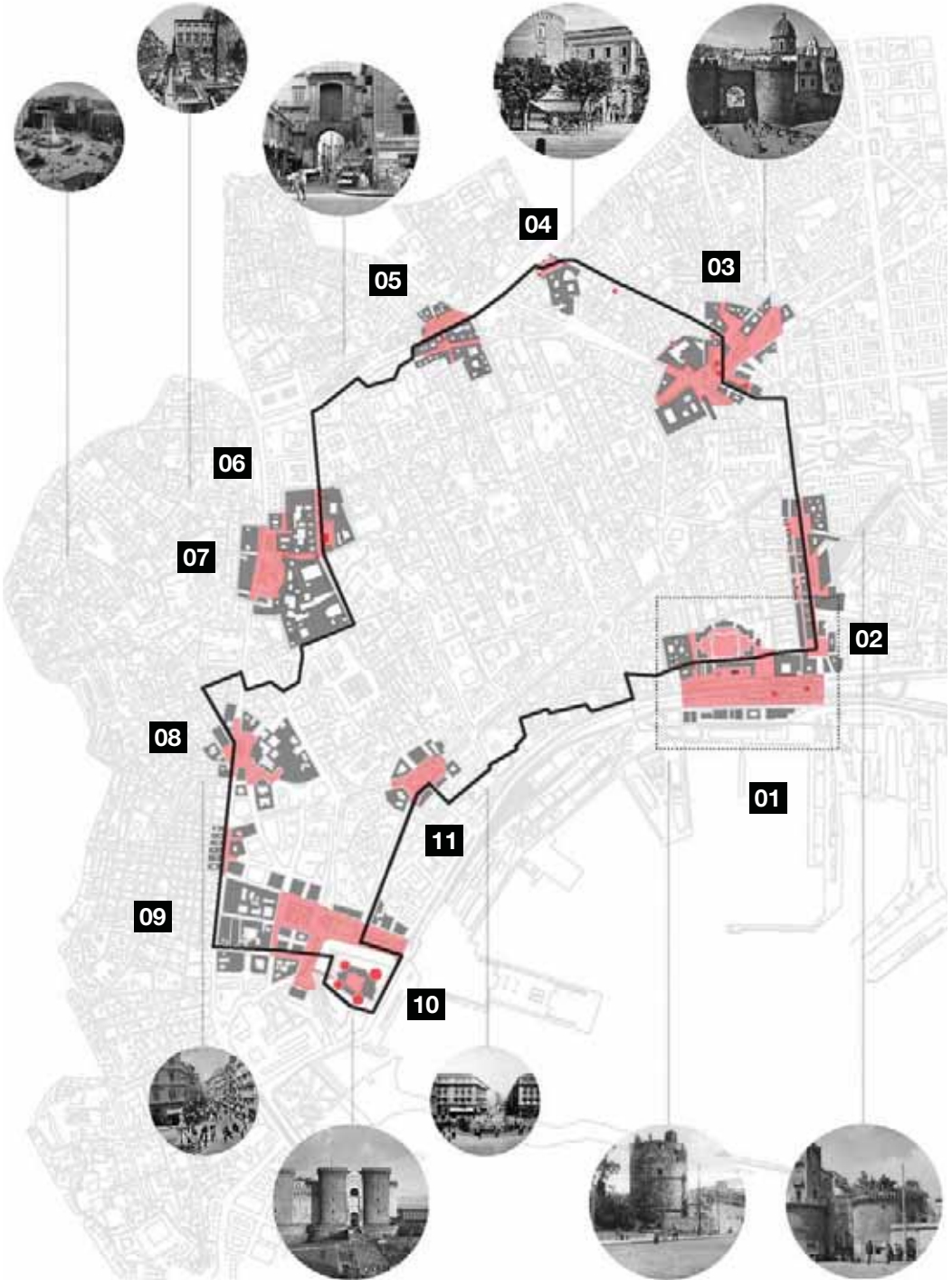
From the Greco-Roman limit remains the ruins discovered in the Piazza Bellini.



From the Ducal-Norman limit remains the Castel Capuano which now houses the courthouse, after serving as a residence for the Norman vices-kings.



The two remains that we perceive on the Angevin border are the Port'alba and the Castello Del Carmine. Port'Alba was built in 1625 to facilitate the movement of the population.



The remains along the city's evolving limits

Different civilizations have occupied the city of Naples, while leaving their traces; from Greco-Roman, to Norman, through the Angevins, Aragonese and Spanish. This expansion is seen in the schema of the successive limits of the city. The first enclosure of the city was built from the foundation of it by Greek settlers in the fifth century BC and was destroyed in the nineteenth century.

From this enclosure, there are few visible traces: remains of walls, towers of fortifications and castles.

Following the identification and the recording of the traces of the successive enclosures of the intramural city, one notices that all these ruins are on the route of the Aragonese wall of the city. The idea of a historical and cultural journey in the footsteps of the old city wall of Naples is born.

The intervention brings together several ambitions, including the facilitation of smooth travel between the historic center and outlying districts, the reinvestment of public spaces and the enhancement of the architectural and historical heritage of the city.

A transect that takes the form of a loop is determined and divided into eleven sequence sequences that will each be treated by different students.

The first around the piazza Mercato, then the port Nolana followed by the porta Capuana, the Barracks Garibaldi, the porta San Genarro through the squares Cavour, Bellini, and Carità to reach the castle Nuovo and finally the stazione marittima and the piazza Giovanni Bovio.

01 - Piazza Mercato

02 - Porta Nolana

03 - Porta Capuana

04 - Caserna Garibaldi

05 - Porta San Gennaro

06 - Piazza Cavour

07 - Piazza Bellini

08 - Piazza Carità

09 - Castel Nuovo

10 - Stazione Marittima

11 - Piazza Giovanni Bovio

Via Nuova Marina

The wall marks the boundary between two districts: San Giuseppe and Montecalvario.

The Pendino district, has a larger road width with an urban facade overlooking the sea before the development of the port that separates the area from the sea.



Via Carbonara

Via Carbonara brings together an old urban fabric where the facades are close together, the greenery is dominant and there is an average of ground floor and three upper ones.





Via Garibaldi

The wall marks the boundary between two districts: San Giuseppe and Montecalvario. The Pendino district, has a larger road width with an urban facade overlooking the sea before the development of the port that separates the area from the sea.



Via Foria

Via Foria borders the ancient nucleus of the city of Naples to the north and starts from Piazza Cavour up to Piazza Carlo III. Famous for the numerous presence of characteristic antique shops, the road is an exact kilometer long, crossing the districts of Stella, San Carlo, the Arena and San Lorenzo. Via Foria depicts the construction of the 70s that replaces a previous fabric with a range of ground floor and three upper.

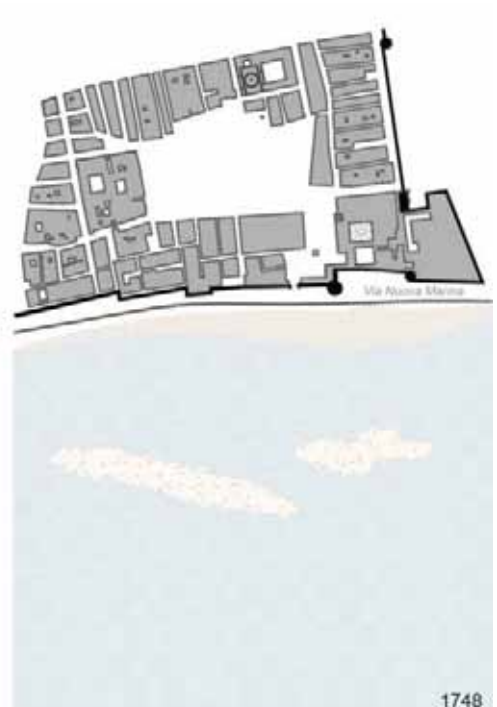
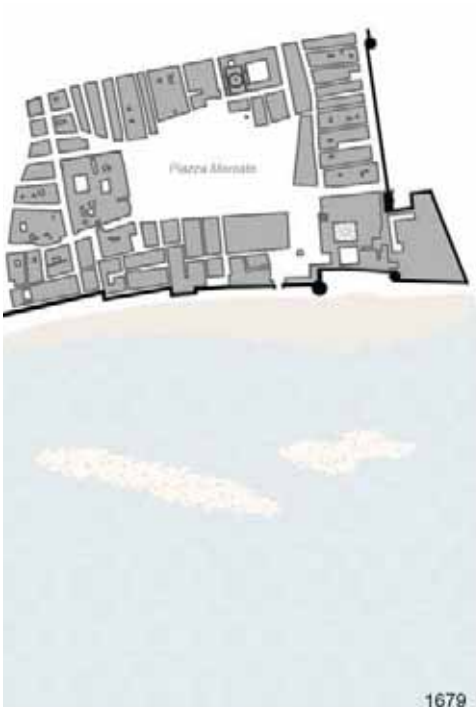




The evolution of Piazza Mercato

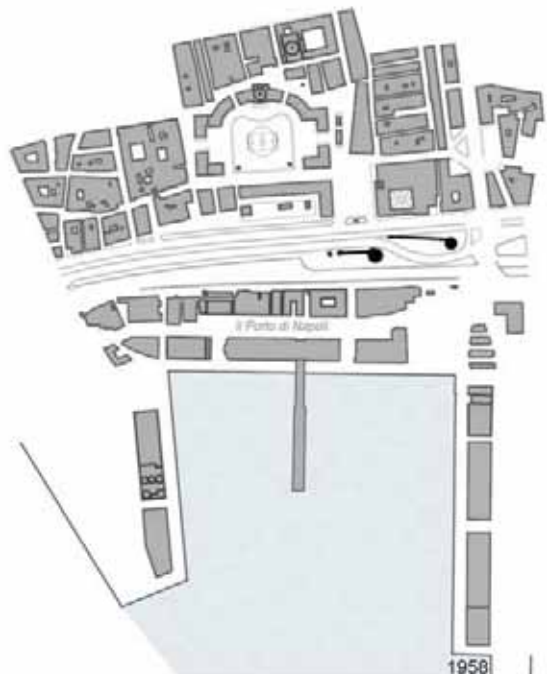
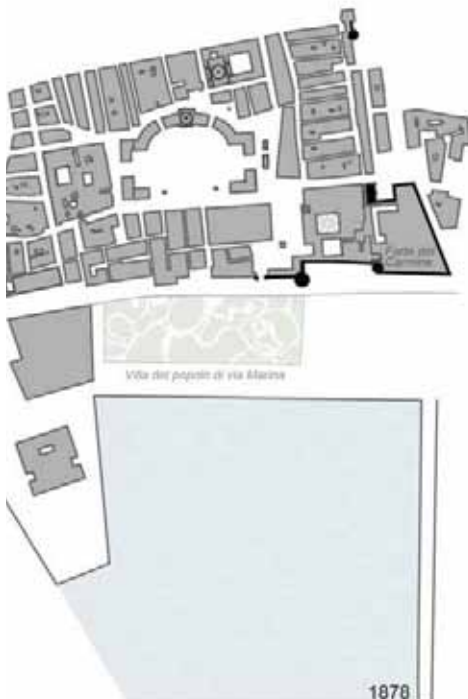
Piazza Mercato is one of the largest squares in the city. Its initial function is commercial: a market on the scale of the city. There are several monuments of interest: the Basilica Carmine Maggiore, two obelisk fountains of the 18th century, the Schiesa di Santa Croce and Purgatorio al Mercato.

In 1748 Nuova Marina street is created by Charles de Bourbon. The piazza Mercato becomes a popular and living place while remaining linked to the ruling power. From the end of the XIII century, public executions are held in this place. that will take a new dimension with the Mazaniello revolution.

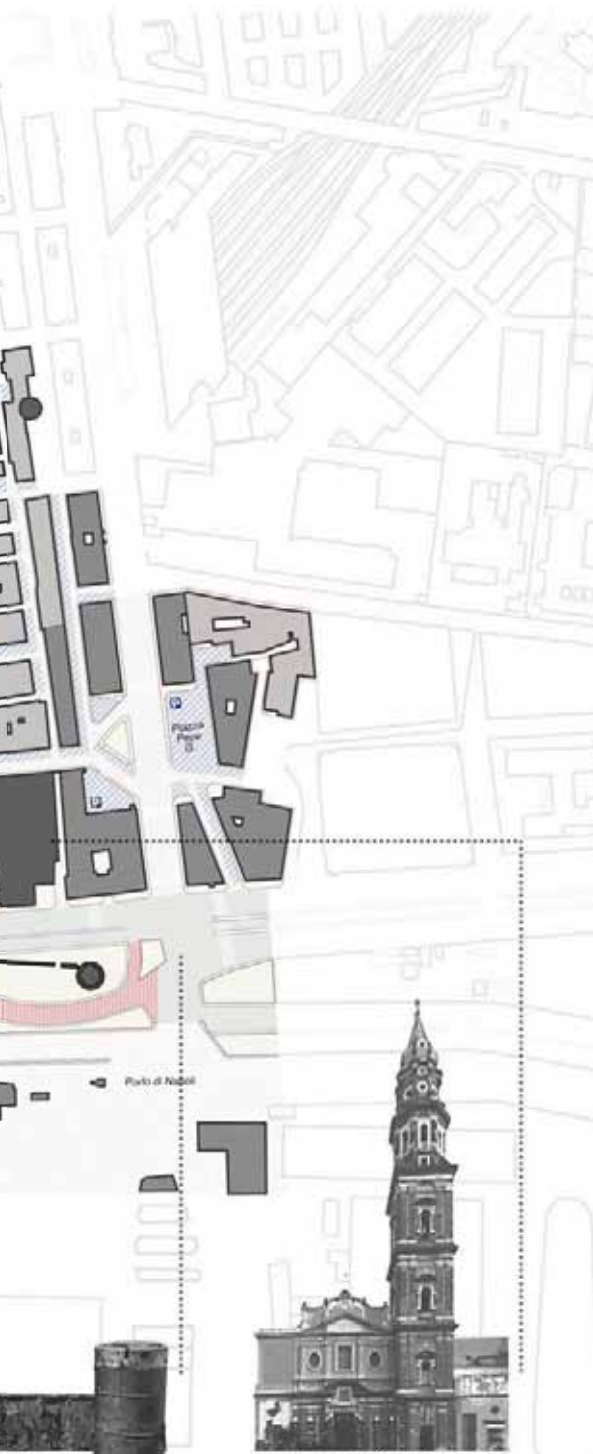


In 1877, a small oasis of greenery was created, the gardens of the villa popolo designed near the piazza Mercato and Carmine to cater for the popular classes. The villa Popolo is experiencing a rapid decline, due to the increase in port activities that require more space.

The fortress of Carmine is destroyed for the widening of via Marina, as well as the old urban fabric bordering piazza Mercato giving way to the "Ottieri Palace". This 40 meters high new residential complex creates a physical barrier to the southern part of the square, cutting it from the sea.







The second world war

The bombings of the Second World War destroyed the monumental Piazza Mercato, seriously damaging the port area and in particular the square.

During the post-war period the decline of the activities of many traders in the region forced them to close their stalls and leave the market place.

From then on, the Pendino district becomes synonymous with poverty and mystery with one of the highest unemployment rates in the city.

The square that once was one of the most important eastern gates of the ancient city of Naples near the port, a popular place for textile and jewelry merchants, is empty of all its activity.

Piazza Mercato once again sees its situation worsen during the years of real estate speculation. In 1958, south of the square, the "Palazzo Ottieri", a housing complex of 40m high and 115m long was erected.

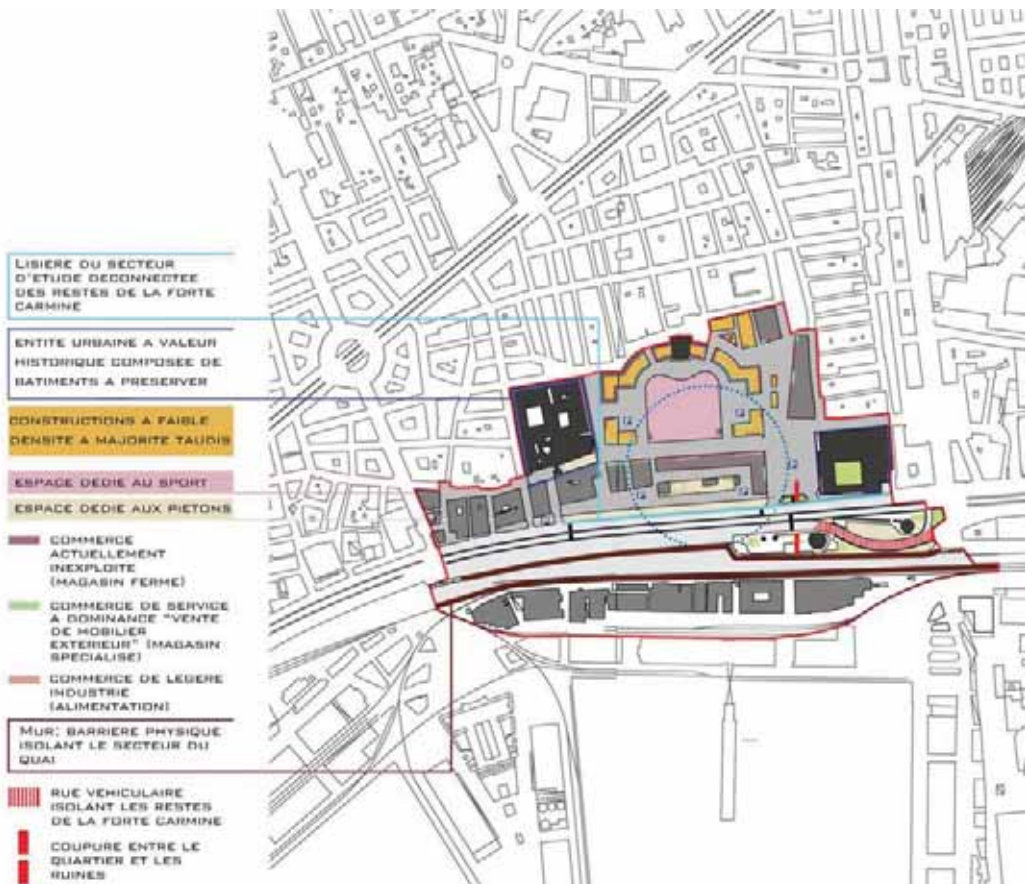
The modern bar separates the market place from the Mediterranean and breaks any volumetric homogeneity of the urban fabric surrounding the square.

Piazza Mercato is currently a large urban void serving as a parking area for the neighborhood.

During the last years several projects and attempts of redevelopment have been elaborated without anything being put in place.

The findings

- The edge of the study area is reconnected to the ruins of the Carmine fortress.
- It is an urban entity with historical value containing buildings that need to be preserved.
- Low density buildings, mostly slums.
- Several spaces dedicated to sports and pedestrians.
- Some small commercial spaces limited to the sale of furniture, grocery, but mainly empty.
- A wall as physical barrier isolating the sector of the wharf and port from one side and a vehicular street separating the Piazza from the Carmine fortress.



Urban spaces used by car parking

There are four parking zones:

- the yellow spreads over 4,800m² caters for 180 cars
- the orange spreads over 4,575 m² caters 155 cars
- the red spreads over 2,710 m² caters 90 cars
- the brown spreads over 13,350 m² caters 350 cars

Which sums up to 775 parking spaces spreading over 25,435 m²

DEGAGEMENT URBAIN ET GARAGE SAUVAGE:

	180 VOITURES
	4800 M ²
	155 VOITURES
	4575 M ²
	90 VOITURES
	2710 M ²
	350 VOITURES
	13350 M ²

LIBRIERE DU SECTEUR
D'ETUDE DECONNECTEE
DES RESTES DE LA FORTE
D'ARMINIE

ENTITE URBAINE A VALEUR
HISTORIQUE COMPOSEE DE
BATIMENTS A PRESERVER

CONSTRUCTIONS A FAIBLE
DENSITE A MAJORITE TAUDIS

ESPACE DEDIE AU SPORT

ESPACE DEDIE AUX PIETONS

COMMERCE
ACTUELLEMENT
INEXPLOITE
(MAGASIN FERME)

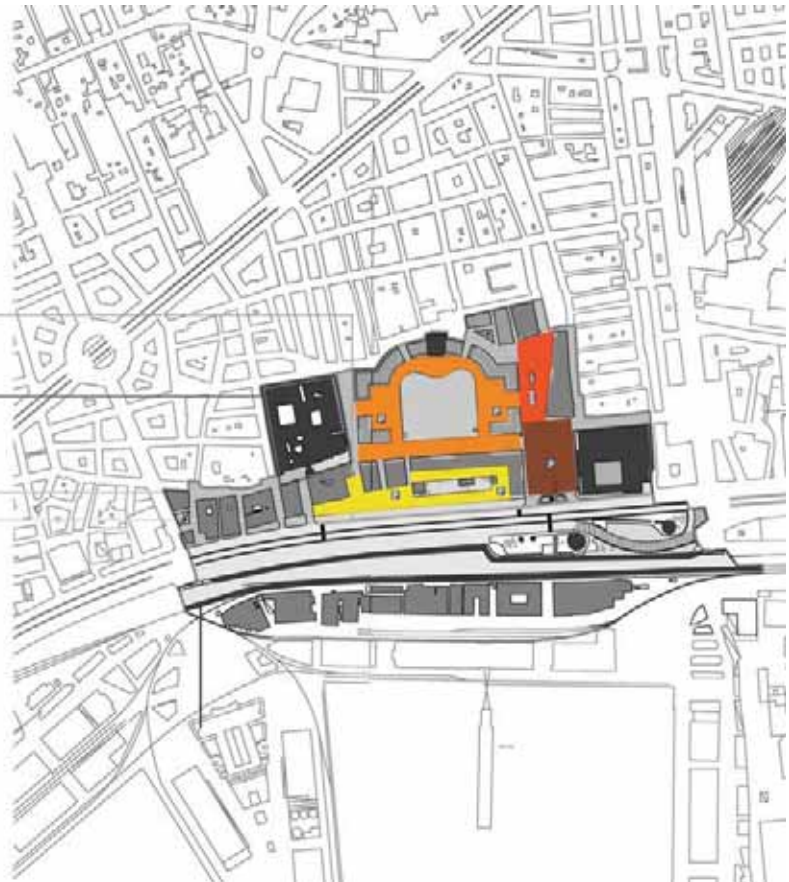
COMMERCE DE SERVICE
A DOMINANCE "VENTE
DE MOBILIER
EXTERIEUR" (MAGASIN
SPECIALISE)

COMMERCE DE LEGERE
INDUSTRIE
(ALIMENTATION)

MUR: BARRIERE PHYSIQUE
ISOLANT LE SECTEUR DU
QUAI

RUE VEHICULAIRE
ISOLANT LES RESTES
DE LA FORTE D'ARMINIE

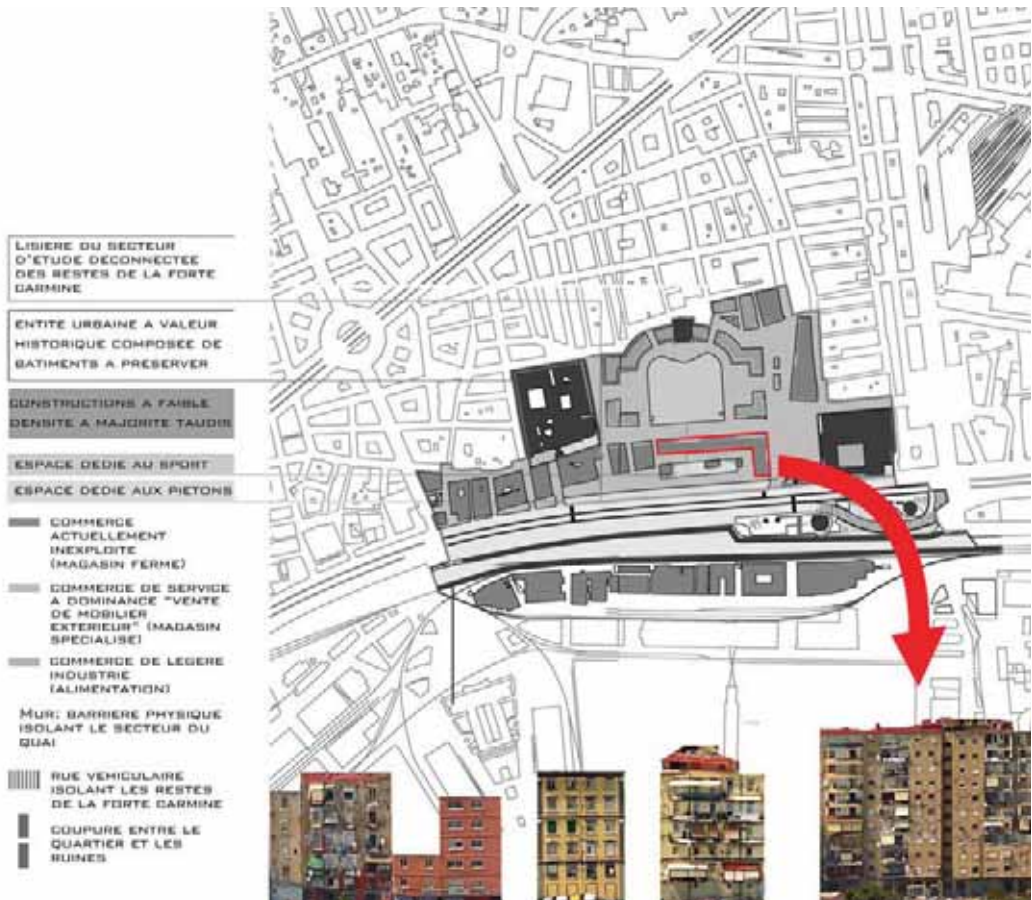
COUPURE ENTRE LE
QUARTIER ET LES
BUISSONS



The Palazzo Ottieri, typology of the 1950s

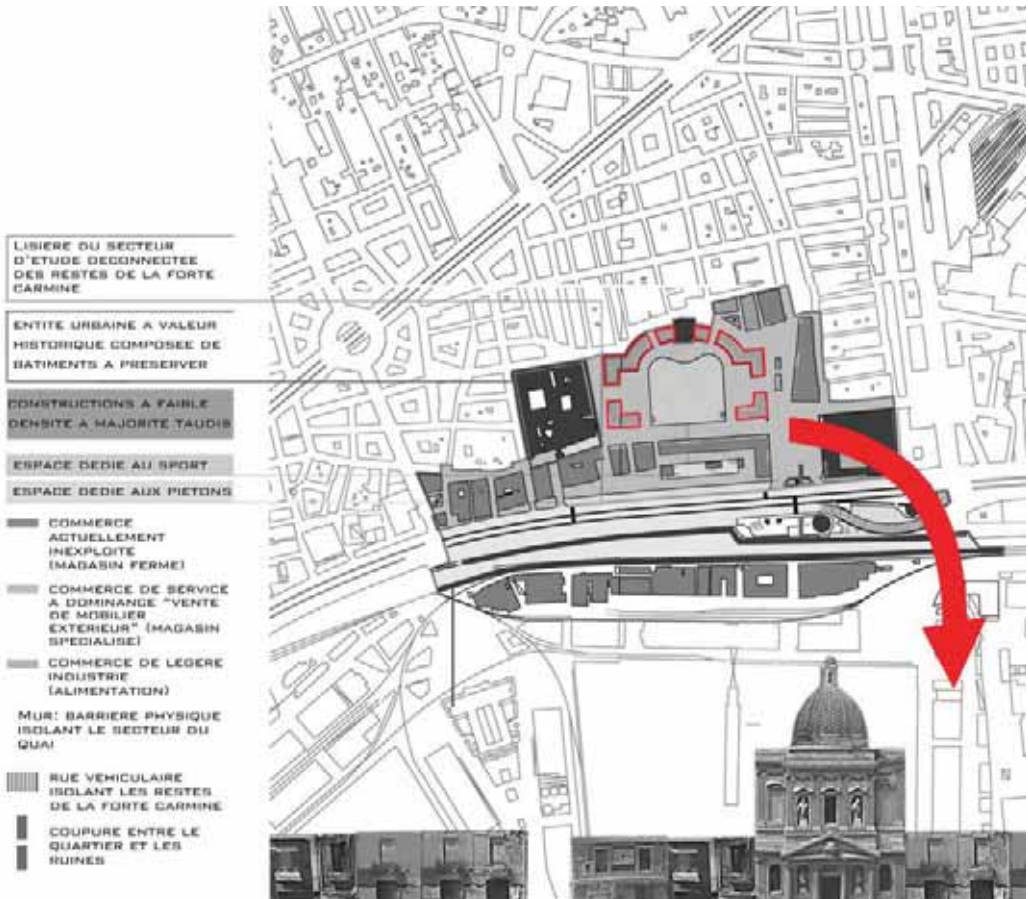
The Palazzo Ottieri is a residential building consisting of one ground and ten upper floors, spreading over a floor area of floor 2,075 m², the total built up area is around 22,000 m².

Since the construction of this building, the Piazza Mercato has lost its value, it became blocked by this dominant construction and is no longer visited by the Neapolitans.



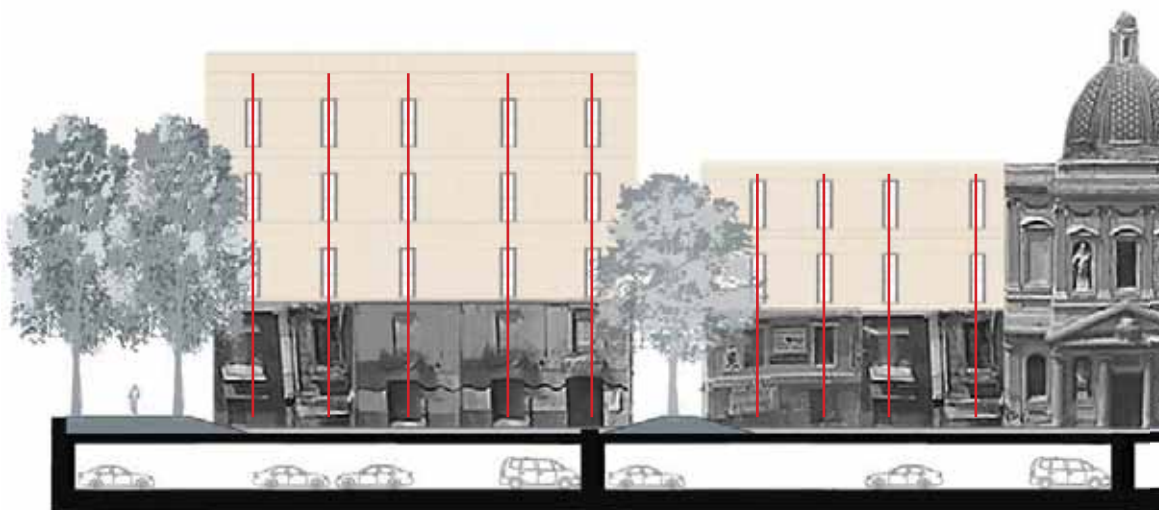
The slums surrounding Piazza Mercato

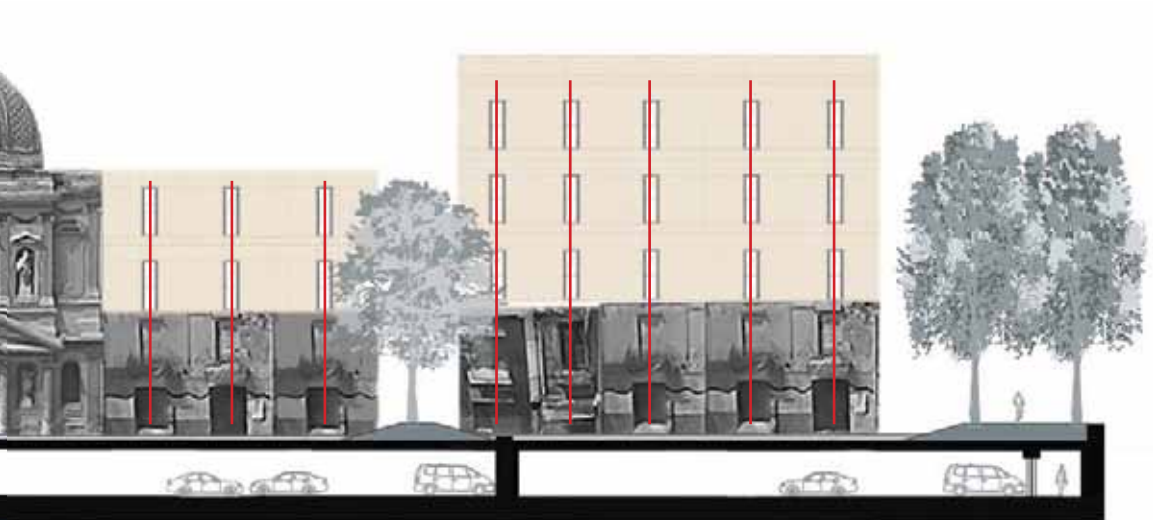
The slums surrounding the Piazza Mercato consist of one ground and one upper floor, spreading over 3,760 m² of shops and the same area for residential.



General design guidelines

- Any monument that does not exceed the average height of the urban fabric in which it is inscribed and is collated to another one, imposes the height of the latter.
- The height of the facade of the party does not exceed the height of the monument over a length of 15m. (A dome or a skylight is not part of the front height)
- Any building with low density (ground floor or ground floor + 1) must follow the height of its surrounding one.
- Any mineral urban development that exceeds 2,000 m², must accommodate a public underground car park.
- In the case of addition of floors, the openings of the extension must have the same axis as the openings and does not exceed the width of the existing ones.
- The new functions must necessarily stem from the vocations that made the reputation of the Piazza such as commercial, pilgrimage, residential vocation...







Naples facades

Photo credit of Jennifer Hajjar

The strategies

Enhancement of the historical heritage of the city.



A local and sustainable urban food system.



An elaboration of the urban green fabric.



A regeneration of the port and the industrial zone.



Linking the historic city and its surrounding neighborhoods.



Construction of underground public carpark.



Creation of public meeting spaces enforcing social links.



Creation of places that host cultural events.



Addition of street furniture.



REESTABLIR VILLA POPOLO
PARC POPULAIRE PONCTUE
PAR DES FONTAINES ET DES
JARDINETS

REANIMER LE COMMERCE

PRESENCE D'UN
ESPACE MINERAL
RECOUVRANT UN
PARKING SOUS
TERRAIN PUBLIC

ENTITE URBAINE A VALEUR
HISTORIQUE COMPOSEE DE
BATIMENTS A PRESERVER

DEGAGEMENT URBAIN
DEDIE AUX PIETONS ET AUX
TRANSPORTS LEGERS

RESTAURATION DES
FACADES LONGEANT
L'ARTERE PRINCIPALE

AJOUTER 4 ETAGES
AUX BATIMENTS
POUR LA HAUTEUR
DU TISSU URBAIN
AVOISINANT

AJOUTER 2 ETAGES
AUX BATIMENTS
MITOYENS A L'EGLISE

AJOUTER 3 ETAGES
AUX BATIMENTS
ENTOURANT LA
PIAZZA MERCATO

ELIMINER 5 ETAGES
DU PALAIS OTTIERI,
ET AJUSTER LA LONG-
UEUR DE FACADE A
UN MAXIMUM DE 70M
EN CREAT UNE
FAILLE DANS L'AXE
DE L'EGLISE





Intentions

- Reestablishment of the Villa Popolo as a public park punctuated by fountains and gardens.
- Reviving the shops/trade in Piazza Mercato, while transforming its underground to a large public parking.
- Preservation of the historic buildings.
- Dedicated urban development/space dedicated to pedestrians and light transportation.
- Restoration of the facades along the main artery.
- Addition of four floors on top of the buildings to align the height with surrounding urban fabric.
- Addition of two floors to the buildings adjoining the church.
- Addition of three floors on top of the buildings surrounding Piazza Mercato.
- Removal of five floors from the Palazzo Ottieri and adjusting the length of the facade to a maximum length of 70m creating an opening in the axis of the church.



Naples, palimpsest city, resilient city, sustainable city...

Where to define Naples today? without influencing the traces of the past, which becomes the anchors of today's urban additions ...

How to reconcile palimpsest city and modernity, how to imagine and invent the coherent articulations between the existing-old and the innovator, the acquired and the extensions imposed by the demographic growth, the urban growth, the competitive necessity of economic dynamisation of the sites carrying potentialities, migratory movements of population...

In Naples, to counter peri-urban extensions, reduce environmental impacts, generate less travel, the authorities are emphasizing densification of urban fabric, especially around public transport stations and connecting points ... on regeneration and renewal urban centers of ancient cities, but taking into account cultural and heritage references ... indeed, an intense relationship exists in Naples between geology, landscape and architectural heritage;

"The city, rebuilding itself, can make a significant contribution to environmental sustainability ..."; this causes a break of the urban sprawl and the reduction of the sprawl of the land reserve by optimizing the use of the space; the city is being made, and continues to rebuild itself: the history of the ownership of soils for example will certainly help to understand in depth the reasons for the mutation of the city, and the possible areas of recomposition by the private dynamics as possible fields of public action...

The history of cities is not dissociated from walls and enclosures, and lately they are à la mode. Trump is proposing his wall, and Britain is retracting within its insular walls. The Middle East is a whole geography of new walls of fear.

They were caused by and represent a worrying rise in divisions in society, and how walls between countries are hardening and attitudes are becoming more polarized.

However, exclusion walls are called to disappear and are eventually torn down with time as in Berlin, Dublin and somehow with the disappearance of the Green Line in Beirut.





Figure 1: AUC1 Area Angioina e Porto; AUC2 Cittadella Universitaria; AUC3 Area dei Decumani; AUC4 Area del Teatro e del Foro; AUC5 Area Mura Aragonesi; AUC6 Area della Porta Furcillensis; AUC7 Area del Mercato; AUC8 Borgo Orefici; AUC9 Cittadella Arcivescovile; AT1 dal Porto all'Acropoli; AT2 le Mura Greco-Romane e Angioine; AT3 le Mura Aragonesi; AT3 le Mura Aragonesi; AT4 il Decumano Maggiore; AT5 dal Foro Romano alla Città Bassa; AT6 dal Tribunale a Porta Nolana; AT7 il "Decumano" del mare; SA Spazi aperti Grande Progetto UNESCO.

Sustainable and resilient regeneration of the historic settlement

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The activities of the International Workshops, started from 2014 Erasmus Program, have taken advantage of a series of studies, research and design experiments elaborated by the Department of Architecture of University of Naples Federico II in support of the implementation of the UNESCO Great Project. The Project has been promoted by the Municipality of Naples to identify suitable redevelopment strategies for the renovation of the ancient centre of the city, aimed at integrating the recovery and enhancement of monumental buildings with the revitalization of socio-economic tissue and cultural activities. Such background has provided an essential knowledge base to effectively read and understand the urban, architectural, cultural and environmental complexity of the ancient centre, as well as a series of best practices of intervention aimed at embedding the topics of sustainable and resilient regeneration in the common practice of local administrations.

The ancient centre of Naples: sustainability of historic settlement and urban growth

Historic cities have always embodied sustainability principles in their development over time. The location of original settlements usually responds to favourable climatic conditions depending on particular geomorphological and orographic conditions, as well as on the availability of raw materials and resources in the immediate surroundings. Key bioclimatic considerations – such as the orientation and morphology of the built environment, the choice of construction materials and techniques, the recurring housing

and blocks typologies – have driven for centuries the cities' development both at urban and building scale, although often mediated by increasing needs in terms of urbanization pushed by demographic growth.

The ancient centre of Naples, where the urban layout of the original Greek-Roman settlement is still perfectly recognizable nowadays, is a perfect example of such urban dynamics and their evolution over time. The foundation city was built according to the orthogonal Hippodamic scheme, constituted by three NE-SW axes, corresponding to main roads (> 3m in section, *plateiai*) and 20 NW-SE smaller roads (< 3m, *stenopoi*), which are still visible today in the layout of the ancient centre, despite the huge densification occurred in the area intra-muros throughout the centuries, since the Roman period. Significant studies [1] highlighted how the “layering” process of the ancient city may be read as a progressive modification of the original “elementary domus” type, which responds to specific construction and bioclimatic principles, starting from the SE orientation of the road layout which granted optimal sun radiation and exposure to the cool summer breeze.

The following densification process responds to clear construction technology issues: the recurring dimension of the building blocks is clearly based on the modulus (approx. 6m) defined by the maximum dimension of the wooden beams made of chestnut tree (because of its mechanical strength and availability in the area) which define the dimension of the enclosed spaces.

The ancient centre as we read it nowadays is then the result of such millennial saturation and densification process, with the exception of the great interventions funded in 1885 by a special law to cope with the severe cholera epidemic of 1884 and conducted by the “Società per Risanamento di Napoli” (Naples' renovation society), based on consistent demolitions around the perimeter of the original Greek-Roman perimeter to restore acceptable sanitation and health conditions were restored, by realising the main axes of Corso Umberto, Via Duomo and Via Mezzocannone.

The UNESCO site

Such premise is indispensable to understand the contemporary reality of the ancient centre of Napoli, recognized in 1995 World Heritage Site for its “Outstanding Universal Value”, as part of “the historic centre as defined

1. Cfr. Caniggia, G. (1997). *Ragionamenti di tipologia. Operatività della tipologia processuale in architettura*. Alinea, Firenze.

by the Aragonese walls, as well as significant elements from the 18th century, including important palaces, as well as buildings for governmental, residential, university, health and sanitary, and arts and crafts functions” (whc.unesco.org). Being continuously inhabited since its foundation, the maintenance and regeneration of the area – officially requested by the UNESCO committee in 2011 to keep the World Heritage status, following a period of significant decay for the lack of maintenance – far than being a mere restoration issue represents one of the most important challenges for the renovation of the contemporary city.

The Great Project “Historical Centre of Naples, valorisation of the UNESCO site” can in fact find its basis on the adoption, in 2011, of a new policy instrument by UNESCO, the “Recommendation on the Historic Urban Landscape”, which provide a set of general principles in support of sustainable urban heritage management, a non-binding “soft-law” to be applied, by all of UNESCO’s Member States [2].

The Recommendation emphasize how historic cities need a constant upgrading and development process to maintain and improve standards of living, to prevent their “museification” and progressive reduction of non tourism-related activities. Of course, to grant the integrity of the historical city and the permanence of typo-morphological and material features at urban and building scale, a knowledge-based design process is needed, to ensure that the regeneration potential is unlocked in accordance with heritage protection instances. In fact, «the Recommendation on the Historic Urban Landscape defines the historic urban landscape as the urban area understood as the result of a historic layering of cultural and natural values and attributes, extending beyond the notion of “historic centre” or “district” to include the broader urban context and its geographical setting. This wider context includes notably the site’s topography, geomorphology and natural features, its built environment – both historic and contemporary – its open spaces, its land use patterns and spatial organization, as well as all other elements of the urban structure, next to social and cultural practices and values, economic processes and the intangible dimensions of heritage. All these contribute to the city’s singularity, its genius loci, and the specificity of the urban experience, which should guide any intervention as regards its function and fabric» [3]. This dimension outlines a new approach to heritage conservation, aimed at developing an integrated framework where sustainability principles – such

2. Cfr. UNESCO (2011). Recommendation on the Historic Urban Landscape. UNESCO, Paris

3. Van Oers, R. Pereira Roders, A. (2012). *Historic cities as model of sustainability*. Journal of Cultural Heritage Management and Sustainable Development. 2. 4-14

as energy efficiency, indoor and outdoor comfort, presence and accessibility of services, soft mobility – must be achieved together with the conservation issues, addressing at the same time the socio-economic challenges linked to the regeneration of the contemporary city.

In the start-up phase the “UNESCO Great Project” proposed by the Municipality of Naples envisaged two major areas of intervention, devoted to the renovation of buildings with historical-monumental value on one side and public spaces on the other. This twofold dimension has been adopted based on the assumption that only a joint and integrated governance action on the built environment as a whole could determine the premise for urban regeneration in the ancient centre, tackling the objective of increasing livelihood and socio-economic opportunities for commercial and tourism activities in the area. Following the example of many historic centres in Europe, the redevelopment of public space has been identified as one of the main triggers of a sustainable urban regeneration process, where key considerations - such as the proper use of resources, the relationship between building and open spaces, the accessibility of the sites and the attractiveness of the public realm – are at the base of the definition of design and technical solutions.

The municipal office for the Planning and Management of the Territory - UNESCO site defined an approach for the redevelopment of public spaces which starts from the identification of homogeneous urban areas (AUCs - Complex Urban Areas) and major urban axes (ATs - Thematic Axes), recognized as “units of intervention” to be approached and redesigned in coherence with their historical character and urban function.

The first restoration interventions on monumental buildings started in 2013, while the public space regeneration, including paving and urban furniture refurbishment, started at the end of 2017, supported by a series of studies developed by the Department of Architecture (DiARC) of the University of Naples Federico II.

Sustainable regeneration of the ancient centre: a methodological approach

The studies conducted at DiARC have been based on a multi-disciplinary approach which included complementary fields of expertise, such as history of architecture, architectural design, urban planning, architectural technology and environmental

design, with the aim of developing preliminary design proposal and technical guidelines for the implementation of the interventions, mainly devoted to the renovation of public spaces, but also including indications for the sustainable retrofitting of the non-monumental buildings in the area.

A series of joint activities have been carried out with the technical offices of the municipality and the Superintendence for Cultural Heritage (national level), through discussions and workshops, aimed at sharing the design proposals and checking the feasibility of the choices. At this stage, a students' design workshop at DiARC has allowed to test the coherence of the addresses from the municipality and define a series of regeneration options put at the base of the discussion with the administrative offices. Following this shared approach, the AUCs have been redefined in relation to historical-cultural aspects and contemporary functions: monumental areas, monastic citadels, university campus, as well as specialist craftsmanship areas (goldsmiths, blacksmiths, tinsmiths, craftsmen of shepherd statues, musical instruments, sacred furniture) rooted in the original places as is still highlighted by road toponyms. The ATs, recognised as main connection axes in the historic city and crossing the different AUCs, have been verified and expanded to be integrated in the accessibility network at urban scale (metro stations, cycling paths, etc.) and to include routes with an historical and environmental value, to be enhanced as cultural and tourist paths so to induce processes of urban, economic and social revitalization also following a direct confrontation with the various local stakeholders.

The environmental approach to the design proposals for the public space redevelopment has played a strategic and operational role in defining a systemic logic and a decision-making process based on sustainable and resource-efficient principles, as well as to ensure the spatial, functional and technological control of the interventions.

The reading of urban themes focused on understanding the value of historical stratifications and pre-existing conditions, performing critical analyses aimed at overcoming cognitive deficits in order to address meta-design and design choices in an integrated way. The main environmental analyses concerned solar radiation, natural ventilation, and outdoor comfort in relation to urban heat. The technological analyses focused on the degradation, physical consistency and performance decay of paved surfaces and urban furniture equipment.

Spatial and functional conditions in the urban structure have been investigated, highlighting the relationships between the “systems” of specialist buildings with the road layout, and the proposed urban and project topics derived from the AUCs and ATs. The analytical framework concerned sustainable mobility (metro lines, electric bus routes, controlled-traffic areas, bicycle and pedestrian paths), the private car parking, and the “gateway” system to the historic city. The presence of cultural/commercial attractors and economic activities represented a strategic point for urban regeneration solutions. In the AUCs, the critical maintenance conditions and diffuse decay of paving and urban furniture, as well as “unsolved” urban themes have emerged as a result of different modification processes, especially the uncontrolled transformation occurred in the second half of the XX century. Public space, characterized by narrow streets and small squares (larghi), appears in some cases as fragmented and its relationship with specialist buildings compromised. Pedestrian crossings are unprotected, with widespread discontinuities between the sidewalks, continuous obstacles and obstructions, promiscuity with car paths and unmanaged parking, thus leading to a sense of lack of safety for pedestrians and especially persons with disabilities. The paving materials - mainly basaltic stone in form of large blocks (basoli) and cubes - show widespread discontinuity and heterogeneity conditions, accentuated by continuous changes in direction and road levels. Urban furniture and equipment, often inconsistent with the historical features in terms of typology and materials used, generally appear inadequate for functionality, safety and aesthetic quality. The dimension of post-nineteenth-century roads and squares, as result of the “Risanamento”, shows disproportion between the space for cars and pedestrians in relation to the current car accessibility limitation. Where the built fabric is not dense enough to grant adequate shadow conditions in relation to sun exposure, the absence of urban furniture and shading reduces the fruition potential and the perceived quality and, in the summer season, discomfort conditions due to overheating phenomena. The high extent of non-permeable surfaces with low reflectivity and high thermal absorption, due to the characteristics of the historical materials aggravates such condition. Furthermore, the XX century volumetric additions along the main coast line road (via Marina) do not allow the cool summer breeze to penetrate in the ancient centre, vanishing the perfect bioclimatic balance which

characterized the urban form of the Greek-Roman city. Based on such critical readings, the design proposals have been addressed to maintain the heritage and cultural value and at the same time respond to multiple issues related to the environmental and economic sustainability, urban identity, social inclusion, accessibility and safety. The effectiveness of meta-design solutions has been verified through comparisons with the pre-existing conditions, by applying specific IT tools for the control of the environmental performance (such as ENVIMET).

Following such analyses, the insertion of tree rows, beside being often in contrast with the original urban character of a “stone city”, has been excluded in areas characterised by narrow streets, since they contribute to determining “heat traps” due to the presence of canopy layer and low natural ventilation conditions. The integration of trees has been instead proposed in the nineteenth-century axes and large squares, where it allows a reduction in thermal loads of an average of 50% and a consequent reduction of the perceived temperature up to 20%, also considering, where not in contrast with heritage value, the use of innovative surface materials with high Solar Reflective Index (SRI). The strategies for improving the pedestrian and disabled persons’ accessibility have been developed in the framework of the consolidated sectorial technical regulations at state level (L 13/89, DM 236/89, DPR 503/96) and the most recent national addresses focusing on the relationship between conservation and accessibility, contained in the Guidelines for overcoming architectural barriers in places of cultural interest (DM of MiBAC 28.3.2008). The design criteria have been oriented to minimize the visual impact of technical solutions for paths, ramps, and signage systems based on the “design for all” principles, with ad hoc solutions for all types of users. Tactile routes have been designed with materials compatible in relation to the existing paving, including the application of the “loges” codes only when strictly necessary. The sidewalks have been redesigned and enlarged where possible, reducing private parking with off-road compensation and proposing technical solutions aimed at granting the homogeneity of soil treatment with the traditional materials, maximising the reuse of existing pavements recovered in other areas of the city, thanks to the coordination and exchange of information with the technical offices of the municipality.

Several studies have been conducted at DiARC in this perspective, focusing on technological and energy

retrofitting principles and solutions for historic buildings. It is a perspective of great interest, especially in the light of the recent national regulations update, which provides public incentives for retrofitting actions combining measures for seismic safety and energy efficiency, and the release by the Italian Green Building Council of the LEED for Historical Buildings rating system.

In analogy with the methodological approach for the regeneration of urban spaces, a multidisciplinary framework is needed to assess the constraints to transformation due to the preservation of historical-cultural values and the opportunity for the upgrading of energy performance in relation to the conditions of use.

The existing building is analysed with respect to the historical-cultural value and historical-architectural evolution; geometric, typological and constructive features; observed material alteration and decay phenomena; energy and environmental performance of building envelope and technical systems.

Such “knowledge project” is developed through based on a wide methodological and technical apparatus, which includes historical-archival research, the use of advanced remote sensing technologies (e.g. laser scanner; RGB data survey including visible spectrum, IR and UV; thermography; radiometry; etc.), simulation and control of major energy and environmental performance parameters (e.g. thermo-physical parameters of the building envelope, technological features of HVAC systems, energy consumption and CO₂ emissions of the building, etc.), BIM and GIS modelling for the management of information processes and the evaluation of alternative design scenarios.

The sustainable regeneration of historical cities represents one of the main priorities in Europe, and especially in Italy, since it binds together issues related to cultural identity, socio-economic development, climate and environment.

The 2030 Agenda for Sustainable Development, the New Urban Agenda and the Sustainable Development Goals (SDGs) recently adopted by the UN outline a new development framework for cities, where cultural heritage is explicitly identified among the key topics in relation to the objective of achieving “Sustainable cities and communities” (Goal 11), where the subgoal 11.4. calls for making cities and human settlements inclusive, safe, resilient and sustainable by strengthening efforts to protect and safeguard the world’s cultural and natural heritage.

Compact and dense urban areas, such as the historical

settlements, constitute a reference and a lesson for the future of urban development, thanks to their climate adaptive, resilient and lively habitat, which provides a much smaller carbon footprints compared to suburban sprawl conditions or countryside settlements [4]. Urban morphology, traditional materials, walkability and proximity of services allows reducing energy demands for building heating/cooling and transport while increasing economic opportunities, also thanks to mixed-use and multi-use buildings and open spaces.

The adaptive re-use of existing structures and the use of local materials and traditional building technologies represent a resource-efficient solution, requiring an extensively reduced energy and material intensity in a life-cycle perspective.

In this sense, sustainable design solutions can be achieved only through a complex knowledge-based approach, able to deal with buildings and artefacts always different from each other, each one representing a unicum, expression of particular historical-documentary values. At the same time, an adequate evaluation of energy and environmental performances of buildings and open spaces cannot leave aside a detailed knowledge of the existing conditions and relationships with the context, even in perspective of a standardized assessment of energy requirements, as well as compliance to codes and performance benchmarks based on generalized standards derived from current regulations and widespread sustainability protocols.

The study and research activity conducted by DiARC on the UNESCO Site of Naples can represent a reference to approach the complex issue of regeneration of historical settlements in a climate-resilient and energy-efficient perspective. These have been aimed at supplying design-supporting tools to local administrations and household in order to manage the complexity of data needed for a proper assessment of actions targeting heritage and environmental issues.

The development and experimentation of such approach, adequately integrated into the methodological practice of urban regeneration, retrofitting or restoration project, has shown to be capable of defining innovative design and technological solutions where instances related to preservation and transformation are adequately balanced, granting the safeguarding of identity and values of historical built heritage together with the upgrading of buildings and open space in relation to the needs of the contemporary city.

4. Cfr. Raven, J., Stone, B., Mills, G., Towers, J., Katzschner, L., Leone, M., Gaborit, P., Georgescu, M. and Hariri, M. (2018), "Urban planning and Urban design", in Ro-senzweig, C., Solecki, W., Romero, P., Lankao, Mehrotra, S., Dhakal, S., Ali Ibrahim, S. (Eds.), *Climate Change and Cities: Second Assessment Report of the Urban Climate Change Research Network*, Cambridge University Press, New York, USA.

The open spaces sustainable retrofit. Banchi Nuovi axis

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The idea of the redevelopment of public space in the historic center of Naples, as a priority action for a sustainable enhancement, stems from the belief that these voids or “city interior” [1] constitute the key to an urban transformation according to innovative parameters of social and environmental quality.

Due to frequently degradation processes, the public space of the historic center, which has always been the fulcrum of community life, threatens to turn into “a residual space, without its own form and without name, without a precise symbolic system” [2].

More recently, public space is facing the loss of its role as social condenser, even though traditionally people live in streets and squares and share daily life in places where “private life is fragmented, porous and discontinuous. (...) Existence (...) is here a collective issue. (...) As the home environment is recreated on the street, with chairs, fireplaces and altars, so only rowdier the road penetrates inside the houses” [3].

What is putting at risk the quality of public space in Naples are concrete issues such as the limited economic resources available for refurbishment and maintenance, the improper use of community spaces - through vehicular occupation or overabundant commercial and food service activities - or the progressive closure of proximity businesses that transform squares and streets from aggregation sites into desolate spaces. All this is creating in different areas processes of degradation that are slowly degenerating their character. For the students of the workshop, the management of design processes able to deal with the complexity of this

1. Cfr. Secchi B. (2006), “Progetto di suolo 2”, in Aymonino A., Mosco P., *Spazi Pubblici Contemporanei Architettura a volume zero*, Skira, Milano

2. Huet B. (1999), “Tre questioni a proposito della forma urbana.”, in Boschi A., Bonacchi A. (1999), *Questioni di forma... urbana*, Alinea Editrice

3. Benjamin, W. (2007), *Immagini di città*, (edit by) Ganni E., Torino, Einaudi



GREEK-ROMAN NAPLES
J.BELOCH, LATE 800

NAPLES XI CENTURY
B.CAPASSO, 1892

NAPLES OF 700
G.CARAFÀ DUCA DI NOJA, 1775



**ENVIRONMENTAL CRITICAL ISSUES//
RADIATION**

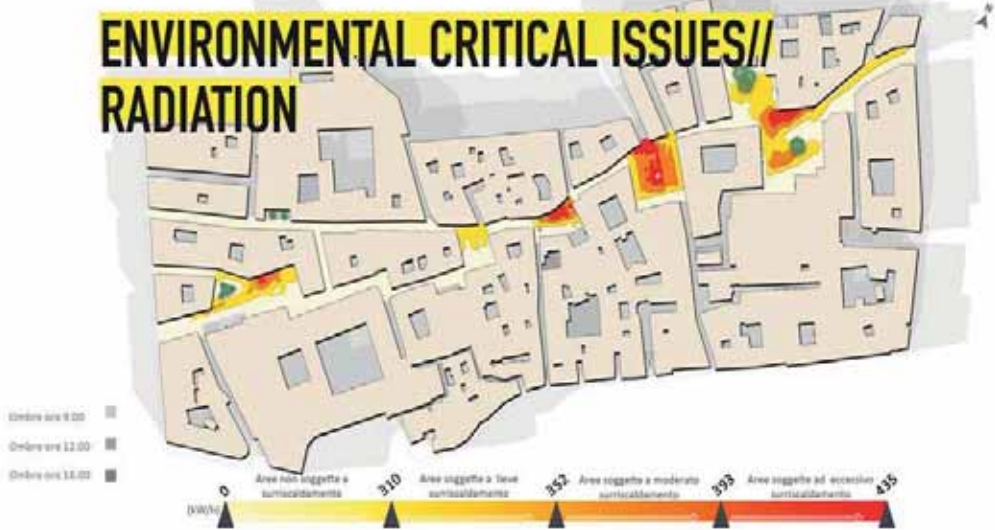


Figure 1: Scheme from IP March 2016. Above: the area of Banchi Nuovi axis in the historical maps. Center: the monumental buildings in the axis studied during the guided tours. Below: the radiation analysis of open spaces by the student Clara Tartaglione.

empty space system, not neglecting the cultural, material and immaterial knowledge of the place, proved to be an important challenge given the short duration of their stay.

The theme of urban open space in Naples is not limited to that of the public space - the square, the widening or the road - but also refers to the collective or private space, as the system of courts or cloisters.

The wise dosing of the relationships between these spaces has created over time a balance with the density of 'filled spaces'. In addition to the analysis of the relationship with the urban context and the relational aspects between buildings, open spaces and communities, a specific focus has deepened issues such as the rational use of resources, the mitigation and adaptation to climate change, in line with the EU addresses and connected to the sustainability of transformation processes.

In Italy as well, the recent debate on the application of technologies and resilient materials in response to climate change suggests actions to adapt public space through management strategies and cultural heritage recovery [4].

Urban regeneration thus defines a complex relational system that addresses the available resources - financial, human, environmental, material and energetic - as well as their rational and efficient use, according to multidisciplinary and multiscale correlations [5].

It is thus about intervening on "a common cultural heritage", recognizing individual and collective responsibility towards cultural heritage and recalling that the conservation of this heritage and its sustainable use aim at the human development and the quality of life [6].

It is especially in places like the Historic Center of Naples, declared a UNESCO World Heritage Site since 1995, that more and more initiatives need to be encouraged to raise awareness and stimulate the debate on the conscious re-appropriation of the 'common good'.

This latter issue is particularly topical: just think of the focus chosen for the Italian Pavilion at 2016 Venice Biennale of Architecture, "Taking Care - Designing for the Common Good", edited by TAMassociati, who developed the theme of architecture as social art and tool for the community and its access to common goods. As it is written by Stefano Rodotà "it is not just a matter of considering the whole urban context, without fragmenting it into pieces and sectoral interests, but to look at the city as a common good" [7].

4. Ministry of the Environment, "National Strategy for Adaptation to Climate Change" (SNAC), approved by decree no. 86 of 16 June 2015. The SNAC identifies the main impacts of climate change for several socio-economic and natural sectors and proposes adaptation actions. In May 2016 started the elaboration of the National Plan for Adaptation to Climate Change (PNACC) to boost the implementation of the SNAC.

5. Cfr. Losasso M. (2015), *TECHNE Journal of Technology for Architecture and Environment n. 10*, Urban regeneration

6. Article 1 of the "Framework Convention on the Value of Cultural Heritage for Society" (Faro Convention) presented on October 27, 2005 in the Portuguese city of Faro, signed by Italy in 2013 but not yet ratified by our Parliament

7. Rodotà S. (2012), *Il valore dei beni comuni*, la Repubblica

Banchi Nuovi axis: the XL/L - M - S scale

In 2016 a group of fourteen students [8] met in the workshop “Urban regeneration and environmental design in the Mediterranean town”, and focused on an open spaces sustainable retrofit in an extremely complex area of Naples Ancient Center: the so-called Banchi Nuovi axis. The axis includes the sequence of streets, squares and widenings that connect via Mezzocannone with S. Maria La Nova and via Monteoliveto, and represent the meeting point of the stairs and streets system that comes from the lower town and the harbor, with important access roads to decumans, such as via S. Chiara and via S. Giovanni Maggiore a Pignatelli. It includes Via E. De Marinis, largo S. Giovanni Maggiore, via Candelora, piazza and via Banchi Nuovi, piazzetta T. Monticelli, largo and via Ecce Homo.

Starting from an in-depth analysis of the historical evolution of the city and through guided surveys in the area, students gained knowledge about the cultural, material and immaterial resources of the place and got in touch with the richness of its historic buildings. Students faced the open spaces retrofit project with also an environmental approach, through the definition of sustainable design choices and the control of the functional-spatial quality of the design alternatives. Insolation analysis maps of the open spaces of the area were provided in order to identify the areas with an excessive thermal load and that need design solutions to improve the environmental comfort.

The adoption of a systemic logic has been crucial to a cognitive and planning development able to consider the reciprocal implications among the parties involved, in a recursive and integrated view. Three levels of study of the project, with different scales XL/L - M - S, concentrated the efforts of three groups on specific aspects, with a final integrated project proposal for the axis of Banchi Nuovi.

The XL/L group deepened the relational aspects between squares, monumental buildings and ‘public terraces’ to be involved in a vision of general revitalization of the area. The latter, given the presence of numerous students and young people attending the university area, is well suited to interventions that relate the spaces of the study with those of relax, but also with those of commerce or nightlife. Terraces were then identified to be involved in a broader redevelopment of the axis, ideally extending the “squares” to the roofs of buildings such as the University L’Orientale,

8. The group was coordinated by prof. Valeria D’Ambrosio and the tutors Enza Terzigni, Federica Dell’Acqua and Alessandra Mennella. The fourteen students from the University of Marseille, Naples and Strasbourg were: Mihaela Grigoras, Luce Guignard, Justine Belin, Khadija Rabeh, Salima Elamrani, Cristian Gania, Angel Badino, Hinayette Arif, Michael Alex Souza De Aquino, Francesco Scarpati, Asma Elias, Bastian Terrazzani, Marcella Bruno, Sara Antenucci.

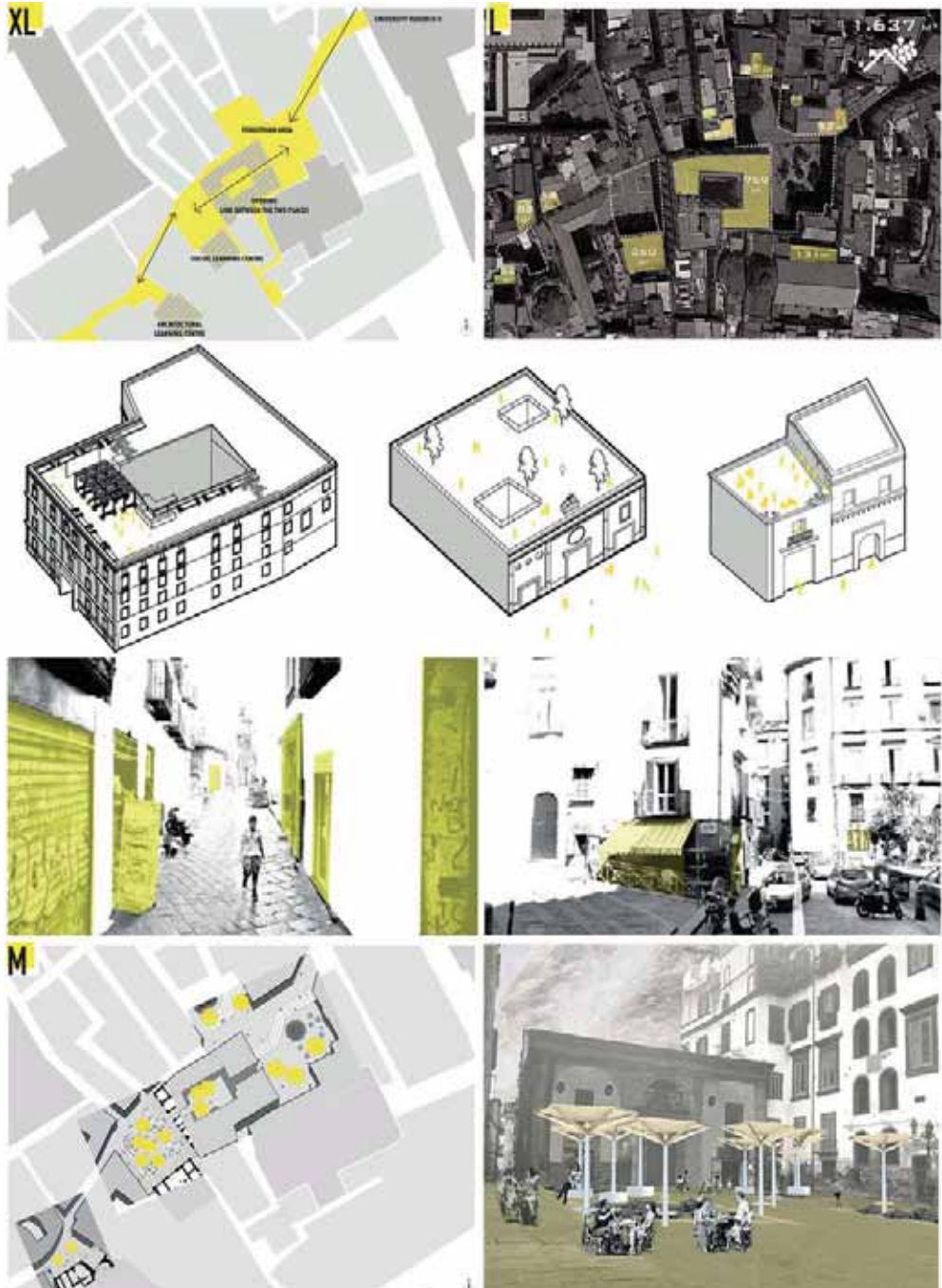


Figure 2 : Scheme from IP March 2016. Above: relations between the squares and the monumental buildings of the area with the 'public terraces'. Redesign of the terraces of University L'Orientale, church of the SS. Cosma and Damiano ai Banchi Nuovi and Palazzo Penne. Center: identification of proximity businesses to be enhanced. Below: the retrofit project of the open spaces along Banchi Nuovi axis and view of Largo Banchi Nuovi with the addition of equipped rest areas.

the church of the SS. Cosma and Damiano ai Banchi Nuovi or Palazzo Penne. Commercial activities of proximity to be enhanced were also analyzed: as crucial sites they are able to contribute “both to the quality of life and to the attendance and liveliness of public spaces for everyday use” [9].

It is with the M group that the project has entered more in detail with respect to the issues of pedestrian accessibility and the coherent integration of green spaces, with equipped rest areas in order to increase the liveability of streets, squares and open spaces.

Several elements have been considered in the open space redevelopment: the different types of users that populate Banchi Nuovi axis, the requirements related to the topic design for all, the environmental aspects and those related to accessibility and safety.

A specific study in this phase concerned the definition of compatible uses for a sensitive context such as that of the Historic Center of Naples, also trying to incorporate the inputs provided by those activities that ‘spontaneously’ come to life along the axis: street food, music, art and shows, street markets, street art, book sharing, etc. The spaces of Largo S. Giovanni Maggiore, Piazza Banchi Nuovi and Piazzetta T. Monticelli were then redesigned and reshaped with the aim of improving the quality of public space.

In the detail scale - the S dimension - a modular solution was designed, repeatable although adaptable according to the context, based on lightness, prefabricability, flexibility, maintainability and non-vandalization characteristics.

For the proposed solution an appropriate degree of technological innovation has been studied, able to integrate at the same time in a sensitive context such as that of the Historical Center.

The solution designed by the students, starting from the idea of the green as the most effective solution for improving the microclimate in open spaces and for the creation of rest areas, has evolved into a multifunctional hi-tech equipment. The variable height steel pole, surmounted by a concave radial structure, is characterized by different functions: an integrated LED light makes it an illuminating system in squares; a covering membrane covered by a photovoltaic organic film ensures that the system can provide light and power charging stations for electronic devices with USB hubs; tanks placed under the seats allow rainwater to be collected to irrigate the surrounding greenery; finally the integration of Wi-Fi repeaters helps to ensure connectivity in an area highly

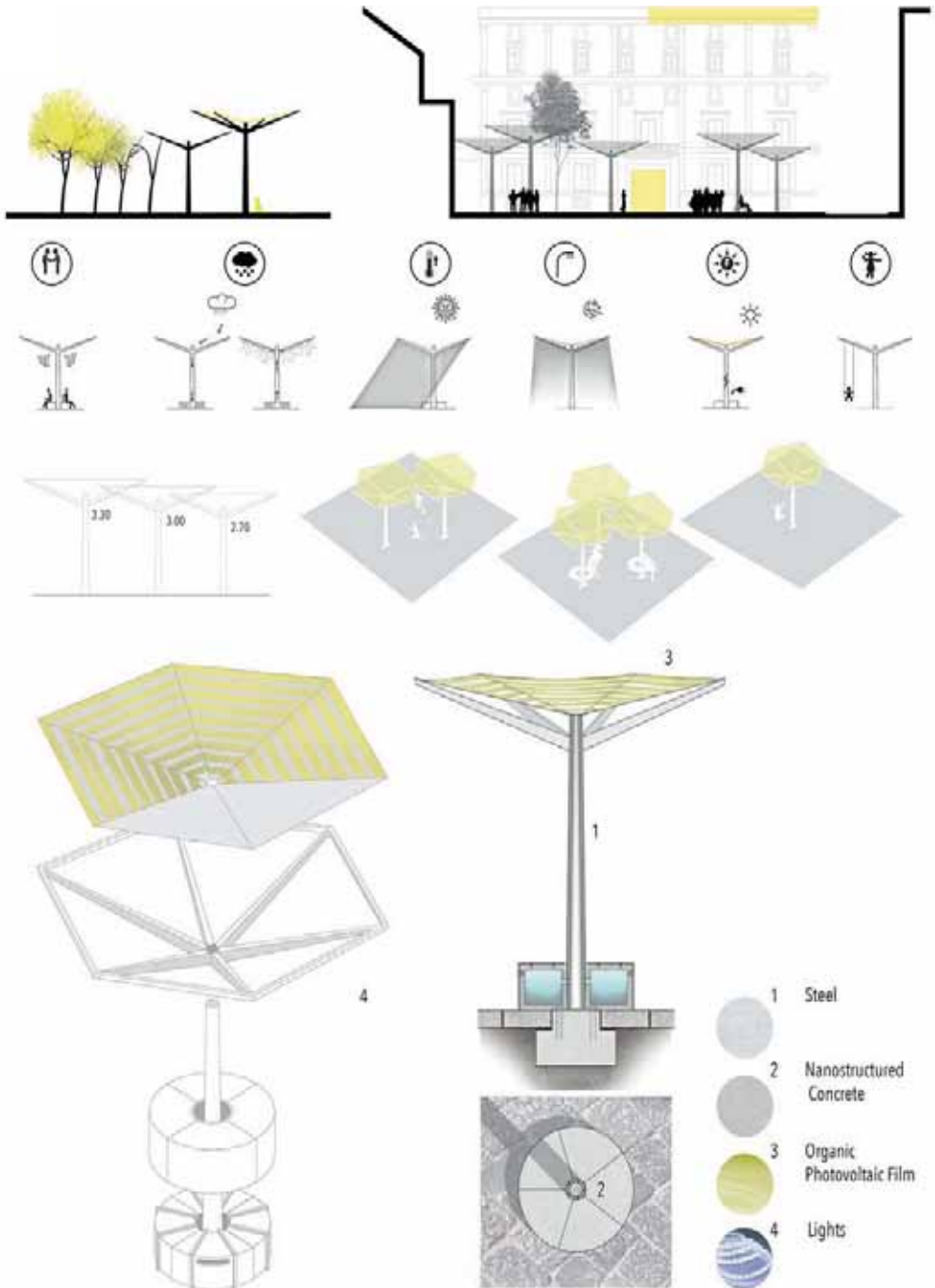


Figure 3 : Scheme from IP March 2016. Above: from the concept of the tree to the hi-tech design. Section on Largo S. Giovanni Maggiore: in addition to the inclusion of the external furnishing elements, the project foreseen the opening of the court of the University L'Orientale, allowing the crossing to the public and the connection with Largo Banchi Nuovi, and the access to the terrace. Below: the detail of the solution designed for open space equipment.

frequented by young people. The different heights of the poles allow to flexibly assemble several elements, creating rest areas or playgrounds.

The workshop was an effective opportunity of reflection on the theme "Historical City and sustainability", experimenting a multi-scale and systemic approach able to relate with the complexity of the Historic Center, facing a multiplicity of related aspects: on the one hand the recognition of the characteristics of the settlement principles, the functional-spatial aspects, the relationship with the context, the recognition of cultural values of the urban environment, the relational aspects between buildings, open spaces and communities with management and socio-economic components; on the other hand, the improvement of the conditions of comfort and liveability, the reduction of needs and the efficient use of material and immaterial resources, the decrease of vulnerabilities in relation to potential environmental and climatic risks. The sensitivity shown in tackling a retrofit project in a place dense of architectural values such as Banchi Nuovi Axis, with multidisciplinary and multilevel correlations, makes the experience made with the students a good practice of conscious re-appropriation and sustainable use of the 'common good'.



Figure 1 : Vico Cinquesanti, just a void in the urban fabric of the dense old center of Naples.

Looking Through the Body

Alberto Calderoni

Università degli Studi di Napoli Federico II, Italy

“We need places for the body. Places where the bodies are seen, are in contact with each other.”

James Hillman

Five sense, five team of architectural students

A design workshop is an opportunity to discover a place, to go around in it for a small time, to try to look at it with eyes that seek deeply to snatch for materials useful to form in our minds a definite, composite and complex image of what we looked at. Therefore the architectural project, the aim of this cultural task, is above all a medium to understand. We use the project's own process to approach, to touch, to listen a place and derive lessons from it. We search through our senses - necessary tools for the architect - images, sounds, odors, consistencies to delineate our idea of urban condition of a precise place. We used the chance of this design workshop to try to reaffirm the close link that exists between the private soul of man and the city. The tools assigned to students to discover and understand the context, the ancient center of Naples, were the five senses. As Mallgrave writes: “the fact that we perceive (and thus we conceive) the environment built through our whole body may seem quite obvious, but the architects, because their cultural tradition, tend to think of buildings as abstract objects or formal compositions that exist in a free geometric space, rather than as existential places of our tactile consciousness”. [1] Starting from the idea that: “a city would need meeting places; a meeting is not just a public meeting, it is a meeting in public: the people who meet each other. Take a break where you can have a moment of contact at eye level. If the city does not have any

1. Mallgrave, H. F., *L'empatia degli spazi*, 2015, Raffaello Cortina Editore, Milano, p. 82



Figure 2 : Physical and Phenomenological Analysis made by the students.

places to stop, how can we meet the others? Walking, eating, chatting, gossiping. For the life of the city, those places where we can talk are enormously important" [2] we tried to imagine a precise sequence of spaces, in the heart of the dense fabric of the ancient city of Naples, only to stay, to experiment without any preconceived purpose the context and to explore how men can stay together for the only pleasure of being. Work with the soul is part of the culture of the city Hillman reminds us and, "the city is a story that speaks to us when we walk in it". [3]

These considerations were the starting point through which we imagined a building as a five room paths, five spaces, each developed by a group of students, where the senses were the protagonists: spaces where man is stimulated to use his own body senses sin-esthetically.

Design process

The design process, being an extemporaneous didactic experience, was rigidly set in three moments, defined by three keywords, used by Hillman to describe the images that in some way describe the man's soul: reflection, deepness, and emotional experience. These three words - abstract and highly evocative - fascinating but also very slippery for architecture, have been used as labels under which to list some of the actions made by the students. Actions made to understand, to experience, to live the city and then bring materials useful for building new spaces on the work table.

The Reflection

Students have been driven to live the city. Reflect on themselves through the reflected image of themselves in the matter of which the city is made. A challenge was given to each group of students: live the urban space and read the places of the city through a specific sense - touch, smell, sight, taste, hearing - and at the end, reconstruct their experience, their own sensations, subjective, extemporaneous perceptions, through images, sketches, drawings, collages. A sense per group. The result was five synoptic tables summarizing the outcome of the unusual survey. What does it mean to reflect on a place? What do you think in a place? To these complex questions we have tried to answer with simple considerations, as closely as possible to a careful way of listening to our bodily senses. Then from this cognitive step was asked to the students to design a space, within the building, where that each precise sense have

2. Hillman, J., *La politica della bellezza*, 2002, Moretti&Vitali, Bergamo, p. 82

3. Hillman, J., op. cit., p. 77-80

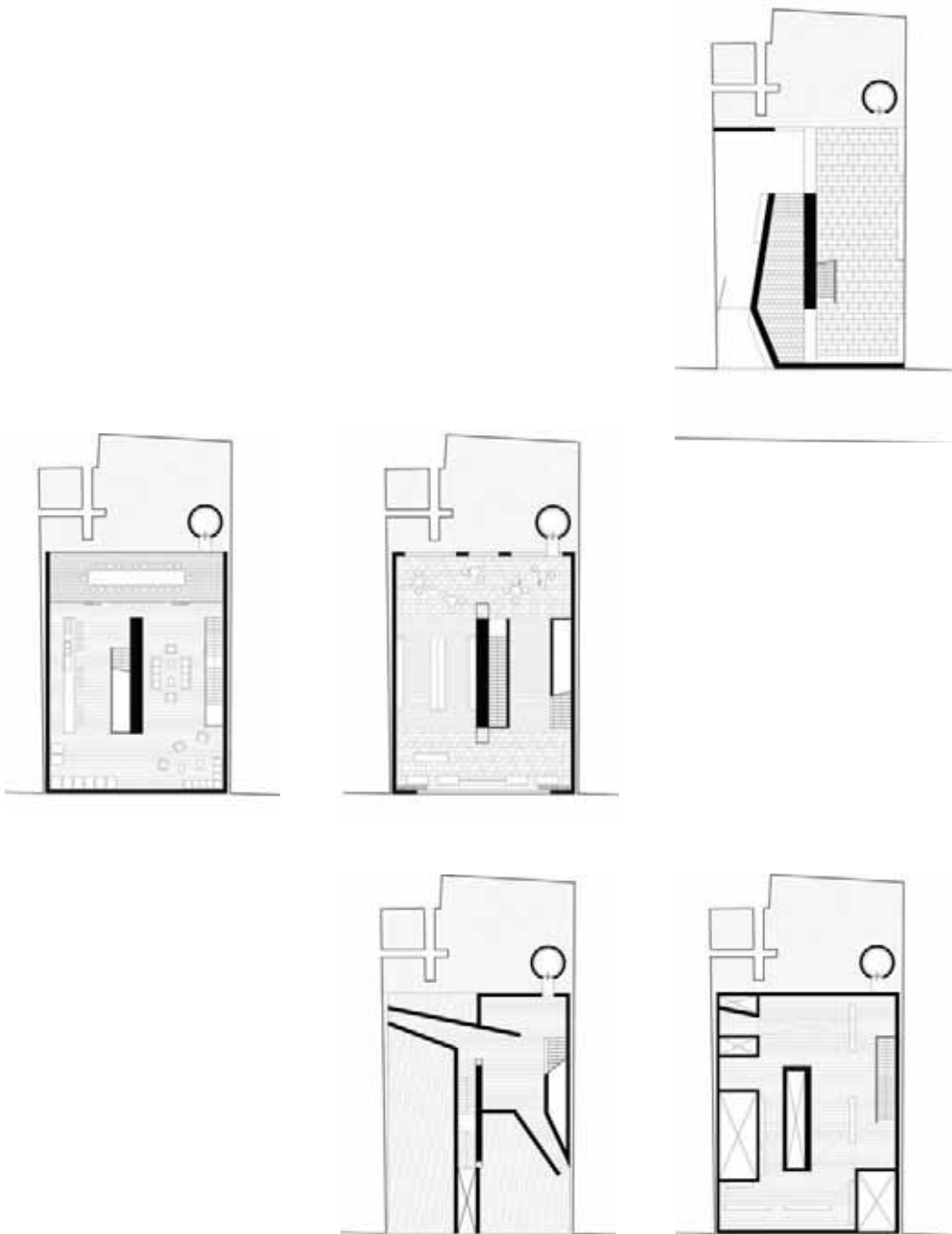


Figure 3 : Scheme from IP March 2016. The five plans of the building for vico Cinquesanti.

H. Acoury, G. Boccia, C. Cheimae, C. De Simone, G. Di Maso, C. Hanusch, W. Kim, P. Mechleb, F. Molaro, A. M. Nèhmè, S. Polverino, S. Ramirez, B. Sheng.

to be the protagonist: a space where solicits that precise sense through material and space conditions. We know the world through our bodily senses. Honest, with no linguistic obstacles or cultural superstructures, the senses inform us about reality, approaching things and making us in relation to the physical space with no artificial filters. Listening to our body and knowing how to take from it useful information for the architectural project seems to be a useful exercise for the training of an architect student. Sensitive and sensory analysis as - at the same time - a starting point and a goal. We reflect our attitudes in the urban space. Our fears, our desires, our habits of living find their material concretion in the built space. Simultaneously formal constraints define the size of our action, inform it, induce it, shape it. We are the reflection of the spaces we live in and, at the same time, we reflect on our being by constantly continuing to shape the space where we live. Trying to study this spontaneous process trying to reflect on our experiencing is a useful experiment to try to make the student informed about the agility of his body's instruments/senses.

4. Cestarello, V., *L'insula che non c'era*, in Ascolese M., Calderoni A., Cestello V. (edited by), *Anaclocosi. Sguardi sul centro antico di Napoli*, 2017, Quodlibet, Macerata, p. 85

The Deepness

Deep is the relationship between men and space; deep is the sequence of spaces that within the ancient city of Naples are engraved. Deep journey with himself: knowing a new artificial reality is always a slow work on your being. Throwing into an unknown reality is always a complicate work that the man make on himself physically and emotionally as well: with the body the man measures the world, he throws himself into the space constructed by defining trajectories first fragile and gradually, with the acquired awareness of places, becoming clearer. Man moves into space and conquers interns and deepness; with the soul projected to the other by itself, he ventures to the unknown, the man continually rediscovers its limits.

We asked to the students to draw as small and simple as possible a plan with few signs, like an architectural translation of the experienced depths, trying, through these diagrams, to represent dimensional conditions and emotional moods. The ancient center of Naples, an urban structure "like a mobile archive, uncontainable, errant, where each architectural detail or human affair seems to claim a natural right of representation" [4] is an artifact rich of signs, traces, figures that can be stimulus for the architectural design. Five plants as diagrams to define a new horizontal and vertical spatial concatenation: a new deepness into the city. A building, the



Figure 4 : Five model pictures of the five rooms.

one proposed as the outcome of the work, imagined as an ascending and descending path in which the five senses are continually stimulated through the form of space, the figurative relationships generated with the context and by the materiality of the building.

5. Hillman, J., *op. cit.*, p. 81

Emotional experience

“Without images we tend to lose ourself”. [5]

The spoken/written language tool does not seem to be particularly effective in defining, in a precise and binding manner, the atmosphere of the places, that is a changeable and an uncatchable data. The atmospheric phenomenon prefers images and visual representations as tools capable of encompassing the more tangible features of its being with a higher level of finitude and effectiveness. Images are a preferred instrument for understanding and transmitting atmospheres because imaginative capacity is much older than language ability: the mind of man thinks of images. The human mind is built up through uninterrupted flow of images: the vast majority of human experience of the world is translated and stored in the body in the form of images. Man invented the abstraction of language just to communicate the images. Images translate emotions and transmit others sensations through their physical existence.

The construction of this useful narrative tool for the project to be transmitted and useful to the architectural student to reflect on their communicative intentions was achieved through the realization of a large scale model of the proposed building. Each group had to build its “room” at scale 1:20; then make a photo without adding any digital changes. All the elements, light, materials, objects and people were physically inserted into the machete that was designed to build these five photographic shots needed to tell the emotional experience that students have imagined. At the moment when these images are observed the relationship between the architect and the object drawn is erased. A new deep, intimate relationship is created between who observe the image and the object of the pictures: a new perceivable material reality self-contained. This the route done from the city’s experience to the experience of a new reality.

An extemporaneous exercise, therefore, made to define a description of a path of physical and sensory understand of a place. Accumulated knowledge that has been sought to tell through five plants and five images synthesis of five days across the streets of the ancient center of Naples.

Naples. Ancient vs new: a complex story

Paola Scala

Università degli Studi di Napoli Federico II, Italy

In Sicilia non importa far male o far bene: il peccato che noi siciliani non perdoniamo mai è semplicemente quello di 'fare' [1]

Giuseppe Tomasi di Lampedusa

I have always thought this quotation, from the *Gattopardo* and that was used to describe the Sicilian situation after Italian unification, is also suitable to describe the determined opposition to change in Naples.

Neapolitan people reject new power, that is what we call history or, otherwise, modernity. Pasolini used these words in a marvellous interview with Antonio Ghirelli where he compared Neapolitans to a tribe destined to extinguish themselves, not because they are not capable of adapting themselves to change but because they are deeply indifferent to it and they are sure, in an incontrovertible way, that the old is better than the new or, at least, less dangerous.

The difficult relation between Naples and modernity [2] is, perhaps, what makes the city an oxymoron. In fact, on one hand each architectural project, each urban transformation seems destined to be stopped by a very strict system of rules legitimately but too late to shield a wonderful cultural heritage from urban speculation. On the other hand the very strictness of these rules make "right" a common unregulated activity and a natural urban transformation absolutely unconcerned with each architectural and urban quality.

As in many Italian cities, also in Naples the real Modernity was built in the suburbs, supporting a centrifugal push that welds the the Northern and Eastern parts of the city with

1. In Sicily it is not important to do badly or to do well: what we cannot forgive is just doing anything

2. Cit. A. Ghirelli (1976) in *La napoletanità*, Società editrice napoletana.

the adjacent towns creating a total conurbation. Instead, in the Historical town the district called Rione Guantai Nuovi was built in the first part of the 50's, integrating the urban transformation of the Rione Carità, started during the 30's. The new district, that should have represented "the City", was made up of some extraordinary buildings, such as the Poste Palace by Giuseppe Vaccaro, that is a real example of Modern Architecture, and by some other buildings that developed the theme "ancient/new" according to the rhetoric of the Fascist regime.

These new buildings should have been "monumental" and were marked out by a "giant order" that gives structure and rhythm to the facades and raises the base: the lower part of the buildings are marked by a gigantic empty space in the main facade, used as an axis of a symmetric composition, where the entrance is located. The front gate brings people to an hall of building height. Many architects that built in Rione Carità in the 30's, first of all Piacentini but also Guerra, Canino, Chiaromonte, used a neoclassical repertoire (in the compositive structure but also in the architectural language and style) to assure continuity between ancient and new and above all to guarantee the "Italian style" required by the Fascist regime.

After the interruption of the Second World War, the urban transformation, that began in the 30's, started again with the building Guantai Nuovi . But now something is different... In the mind of many Neapolitans the gradual replacement of the historical urban fabric, seriously damaged by bombs, represents the first sign of urban speculation that in few years would have completely changed the form of the city.

From Posillipo to Vomero, from Rione Guantai Nuovi to the Eastern Area, everywhere during this time new buildings rose up, many of them became "icons" of that disastrous architectural era that Francesco Rosi stigmatized in the film "Mani sulla citta" [3]. The emblemating building of Rione Guantai Nuovi is the Cattolica skyscraper, desined by Stefania Filo Speciale; a faerce debate took place about this building not only in the specialist press, led by Roberto Pane from the magazine "Napoli Nobilissima", but more generally in the local press. This debate brings about a gradual alteration of the project, whose original reference was the Pirelli skyscraper by Gio Ponti in Milan, and is the reason the final design of the base, suggested by the "Soprintendenza", i.e a lower building, alligned with the existing facades, from which the skyscraper rises.

3. F. Rosi (1963), *Hands over the city*

In effect, the debate on urban speculation affecting the city which started from the 50's has convinced the authorities to avoid any radical urban transformation and to prefer a more prudent way of working that is strongly disapproved of Luigi Cosenza. On this the Neapolitan architect writes: it is a retreat, a way to renounce to the transformation of reality, according to the logic of single episode that legitimizes the single beautiful building within the existing urban caos. Perhaps, Luigi Cosenza himself was the "first victim" of this logic; his Via Marina Plan, designed in 1946, was developed in fragments and it becomes an urban paradox where the Skyscrapers, designed to create the new Waterfront, were built in a total different way from the original global concept and insert themselves within the historical urban fabric in a very random way.

Therefore, beginning in the 50's, in the historical city, architects have projected more and more single buildings that recall overall vision destined not to be realized. In the urban transformation of the "Spirto Santo" complex, Marcello Canino placed the lateral and posterior facades further back from their original allignement. This moving back represents a reflection of an idea, already included both in the Urban Plans of 1919 and 1936 and never developed. These Plans aimed to realize a new system of roads that, cutting through the ancient urban fabric, should have facilitated the connection between Via Toledo and Corso Vittorio Emanuele.

In facts, beginning in the 70's, the only urban transformations of the historical town that are not developed fragmentedly and refers to a greater vision are the many studies developed repeatedly in the University, from "Centro Antico" by Roberto Pane, to the "Regno del Possibile" by Uberto Siola, as far as the "Corpo di Napoli" by Francesco Moccia and Salvatore Polito. In effect, these studies do not merge with any possible urban transformation while the few buildings replaced in the Historical Centre, built on the footprint of buildings that were bombed during the war or damaged by the earthquake in 1980, are blocks of flats lacking any architectural quality. Both the 1972 Urban Plan and its 1994 variant, concernig Historical city, take on a attitude of "integral protection" of the architectural, enviromental and historical aspects. Specifically, the variant maps the buildings in great detail, classifying them individually and defining an exeptional in-depth analysis which, however, does not create a transformative hypothesis. Sometimes it is very difficult for foreign students and professors to understand and accept this controversial and

difficult relationship between ancient and new. During the last International Workshop, organized within the Programme Intensive Erasmus, as Neapolitan team leader I wanted foreign students to take on the theme, beginning with the consciousness of reality. I also wanted to leave them free to develop a utopian solution. In this way we tried to transform this experience into a comparison between different points of view.

In spite of its own determined opposition to change, in recent years Naples has left space for Modernity in designing the new stations planned by the "100 Stations Plan", adopted in 2003. Many of these stations were designed by famous architects. Admittedly, many of these stations are underground and this fact reduces, even if it does not remove it completely, the debate on the relationship between ancient and "new" that is always seen as invasive, improper and irreverent.

However, beyond the single architectural solution of each station, more or less successful according to the sensitivity of the individual architect's approach, what Neapolitans like mainly is the idea behind the Plan, that is the fact that each project does not concern the individual building but concerns the creation of a new public space capable of stating and building new urban relationships. Thus, the Piazza Garibaldi project by Dominique Perrault gives new form to the empty space left by the moving back of the old station, in 1958, and never filled; the "Piazza Municipio" project by Alvaro Siza recreates the ancient relationship between the Hill and the sea; the same urban relationship was behind the "Toledo" station, the most beautiful in Europe, built underground stretching into the Spanish Quarter.

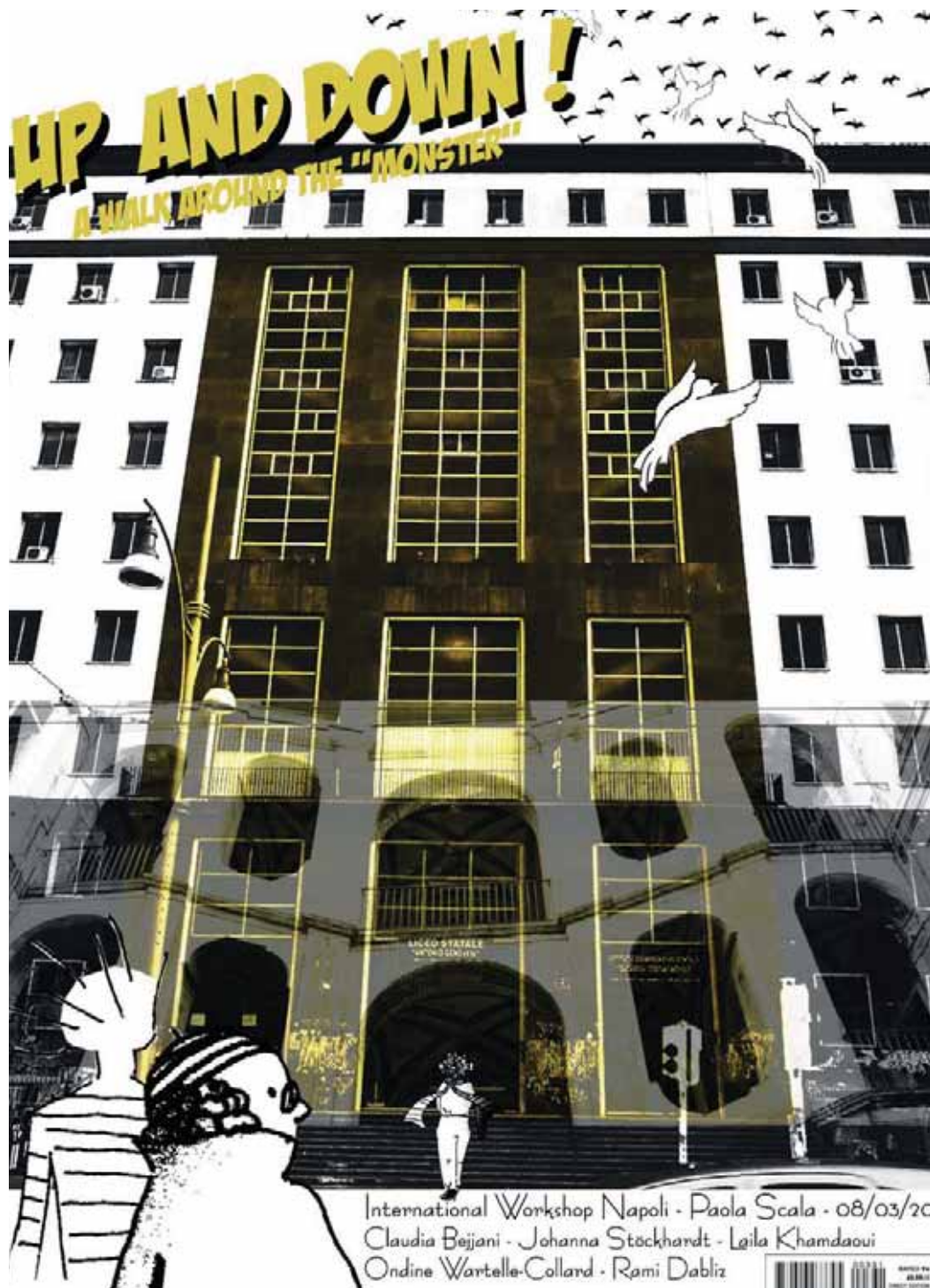
Beginning with this consideration the theme chosen for the workshop was the regeneration of the Building designed by Camillo Guerra, in 1954, in Piazza Cavour. The building rises up in front of the Caponapoli hill and marks with its size the memory of the ancient wall of the city, today demolished. The main facade of the building stretches along what is improperly called Piazza Cavour and that, in effect, is a long narrow space "in between" the Ancient Centre and "Vergini" District, an urban area built "extramoenia" over the hill following the ancient water roads. The monumental size of the "Museo Archeologico" marks this "widening" towards Via Roma. The new underground stations, designed by Gae Aulenti and inaugurated in 2000, organizes an interesting network of underground relationships with the Museum and the the old stations of line 2, once Roma-Napoli railways.

However, the square is quite fragmented and not much used because it is separated both from the Ancient Center and the Vergini area. Thus, the project developed during the workshop began with a new interpretation of urban material and immaterial relationships that could intersect in the square. The aim was to define some design themes that could transform this empty area into more dynamic and contemporary a public space. More than finding a specific architectural solution, the “visions” elaborated by the students during the workshop tries to show, using the techniques of collage and photomontage, how the theme can be developed. Architecture “quoted” in the images is used not as a formal solutions but as instruments to describe, using the analogic game, which kind of relationships the project wants to adress. Therefore, the building by Camillo Guerra, within a larger structure of links, can be considered no longer a barrier but a filter capable of connectting the ancient city with the Museum and with the Vergini area. The project aims to create a relation between ancient and new not reaching a specific formal result, but above all imagining new meanings and relations for the many elements put into play, imagining a transformation that, even if fragmentarly, refers to a main and more organic vision.

Figure 1 : Scheme from IP March 2017
Sewing the city

Tutors: Paola Scala, MariaPia Amore, Claudia Chirianni

Site Knowledge. In the comic, students try to describe all the elements involved in the project, the structure of relationships between them and the principal material and immaterial aspects of the site.



International Workshop Napoli - Paola Scala - 08/03/20
Claudia Bejjani - Johanna Stöckhardt - Leila Khamdaoui
Ondine Wartelle-Collard - Rami Dabliz





Figure 2 : Project1 - Starway to the Garden
 students: Abdelmoula Marouen, Maria Salvatore, Schmitt Léo-Paul, Wartelle-Collard Ondine

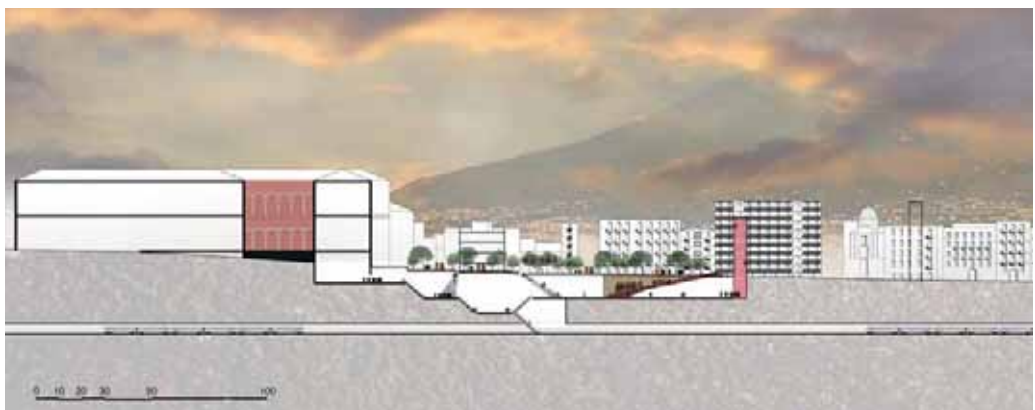


Figure 3 : Project 2 - When the city becomes Museum
 students: Wafa Eloued, Victor Eloued, Victor Cagliari, Rami Dabliz, Fatima – Zahara Ettalali

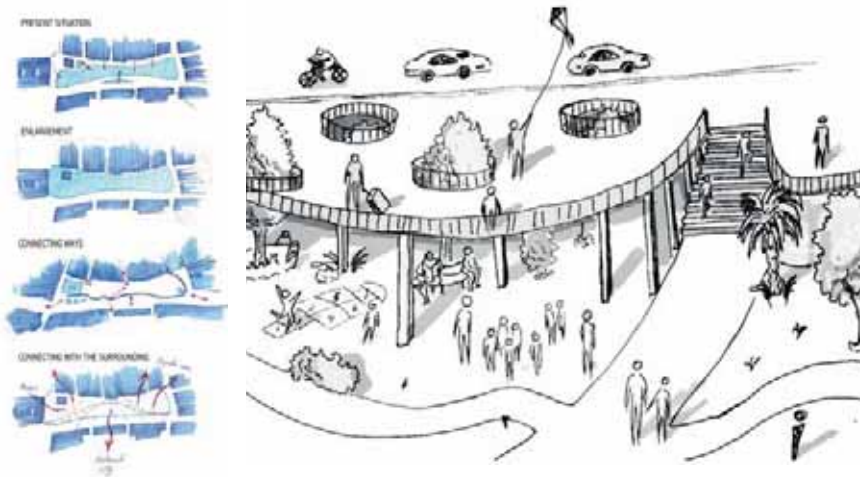


Figure 4 : Project 3 - Green escape
 students: Alessia Napolitano, Claudia Bejjani, Elie Ghattas, Johanna Stöckhardt, Laila Khamdaoui, Ouassila Maouche

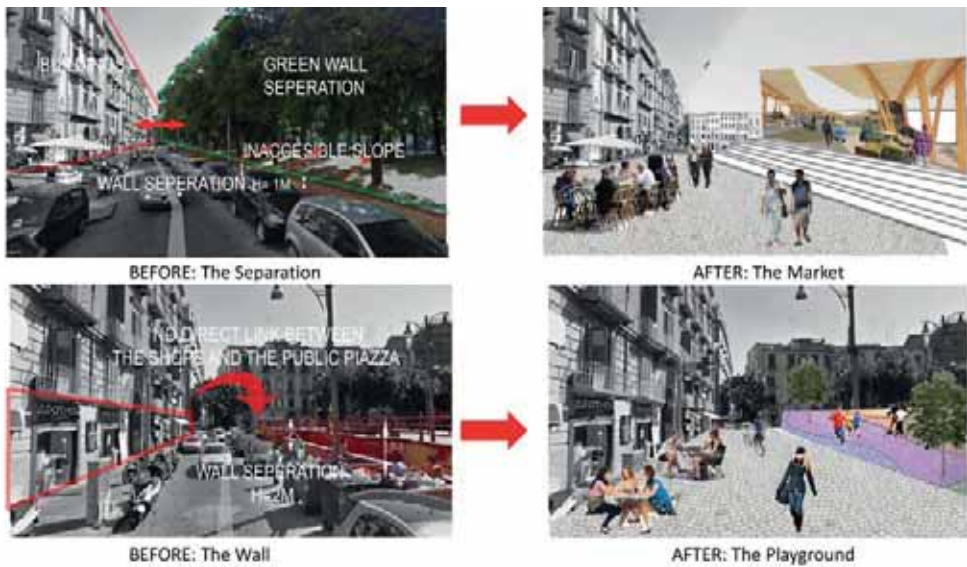
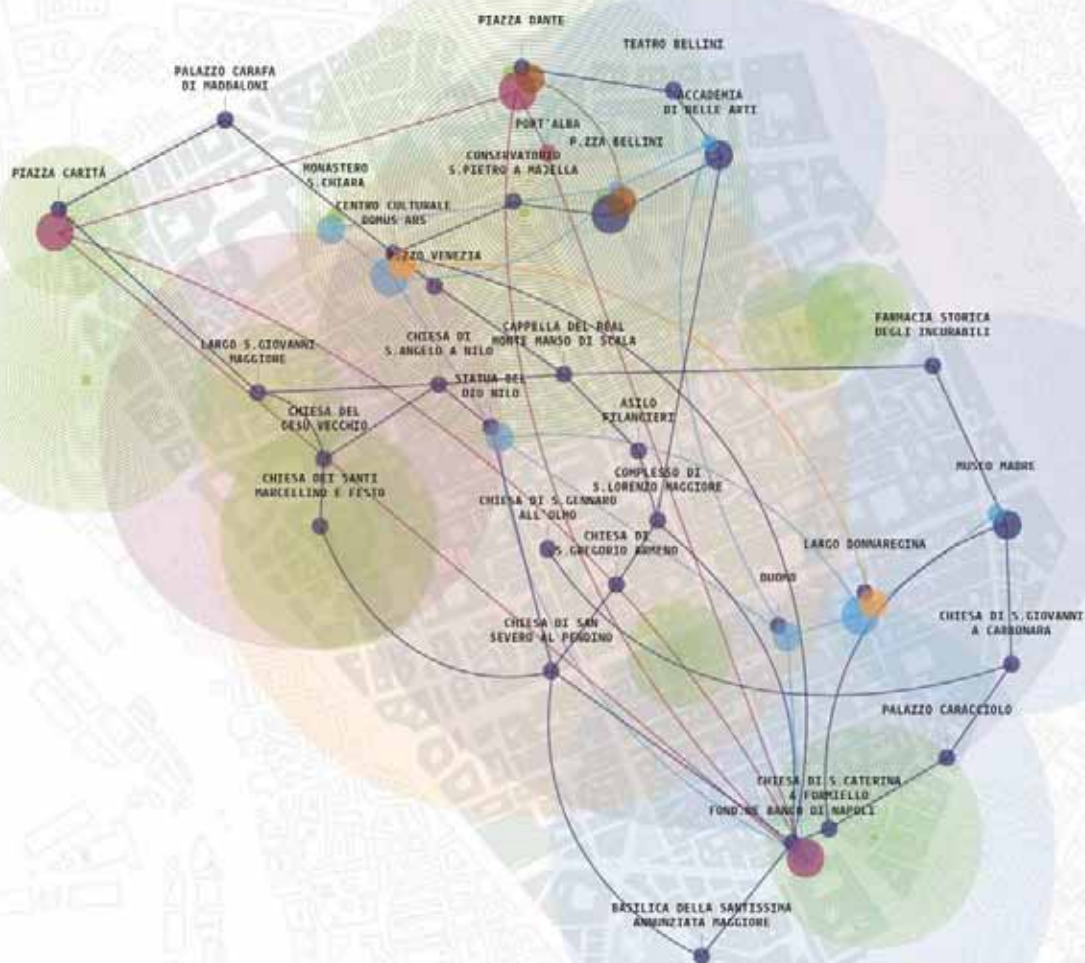


Figure 5 : Project 4 - The right place for everyone
 students: Suskaina Ech, Sandy Sarkis, Yasmine Tanouti





Urban Core Ecosystem

Renata Valente

Università degli Studi della Campania Luigi Vanvitelli, Italy

Studying the ancient centre of Naples is an ambitious challenge for those who are interested in understanding the complex sense of historical, technological, social and environmental stratifications, overcoming the oleography and traditional representation. This experience is, however, an opportunity to link one's own lines of research on the project, lines magically reconnected when presented to a foreign guest. This is how the knowledge of places given by walking, the understanding of the relationship between nature and artifice and the theoretical speculation on the concepts of adaptation and context, have contributed in building the idea of environmental project proposed in the workshop by the group of teachers of the SUN - University of Campania.

1. Renata Valente, "Pedonalità e Percorsi: confronti internazionali per progetti sostenibili di spazi lineari" in S. Cozzolino, L. Nardi, R. Valente, *Teorie di progetto ambientale attraverso l'Europa*, CLEAN edizioni, Naples 2014.

1. Walking as a survey methodology

The visits and the active attendance of the survey sites are those of an approach characterized by the stimulation of the perceptions which contribute to creating the personal story of the site, to be later expressed in own project proposals. The cultural references of this approach have a long tradition, since 1953 when Guy Debord coined the term "psychogeography" by linking the perceptual experience to the site and its characteristics, founding in 1957 the Situationist International, active until the early 1970s. The program was to create situations through the collective organisation of a unitary environment where integral art and new architecture were realised. Among the main practices there was the "urban dérive", a playful journey concept to explore unexpected conditions [1].

Later, in 1960, in his urban environment analysis included in *The Image of the City*, Kevin Lynch established the

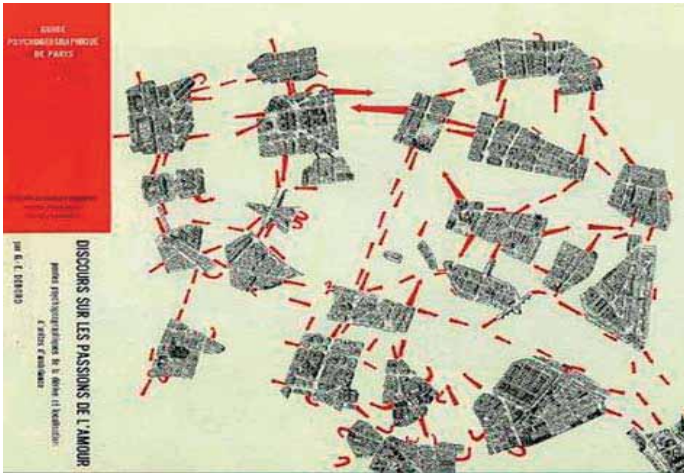


Figure 1 : Guy Debord, *Guide psychogéographique de Paris*, 1958 (cover)

terms “path”, “margin”, “district”, “knot” and “landmark” as important features for analysing the city. The year after, in Britain, Gordon Cullen noted in *Townscape* that “it is easy to see how the whole city becomes a plastic experience, a journey through pressures and voids, a sequence of “*exposure and enclosure*” [2]. The interpretative keys of urban space were distinguished in serial visions, place, content, functional tradition. In 1964, Donald Appleyard and Kevin Lynch published *The view from the road* on the understanding of the route from the automobile and Bob Venturi studied Las Vegas [3] from a perspective that changed the way of viewing the city. Later in 1974 Henri Lefebvre [4] described space as a social construction that influences practices and perceptions, distinguishing hierarchical abstract or quantified space, and social or qualitative space where daily life takes place. In this sense, the road is a physical tool that can be used to mark and control, as its system can be subject to transformations that strongly reverberate on the experience of the citizens. The trails are again at the centre of the so-called “strollology” theory, the science of walking, promulgated in 1980 at the University of Kassel in Germany by sociologist and urban theorist Lucius Burckhardt, relying on the practice of hiking in the landscape to explore the connections between mobility, perception and project. According to this theory, the landscape must be a structure of our imagination rather than an environmental phenomenon, since perception is based on the cultural heritage of previous representations. The objective of the research was what is called “Minimal intervention” [5]. Burkardt’s theory makes scientific descriptions of strolls to exactly acknowledge the landscapes, while the situationist derive proposes a different

2. Gordon Cullen. *Townscape*. Reinhold Pub. Corp., 1961.

3. Donald Appleyard, Kevin Lynch, John R. Myer, *The View from the Road*, Publisher: The MIT Press; 1st edition 1965; Robert Venturi, Denise Scott Brown, Steven Izenour (1972). *Learning from Las Vegas*. Cambridge MA: MIT Press.

4. Henri Lefebvre, *La production de l'espace*, 1974, Antropos.

5. Lucius Burckhardt e Bernard Lassus, Gibellina, September 1981.

perspective, even connecting them to the larger scale.

The difference between situational derive and strolling is that the latter implies destination, study of textures, surfaces, materials, rhythm, climate and perception of time as well as all the other intangible components. Burckhardt suggests that invisible systems, relationships and objects should be included in designs: in the same way, situationists criticised the least apparent forces of the city and emphasized the psychogeographic aspects. As observed by Fitch [6], Debord and Constant, both members of Situationist International, had a wider view of the city's production as a built-up space. Constant's work focused on building new atmospheres within the urban context, emphasizing the importance of dynamic evolution through adaptation and creative transformation.

In *The Practice of Everyday Life* Michel de Certeau distinguishes between two specific forms of appropriation of space: the rhetoric of what is stationary and that of the path, a means of "stating a space". He defines the daily marching of the citizens as a creative force, spatial action that implies a relation between different positions on a site. De Certeau claims that the pedestrian appropriates the spatial urban system as one who speaks and learns a language, therefore the stroller "speaks" the space of the city [7]. In the 1990s, John B. Jackson proposed a science called "odology", a study of roads or journeys, their uses, directions, how they originate and develop [8]. Part of geography, planning and engineering, both constructive and social, also defined it as a study of our reactions to motion along a set path, reintroducing the emotional response in each trip.

Inspired by the currents described, walking as an aesthetic and project practice was proposed following Rome in 1995 by Stalker / Osservatorio Nomade, which conducted research and actions over the territory with attention to the marginal areas and urban voids in transformation [9]. Cultural references were "The Songlines" narrated by Bruce Chatwin [10] and Jackson's "odology". Using a mix of photographs, sketches, reports and audio recordings, the walk can be documented as a creative effort. This interpretation of places is valuable in dealing with the predicting analysis of the environmental project, based on understanding the complex aspects of the urban ecosystem of reference and also inspired the students of the Naples workshop during guided or personal routes in the streets of the ancient centre.

2. Nature and artifice

Parallel to the knowledge of places given by walking, working for the sustainable town of the future, according to the concept

6. *ibidem*

7. Michel de Certeau, *The Practice of Everyday Life*, trad. Steven Rendall, University of California Press, 1984.

8. Cfr. John B. Jackson, *A sense of place, a sense of time*, Yale University Press, New Haven, London, 1994, p. 191.

9. Cfr. Francesco Careri, *Walkscapes*, Einaudi, Torino 2006.

10. Bruce Chatwin, *The Songlines*, Franklin Press, 1987.

of urban ecosystem, we proposed to study the townscape, considering both natural elements and resources, as well as man made processes, and even immaterial aspects. In fact, to paint the big picture of the place, we must study natural resources as sun/energy, air, soil, water, vegetation, as well as settlement processes effects, as materials and construction, waste, communication and mobility. The integration of these results should be then enriched with social data, meaning usage habits and times, to study the dependence from the physical ecosystem.

2.a While Neapolitan soil, subsoil and materials for construction are mostly influenced by the volcanic systems and are explained further in this volume, any environmental analysis should start from climate aspects; Fig. 2 (a,b,c.) present Neapolitan meteorological-climatic data. The hottest months are July and August with more than half of the time over 30 degrees Centigrade, while June and September are more temperate. The coldest days of the year are in January and February, but the average temperature is always more than four degrees over the zero value. The prevailing winds blow from Southern areas, but cold wind from the North East are typical of Winter months. These conditions match with the urban orography, determining wind corridors, especially in narrow streets with high buildings. Rain data show the most rainy months are April, October and November, and Autumn has the highest rate, with 376,5 mm over the 1008,2 mm/year. These aspects are important considering the shadow due to specific proportions of cross sections of the ancient roads and the always more frequent cloudy days (Cfr. Fig. 3 and 4).

Naples has 1034 heating degree days (HDD), meter reflecting the demand for energy needed to heat a building. Spring and Autumn have almost disappeared and the duration of Summer is actually increasing, with rain more and more intense and interspersed with long periods of drought. Moreover the urban heat island phenomenon is intense, especially in summer afternoons with clear skies, when, during hours of maximum heat, the town emits as much energy as the effects of the sun when it arrives to the soil. These data are useful to choose systems for buildings, but also when considering strategies depending on habits and ways people live the place.

2.b Neapolitan waters description deepens into the history of the Sebeto river and its disappearing. The maps showing the reconstruction of old urban water streams confirm the existence of a river whose mouth was in piazza Municipio. Three dimension constructions show us the gorge into the hill

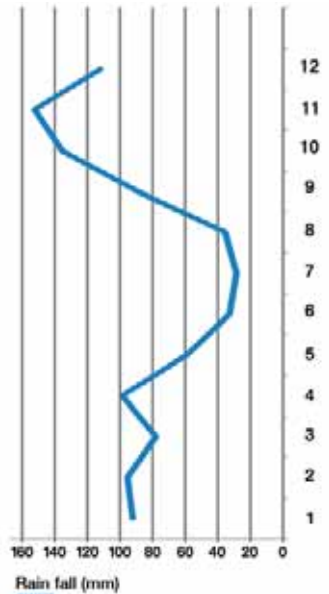


Figure 2a : Rain fall (mm) in Naples during year long (data from Atlante Climatico 1971-2000, Servizio Meteorologico dell'Aeronautica Militare).

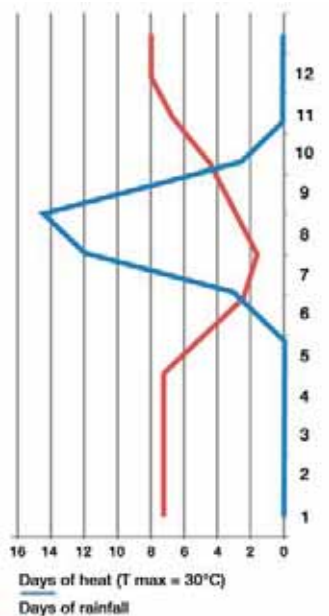


Figure 2b : Days of heat in Naples during year long (data from Atlante Climatico 1971-2000, Servizio Meteorologico dell'Aeronautica Militare).

from where once the “lava dei vergini” (this was the name of this area) used to come, when there was heavy rain and now there is the sewage plant that sometime overflows (ctrl Fig. 5). Literature reports the existence of a river between the two ancient towns of Palepoli, on the hill of monte Echia and Neapolis, where there is the ancient core with Greek ippodameous grid. This river was the reason for settling in the town, where there also was the harbour. Looking toward East, the sequence of ancient engravings representing the old town from 1560, shows a water course, whose waters were used around the walls protecting the town. Later plans assure about the presence of the river, first with a linear bed, then with a braided one, but almost out of the townscape of Naples, in the peripheral area with mills and industries. More recent plans from the XIX century towards the early XX century show how the development of the railway changed the channels network. Today there is a complicated system of canal sewage, completely disappeared to man’s eye, also because the area is full of refineries, to be moved for safety reasons.

Another aspect of the urban water issue is historical rain data; considering the average rate of precipitations and the time scale, while the total amount of rain is decreasing in average, peaks are higher and occur in a very short time with extremely severe conditions, as shown in Fig. 6. This means that plenty of storm water falls in narrow time spaces. More accurate data on year base indicate that major events happen maximum twice per year. As a consequence people forget the damage caused each time and do not consider this aspect in current planning of urban (grey) infrastructures. Around the world, in the last ten years, the design criteria to avoid urban floods have been named in different ways: Water Sensitive Design, Low Impact Development, Green Infrastructures, Sustainable Urban Drainage Systems, Best Management Practices. Although environmental solutions are always relative to places, time and spaces, also for Naples an optimal system would be structured in distribution and discharge of urban waters, designed to separate networks. Naples has many underground cisterns, constituting the ancient Greek and Roman aqueducts and the caves in tufa realised to build the constructions upside. Currently the local administration is enhancing the survey of the cave urban system, updating existing maps and the old aqueduct ones, connected with natural sources of drinking water still present in the urban domain. An investigation about a sustainable policy on urban water infrastructures would positively influence the Neapolitan townscape: researching on built

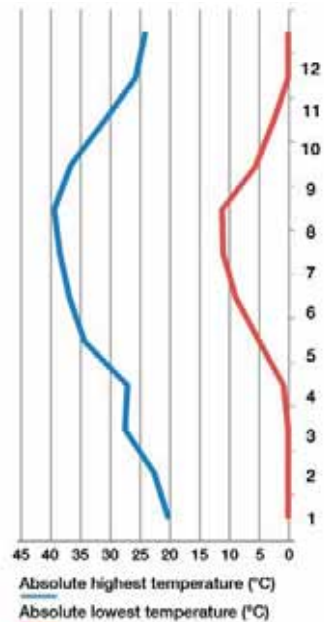


Figure 2c : Absolutes temperatures in Naples during year long (data from Atlante Climatico 1971-2000, Servizio Meteorologico dell'Aeronautica Militare).



Figure 3 : Typical street cross width in Neapolitan historical core.

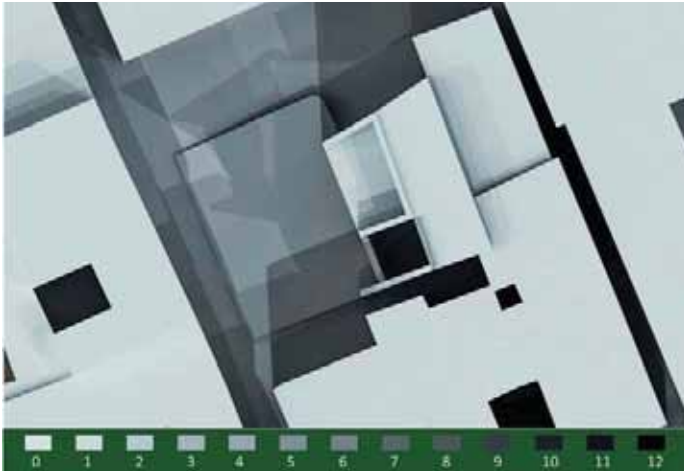


Figure 4 : Solar Protection Map. Overlay of shadow areas during solstices and equinoxes at 9:00 a.m., 12:00 and 4:00 pm. The numbers indicate the layers' sum. (by A. Gionti)

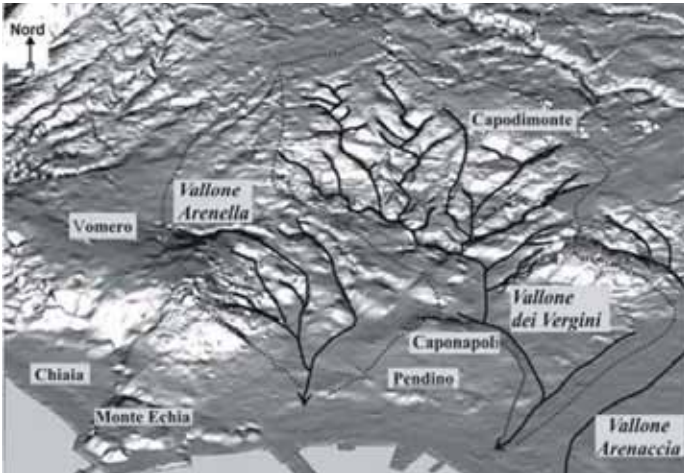


Figure 5 : Ancient Neapolitan Drainage Pattern (by Amato L., Guastafarro C., CinqueA., Di Donato V, Romano P., Ruello, M.R., Perriello Zampelli S., Morhange C., Russo Ermolli E., Irollo G., Carsana V., Giampaola D., 2009. Ricostruzioni morfologiche nel territorio di Napoli. L'evoluzione tardo pleistocenica-olocenica e le linee di riva di epoca storica. Méditerranée 112, 23-3.)

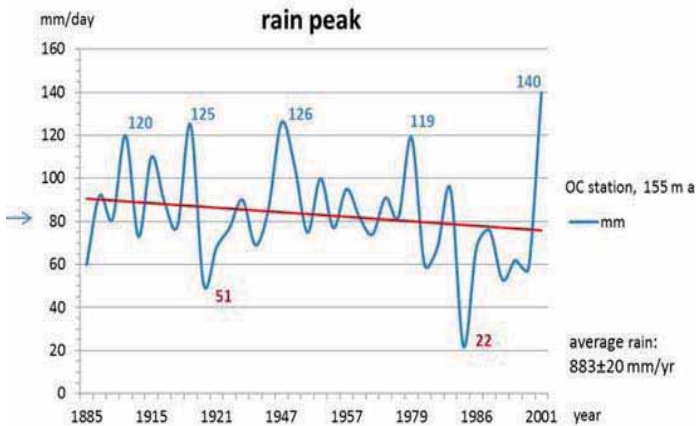


Figure 6 : Rain time scale in Naples (Carlo Donadio, data processing of the Meteorological Observatory of the University of Naples Federico II at the Department of Earth Sciences, Environment and Resources, resp. Adriano Mazzarella).



Figure 7 : Example of stormwater Tree Trench (from Philadelphia Green Streets Details).



Figure 8 : Example of stormwater Planter (from Philadelphia Green Streets Details).

environment details dedicated to water retaining, filtering and draining on site, may develop the designers' tools also at the smallest scale (see Fig. 7 and 8).

The task of the project for new Neapolitan townscape is to envision scenarios related to temporality, adaptive open spaces with high performance surfaces and technologies. Depending on punctual construction conditions some indications could be:

- to study the urban watershed to identify streams;
- to reconsider the role of cisterns in the historical city;
- to revive technologically updated permeable paving in use centuries ago;
- to improve smart façades;
- to improve the use of vegetated roofs;
- to consider sidewalks with green street construction details, useful to collect, detain, filter, drain and infiltrate rainwater on site, while increasing the amount of urban vegetation.

2.c Currently, the vegetation in the parks of Naples is far from the core of the town. Green coverage isn't perceived in the centre and the small quantity of plants is hidden in cloisters, still owned by the church or by institutions. In spite of difficulties due to ownership issues, these precious resources could be important points of the special green network infrastructure to be highlighted, connecting open spaces, courtyards and cloisters.

The settlement aspects conduct to materials and construction historical layering, from the geological characteristics of local soil to the townscape. The materials are tufa, piperno and basalt, that have influenced techniques and shapes suitable to masonry construction tradition. The bio climatic behaviour of old masonry buildings with large walls is suitable

to maintain the indoor temperature and the need to design in order to avoid HVAC, by using natural cooling systems for ecological and economic reasons. Porosity, multiplicity of thresholds and undefined boundaries of open spaces are the most typical archetypes of Neapolitan built heritage, creating pleasant hybrid in-between places.

3. Naples Responsive Environmental Design

Contemporary environmental design is based on the concept of adapting to change, may it be natural or brought by the action of men; each context calls for a confrontation in which the designer expresses his own approach. The matter proposed during the workshop is how/what architecture becomes when it is adaptive and even if it is right to be adaptive.

The definition of adaptation describes when something existing changes to become suitable to a new or special situation. In design there might be adaptation during project phase, meaning the designer has adapted his/her attitude due to the place, or we might have adaptation of the building or the site during the usage phase. In the second case there could be foreseeing by the designer or causality or even participation by users. Following the biological metaphor for adaptation, we observe plants, animals and their transformations, the mimesis, distinguishing growing among other possible habits. In 1982, Stephen J. Gould and Elisabeth S. Vrba introduced the difference between the concepts of adaptation and exaptation. In the latter an advanced character for a particular function takes on a new function, independent from the primitive one: an example are the feathers of birds, evolved from dinosaurs presumably for thermal insulation purposes which later turned out to be useful for flying. If not all the adaptation processes are predictable, organisms have genes that work just when solicited from specific context conditions.

The idea of an architecture that evolves in the sense of being performative, giving more benefits than the formerly imagined ones, being suitable to changes, is fascinating. The adaptation recalls also Andrea Branzi's theories on deciduous architecture, stating how the contemporary condition flows over a stable definition of needs, uses and behaviours favouring the concept of a transformable and evolutionary architecture.

Considerations about adaptation concern also the scale at which the project can be adaptive; there is physical and time scale, considering where and when the transformation takes place. The physical scale pertains levels from planning



Figure 9 : Small scale historical water infrastructure detail: stone grid in the cloister of the S. Martino Chartreuse (photo by author)



Figure 10 : Detail of the façade of the Church of Gesù Nuovo (photo by author)

to detail project. On the other hand the time scale regards differences between geological and historical eras down to minute intervals. What is interesting about scale, as well as difficult to pursue, is that the environmental project has to be telescopic in the sense of inter-scalar, as Pierre Belanger explains [11]. The infrastructures recovery is one of the typical fields of research where the effects of transformations must be imagined at multiple scales, of the context [12]. By considering a dynamic landscape, meant as framework, we have the social, the historical and the environmental context. By applying these considerations to the territory of the town of Naples, the adaptation could fit:

- in the historical centre, meaning relationships with history, restoration, microclimate and new flows and functions;
- in the post WWII areas, meaning relationships with durability and features of building techniques and relationship with the climate;
- in Naples post-industrial areas, meaning the research of new senses, functions, the refurbishments of buildings according to climate conditions as well as new flows and functions.

From the environmental point of view, responsive context and design proposing an architecture which reacts to light, water, wind, temperature, steam, artificial materials. Naples Responsive Design considers local specific solicitations and their corresponding project attitudes, especially on the historical centre themes proposed in the international workshop.

For the occurring of earthquakes/eruptions, bradyseism, new coastlines and transformations due to the geological asset, the strategies are building thinning, housing density reduction, adaptation of anti-seismic structures, floating equipment design and amphibious coastal environments.

To contrast the ground saturation and the impossibility to build new constructions, due to the density reached along centuries of settlement, beyond thinning and reduction of density, it is necessary to focus on the recovery of existing building materials and the interruption of soil consumption.

To face bioclimatic data and trends, due to climate change, widespread retrofitting projects for energy efficiency, passive cooling, use of renewable energy sources, rainwater and infrastructure management, flood control and shortage of supply are indispensable, in addition to recovery and to the sustainable management of local water sources.

Although this somehow contrasts with some iconography of Mediterranean architecture, based on a very friendly climate favouring life outdoors, responsive design in Naples leads to the idea of a continuous breath of the architecture and a

11. Pierre Belanger, "Synthetic Surfaces", in Waldheim, Charles. 2006. *The Landscape Urbanism Reader*. New York: Princeton Architectural Press.

12. Renata Valente, Mariachiara Catani (ed. by), *Around Urban Highways Connections and Studies for Environmental Reclaim*, Alinea, Firenze 2008.

live relationship with the context. The accent is then on the *threshold*, space of connection and mediation as stairways, balconies, terraces, loggias, porches, greenhouses, accesses [13]; places of interscalarity from geographical to domestic, transits between outdoor and indoor, mediation and filter, in-between spaces amid public and private, light and shadow. Everything may help to stratify the façade as a complex device.

These topics were already central in Luigi Cosenza's work, particularly in casa Oro, in the house in Positano, or in the Olivetti factory, where he samples the relationship between man, nature and environment, defining the Mediterranean loggia as the magic room outdoor that has the landscape as a wall. He suggested to recover the relationship with nature through three complementary ambits: covered and uncovered spaces (closed or open); external spaces (limited or unlimited).

Referring to "the only formal composition issue of inner and outer space, as it appears in the succession of time", the last sentence introduces the fourth dimension of time, and the attention to its perception. This technological architecture approach might be defined like Cosenza's climatic architecture, where the composition of volumes on empty spaces protects from climatic variations according to a colloquy with the environment, the starting point of the project [14]. His interest on the open stairs and the spaces of the dwelling, witness his idea to use tradition but developing it for the contemporary, being suitable to definition of refined adaption. In the Neapolitan context he proposed entrances of houses through sheltered green open spaces, by creating loggias with bioclimatic benefits. Also the automatic breathing of the Olivetti façade reacts to climate by opening windows, and by shading to defend it from heat.

The Neapolitan context also confirms Jan Gehl's theories, who refers to the threshold as "soft edge", stimulating place where the most interesting things happen. From the constructive point of view, the technological aspects of the threshold go from the hardest until the most immaterial ones: its new requirements [15] are transformability, ability to provide renewable energy sources and to produce a new participatory relationship. The design experience had during the International Workshop confirms the interest toward borders for connoting public spaces, capturing attention for new textures and performances in projects.

13. Cfr. Salvatore Cozzolino, Françoise Klein, Marc Streker, Renata Valente (2013), *Threshold/Seuil/Soglia IWS 2012*, Firenze, Alinea Editrice, pp. 176.

14. Manfredo Tafuri, *Storia dell'architettura italiana 1944-85*, Torino, Einaudi, 1986.

15. Salvatore Cozzolino et alii, 2013, *quoted above*.

Special frameworks

The reflection and design on the ancient centre of Naples invokes debates that never soothed on different methods and approaches. Personal conviction is that the power of historic stones and the high density of use, impose an approach of silent pause of construction. The voids created in the constructed fabric offer opportunities for thinning, decongestion, air, light, green, soil, water and aggregation.

The semantic, historical and social charge needs no new stratification but a suspension. It is therefore worth highlighting what there is taking care of the quality of relationships between inhabitants and the context itself. Consulting foreign colleagues and their projects has meant being sure of the appropriateness of proposing a light or immaterial superstructure that exalts the existing, not always known and often unusable.

Along with the cultural trend of reclaiming European historical centres, from the 1970s, the occasions for using sites with events of varying lengths have been multiplied, activating research on projects that meet these needs. In 1999 Manuel Gausa [16] described the evolution of architectures of “precarious time”, provocatively distinguishing them in 1. Impermanent, unstable, fragile and low impact architectures, 2. Removable industrial products, 3. Spacecrafts deposited without connection to the site, 4. Camouflage and tactics without edification, 5. Emergency architectures, 6. Ephemeral objects, 7 Lights and virtual architectures [17].

Following this historiography of the ideology of “fleeting technology”, in those years the concept of dynamism in open space architecture expresses the will to not link with the place and limit the performativity at the short time of the event. The reference was Michel de Certeau’s “tactic of weakness”, exploiting contrast and surprise effect, referring to the nonlinear time and reversibility. In misaligned parallel with the system of production objects, architecture fascination was due to impermanence, non-involvement with the site. The architecture of the event made its weakness a resource to operate in the cultural and productive scene. Pointing to environmental and social efficacy, today we reflect again on the methods of researching the relationship with the site, to update as expressed by Andrea Branzi’s theories [18] on the proposal of reversible solutions. For these reasons, our group proposed the recovery of voids: to meet new needs dictated by changing scenarios, students were urged to projects that govern the various configurations over time, using lightweight and dynamic construction systems, enabling editable and reactive micro-buildings. Where the stratification of open

16. Manuel Gausa, *Tiempo fugaz, tiempo precario*, Q 224, Actar ed., Barcellona, 1999.

17. *ivi*

18. Andrea Branzi, *Modernità debole e diffusa. Il mondo del progetto all'inizio del XXI secolo*, Skira editrice, Milano 2006.

space equipment can be integrated into existing volumes or frontiers, this new high-performance integrity must be fuelled by renewable energy to avoid using binding equipment to physical infrastructure, which determines constructive and maintenance entropies [19]. The development of this language can form spaces rich in perceptive and interactive stimuli, contemporary agoras that create new cultural identifications. We defined these new spaces that we wish for the city as performative [20], that is, predisposed both to provide direct performance and to produce a participative relationship between users and the place, to become aware of social and/or environmental dynamics [21].

The group's objective was to urge these principles into the students' projects, burdening them beyond the strength of their young shoulders. However, accepting the challenge in dealing with such a high complexity of places has made everyone feel more reckless but, in the end, very proud. The rest was generated by the extraordinary scene of the city of Naples.

19. *ivi*

20. Cfr. Renata Valente, "Spazi aperti urbani ad intensità prestazionale", in Antonio Bosco, Sergio Rinaldi, Renata Valente, *Strumenti per il progetto di microlandscape urbano Design Tools in Urban Microlandscape*, Alinea editore, Firenze 2012.

21. Cfr. Renata Valente, "Spazi aperti urbani performativi", in *Mediterraneo tra mito e risorsa, Il progetto sostenibile*, Milano: Edicom edizioni, n. 26/2010.

Design for services and mini-ecosystems of culture

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Metaphors for Naples

The ways in which the inhabitants of Naples relate to the built city, to the landscape and to the dimension of sociality, have historically struck those who above all saw the city from a different point of view by geographical and cultural belonging [1]. So a well-known metaphor for Naples was expressed by Walter Benjamin, and it is at the same time about a physical and abstract feature: "Porous as this stone is architecture. Structure and life continually interfere in courtyards, arcades and stairs. Everywhere, vital space is kept, that can accommodate new, unpredictable constellations. The definitive, the characterized are rejected" [2].

Massimo Cacciari interprets Naples as an inseparable set of men and stones, whose social and architectural form is never "thought forever"; he sees a very close bond between nature, life and architecture; between morphology, influential landscapes and climates that affect a fluid way of living between the interior and the open spaces. Its traditional architecture is largely tufa, something more than a local material. Tufa for numerous buildings in the old town was extracted directly from the quarries underlying the building. So the positive of the construction refers in perfect coincidence to its negative in the subsoil [3].

Naples is among the few cities of its size and quality of architecture still lived in by its native inhabitants. In the Naples described by Alfred Sohn-Rethel, churches become places for everyday life with poor mothers who use mass for breastfeeding, while the devotion of saints punctually expands throughout the city; on hot summer days beds are taken outdoors; an overheated marine engine can be used to boil the coffee pot, and in general any technical device may

1. Cfr. F. Ramondino, A. S. Müller, *Dadapolis. Caleidoscopio napoletano*, Einaudi, Torino 1989.

The book collects texts about Naples by poets, writers, scholars, philosophical artists or travelers who have observed the city at different times and from different points of view.

2. W. Benjamin, Asja Lacin, *Immagini di città* (1924), Guida, Napoli 1970.

3. On these themes, cfr. C. Velardi (edited by) *La città porosa. Conversazioni su Napoli*, (Cronopio, Naples, 1992). Specifically, interviews with M. Cacciari "You can not massacre Naples!" and F. Venezia "The desert, the body, the subsoil".

find completely unrelated uses to the function it is destined for [4]. Ernst Bloch extends the idea of porosity to the whole of Italy, whose Baroque character is not absence of form but rather refers to a different, deeper form that does not exclude elements of chaos [5].

So we come to the second metaphor: Naples is a colossal *sponge* lying on the sea, which does not tend to solve its problems through macro-projects. Unable to reduce or cancel the complex of tensions and conflicts that animate it, it often ends up assimilating, almost feeding on them [6]. Beyond any rhetoric that these visions can give rise to, it is undeniable that historically the city has played a role as a “sponge of cultures”, syncretically crossing different influences; in the past as today, Naples has distinguished itself for a tendency to ethnic and religious tolerance, for the ability to have sacred and profane coexisting, as well as a general vitality in spite of serious problems. The coexistence of different ages is clearly visible in many churches in the overlapping layers of later decorations, finds that juxtapose Greek-Roman traces up to the Baroque intervention. All these features make Naples a city that has rejected Modernity in its orthodox version above all in the sense of a net fracture with the past. Naples is then post-modern ante *litteram*.

Visions of the conservation / innovation binomial

For some cities characterized by complex situations of economic and managerial difficulty, the particular quality of architecture and the environment, being obviously a great value, also implies a risk of immobility. Slowness in making decisions, uncertainty to proceed in the direction of a planned and coherent change, have historically been a major problem for the city of Naples when it faced the fast technological and social mutations of modernity without being able to keep up. The achievements the 50s and 60s of the economic boom, with the often indiscriminate construction, the structure of the Centro Direzionale completed in 1995 on a project entrusted to Kenzo Tange in 1982, represent for Naples episodes that more than accomplishing Modernity misinterpret its spirit in different way. The truth is that the city was not able to implement, over time, the coordinated strategies of modernization and innovation consistent with its historical identity.

The case of Lamont-Young, the eclectic Anglo-Neapolitan architect, engineer and town planner born in 1851, is now emblematic, though today we consider him much ahead than his era. His visions at that time appeared utopian, but we read them today, after more than a century and a half, as the roads that in a perspective of concrete development –

4. A. Sohn-Rethel, Napoli: *la filosofia del rotto*, Carola, Como 1991, pp.18-19.

5. E. Bloch, Italien und die Porosität, (1925) in *Werkausgabe*, Suhrkamp, 1965.

6. Cacciari, quoted above.

which we would define today as “sustainable” - should have gone through the city of Naples. Though fervid admirer of the possibilities of the technique, Young was instead accused of being a visionary but conservative because he was sceptical of every purely industrial vocation of the city and towards interventions he believes were distorting: he refused both wild fire spreading and the ravaging of its old centre.

Strongly convinced that mobility was the key to the development of Naples, in 1872 he proposed his first underground line of Naples and many other integrated solutions that included lifts, escalators, funiculars; thus also realising the vocation of Naples to “vertical mobility” and to small interventions in accord with orographical detail, alongside those of a wider scope; he designed the “Venice district”, from Santa Lucia, along the Posillipo coast, supposed to connect Naples with the Campi Flegrei, bulding with excavation materials for the underground [7].

His vision of Coroglio-Bagnoli, on the Western edge of Naples, is that of a place with great potential for tourist development with large green areas, thermal and bathing establishments, low impact construction, sports facilities and hotels; but he also saw it as the pole of scientific and technological innovation, promotion and material culture (both as art and local craftsmanship and industrial production) that he wanted to place in the great *Crystal Palace*. Beyond its architectural form, today we can read it especially in adherence to its name: a great “window” to finally help Naples to systematize and communicate its identity to the world. A centre of direct cultural exchanges between scientists, technicians, artists and ordinary people: conferences, music events, restaurants, theatres, cafés and art galleries, greenhouses, exhibition halls, crafts museum, industrial museum [8]. At the beginning of the 20th century, instead, Bagnoli-Coroglio started its industrial destiny, with the construction of steel mills, followed by the Cementir in the mid-1950s. The area, dismantled for decades, has been de-industrialized and reconverted since the 1970s. The recovery still going on today, goes exactly to what Lamont Young had already imagined at the time.

This episode leads us to understand how, for Naples, modernization came more in conflict than in synergy with the great environmental and landscape quality; with the potential of its historical architecture; with its fabric of artisan production and with its general artistic and cultural inclinations. Although the city needs an in-depth innovation that goes hand in hand with conservation, its great qualities rather than making a system seem to condemn it to paralysis.

But what design strategies could be the most effective for

7. Cfr. monograph by G. Alisio, Lamont Young. *Utopia e realtà nell'urbanistica napoletana dell'Ottocento*, Officina Edizioni, Rome 1984.

8. Fondazione Idis – Città della Scienza has been looking for years in the same place and with great effort to drive this vision forward. It has designed and manages a museum of excellence in the disused industrial area of Coroglio-Bagnoli. It endured almost complete destruction, on the night between 4 and 5 March 2013, of the original structure of the Museum of Science. The project of the City of Science was realised in the early '90s in the area once occupied by the steelplant of Italsider and is a positive example of conversion of the territory through the creation of a scientific and technological pole as lever for development.



Figure 1 : G. Matta-Clark, Conical intersect, Paris - Les Halles 1975

Naples today? Young, beyond the specific case, has also shown us that sometimes it is about developing a different “eye” to look at the problems.

To give some insight into this, we can look for reference in other moments and cultural contexts. We think of Gordon Matta-Clark's work, with his experimental and provocative efforts on what was erected in Paris as in New York. In the context of the 1975 Paris Biennial, while the *Centre Pompidou* is being completed and the subsequent restructuring of the Parisian neighbourhood where it rises, Matta-Clark completed his work *Conical intersect*. Through the ravaging-joining of two contiguous 18th-century twin buildings - in phase of demolition - Matta-Clark made a conic “hole”, a sort of periscope aimed at the city. Thanks to the conical section of the cut, the viewer could observe, as with a *zoom*, the historical Paris compared to the new and modern one.

Looking at a design project we can better understand the spirit that animates *Conical Intersect*: Matta-Clark builds an “eye” that from the inside looks at the open space of the city. It is neither an apology of destruction nor a defence of conservation, but a different way of looking at things.

Matta-Clark challenges the idea of a fixed space, linked to the traditional concept of architecture. Instead, he opens up the space built to the idea of *transience*, to the dialogue with weather and light, and above all to the concept of “situation” as the true essence of the city. It is the rejection of the modular residential space, enclosed and hard, that transforms inhabitants into prisoners, and that Modernity on the one hand avoids but on the other presents in new forms. Around 1974 Matta-Clark performs another series of operations later named *Fake-Estates* works. He buys non-building areas in New York, spaces between one building and another without real commercial value; fragments of cities apparently devoid of any meaning.

But the sense in his artistic provocations in Paris as in New York is shown in the central theme of this workshop for Naples: after about 40 years the theme of the *urban fragment* and its reuse, between closed and open spaces, is one of the key words [9] for IP workshops.

Loosening the knot between immobility, conservation and innovation necessarily requires a new eye, new design visions. The City of Naples in the current historical phase has a disused estate of public property, which the Administration is activating functional recovery policies for, trying to involve society in this process. The role of the project is not marginal in imagining and making light, sustainable, economically viable interventions from a management point of view as well.

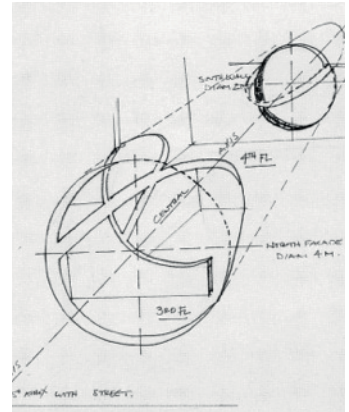


Figure 2 : G. Matta-Clark, *Conical intersect*, Schizzi di studio.

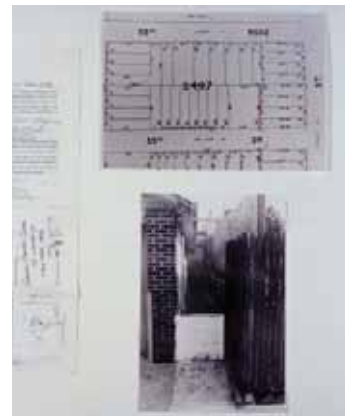


Figure 3 : G. Matta-Clark, *Fake-Estates*, 1974.

9. On the analysis about Matta Clark cfr. S. Walker, *Gordon Matta-Clark: Art, Architecture and the Attack on Modernism*, I.B. Tauris, London-New York 2009.

The IP workshops have worked exactly in this direction.

A “visceral revolution”, according to Andrea Branzi, is the condition of the contemporary city: the conception of the city, made of architectural boxes, is no longer suitable for centring what is today’s predominant dimension: another less visible and less represented city but more extensive and vital, made largely of intangible services and providing emotions, goods, information [10].

Most importantly, it is necessary to reuse what already exists in the city, and so the key-word *innovation* is tightly linked today to that of *reuse*. We are in a situation in which it is crucial for the functioning of the city to design environmental micro-systems, flexible or temporary architectural subsystems; thus promoting urban metabolism that generates an objective and technological system that “allows the city to continuously adapt to new functions, recovering disposals, transforming large and small containers and redefining its internal functions; taking over entire urban areas and adapting them to new markets.” [11] This type of post-industrial logic appears to be consistent with that resistance to a modern *orthodox modernity* in Naples.

Continuously renewing the multitude of micro-structures that provide a truly habitable artificial environment, thinking of these transformations according to sustainable logics is one of today’s most important tasks for design discipline, meant in its *industrial design*, *interior design* and *set-up* declinations. But starting from the world of urban set-up means first dealing with *new services*.

The contemporary project must take account, as Italo Rota states, of an irreversible figure, which is the end of the ideal man and ideal architecture [12]. But in Naples the concreteness itself sometimes seems to have been mistaken for utopia.

Light and reversible intervention tools: design for services

A *design of ante-litteram services* is contained in Hannes Meyer’s definition: “The architect is a specialist in organization,” he wrote in 1926. Design for services is above all a dynamic of innovation today: thanks to this method, design becomes the tool for conceiving user-centred services, on the real person, on concrete social needs.

Design for services includes both intangible and material artefacts [13]; but it means above all collaboration between creative figures of different disciplines. A designer working this way must be able to express himself through all media; freely cross all formal disciplines. In doing so, it is normal to experience

10. “A city made of internal spaces, immaterial experiences, micro-projects, and environmental subsystems, which do not have an external form altogether, but are like the bowels of a body that can not be seen but are the places of an intense endocrine production that in fact nourishes the development and vitality of an organism” .

A. Branzi, *La rivoluzione viscerale*, in “Domus” n. 897, November 2006.

11. A. Branzi, *L’allestimento come metafora di una nuova modernità*, in “Lotus” n. 115, December 2002.

12. A. Branzi, *L’allestimento come metafora di una nuova modernità*, in “Lotus” n. 115, December 2002.

13. On methods and implementation of design for services cfr. A. Meroni, D. Sangiorgi, *Design for Services*, Gover Publishing, 2011.

interference with architecture, strategic design, interaction design, social design, urban design, visual communication, and experience design.

Design for services also overcomes the traditional project hierarchy, expressed by the famous slogan of Nathan Rogers “from spoon to town”. Without forgetting a global ecology of the project, it is to be noted that in design practice the city is best interpreted today, according to Branzi, as “a sum of spoons”; its transformation can start from small, feasible solutions, to be put into system.

Design for services acts on the *exploded frontiers* that traditionally limit the different levels of the project: these are the cultural boundaries of the perception of the object as mere object of consumption or object of art; from the separation between home, public and private space; of the conception of the body and the social set of people as the foundation of the urban dimension; but at the same time as the centrality of the virtual connection [14].

The project can act on micro-spaces and fragments of cities, use light and reversible intervention tools. But also stand from the point of view of the experience design, consider closely the real situation of the city use, that is, the inhabitant immersed in the city with his body and all five senses, the variability of the micro-climate conditions of the places, the interactions with the mobility systems, the visual reference systems and the role of information. Summarising, we can therefore point to two priorities.

Designing time: reflecting on the life cycle of artificial systems (buildings or simple objects); preferring eco-sustainable materials; adopting diverse strategies; designing light, reversible and impermanent structures or rather thinking of the longevity as a quality.

Mini-systems of culture: physical spaces and immaterial organization

If we imagine Naples as an *ecosystem of culture*, this is made of objects, but also of images, sounds, smell and tangibility. In other words, communicative and sensory artefacts. The city of Naples is rich in cultural activities, with famous and historical places as well as prestigious theatres. But it also represents a productive forge of mini and micro cultural activities, constantly born spontaneously and giving urban life a surplus of vitality and energy.

On the other hand, we have a physical structure of the city dense of forgotten spaces, interstices and fragments, with a potential use value; public places often resulting under-used, usually for management reasons.

There is no integrated project yet to reconnect these potentials, re-qualify the spaces for their use, and at the same time promote knowledge and propagation of autonomous and spontaneous

14. If for Branzi “The city is a computer every 20 square meters”, Italo Rota reminds us that “The city today is made by the bodies of humans, the landscape is made by the mass of humans, and we all make up a landscape. This landscape is made of us, wearing our clothes which are the fabrics, the colours, the shapes, and not by chance today the greatest form of expression is fashion: but fashion today builds the shape of the city; if you go East where humans are far more numerous than here, you only see humans” .

Cfr. “La città è un computer ogni 20 mq”, in A. Branzi, F. La Rocca, *Scritti presocratici*. Andrea Branzi: *visioni del progetto di design 1972-2009*, FrancoAngeli, Milano 2010. (partially published in “Interni” n° 571, May 2007, with the title “La scrittura d’architettura”). I. Rota, *La fine dell’uomo ideale*, quoted above.

cultural expressions; design for services is the discipline that by its nature has the tools to play a *leading role* in this regard.

In recent years, the city administration has been very interested into the reuse of built heritage for new uses. Spontaneous organizations of citizens, collaborative networks among the various associations, try to help better define a “system of culture” that has coordinated strategies and also includes small initiatives [15]. Social co-operation, the involvement of civil society associations in the cultural field, listening to the users’ needs represent another important aspect in the strategies of design for services heading to *social design*. This attention to participation from below is, after all, a living and growing phenomenon in Neapolitan society today.

Moreover, in the last years Naples has been a city of openness and integration between peoples and their cultures. Just as the rising of fast foods and restaurants from the Middle East, Africa, South America and anywhere else, promoting and spreading the different cultural expressions, such as music, of the many ethnic groups that now live in the area would be an element of cultural enrichment and social integration.

Offering an adequate system of places, small spaces that can house mini and micro-cultural activities, of which the city of Naples is incredibly rich; promote integrated growth, increase social interaction opportunities and economic development. The theme of the IP Workshop “Mini-Ecosystems of Culture” sprang right from these general considerations. The aim was to develop small case studies, experimenting the development of a city space in service of cultural activities that exist on the site – at an early stage or already with their own strength.

With light and reversible project interventions, some spaces can become barycentric for the promotion of cultural activities that insist on a nearby area. Small temporary structures, mini interventions of street furniture - even just the appropriate lights - may be decisive for liveability; as well as information systems integrated in spaces according to different logic than those of old signage, oriented, for example, to a new *psychogeography*, of a Situationist matrix. These strategies, which can be realised in material or immaterial artefacts, would be the true amplifiers of local culture.

Connect physical spaces and immaterial organization: this is in summary the adopted keyword. The design of the services is configured as a *positive virus*: a non-invasive strategic project, but it can determine a series of chain transformations. One can imagine a micro system of ethnic music, Neapolitan poetry, literature, theatre, and so on, or a mix of these activities, united by placement in a given area.

An important tool in the workshop was developed, albeit only at

15. In particular, the Association “Vivo a Napoli” - chaired since 2012 by Emilia Leonetti - defines as its specific objective, also stated in the Program Manifesto, to overcome the logic of fragmentation, to develop a more organic system of culture as leverage of a profound change: “We live in Naples. A beautiful and tiring city, where everything seems to be more difficult and unlikely. A city that has always produced culture and loves culture, but it fails to make culture a factor of ethical, social and economic growth. The many valuable cultural initiatives that animate the city are lost in a thousand fragments. To overcome this fragmentation, we want to build, together with institutions and operators in the industry, a path to create a ‘culture system’ which may become the heart of a new development model that can help revive the city.” See website: <http://www.vivoanapoli.it>

a concept level is a *digital map of mini-systems of culture*. A new topology system showing in each area of the city and day-to-day, ongoing or planned cultural activities, privileging the smaller and lesser known ones. A system that can naturally be opened to the intervention of users and different parts of the territory, thus constituting a highly collaborative tool.

Through different filters (for example: 1. type of event: music-theatre-cinema-literature-gastronomic event; 2. reachability: display of available means of transportation; 3. free events; 4. location pictures etc.) information makes it possible to make visible together a series of activities, places, and occasions of meeting otherwise unconnected; by encouraging the various operators in the area to standardize their respective activities.

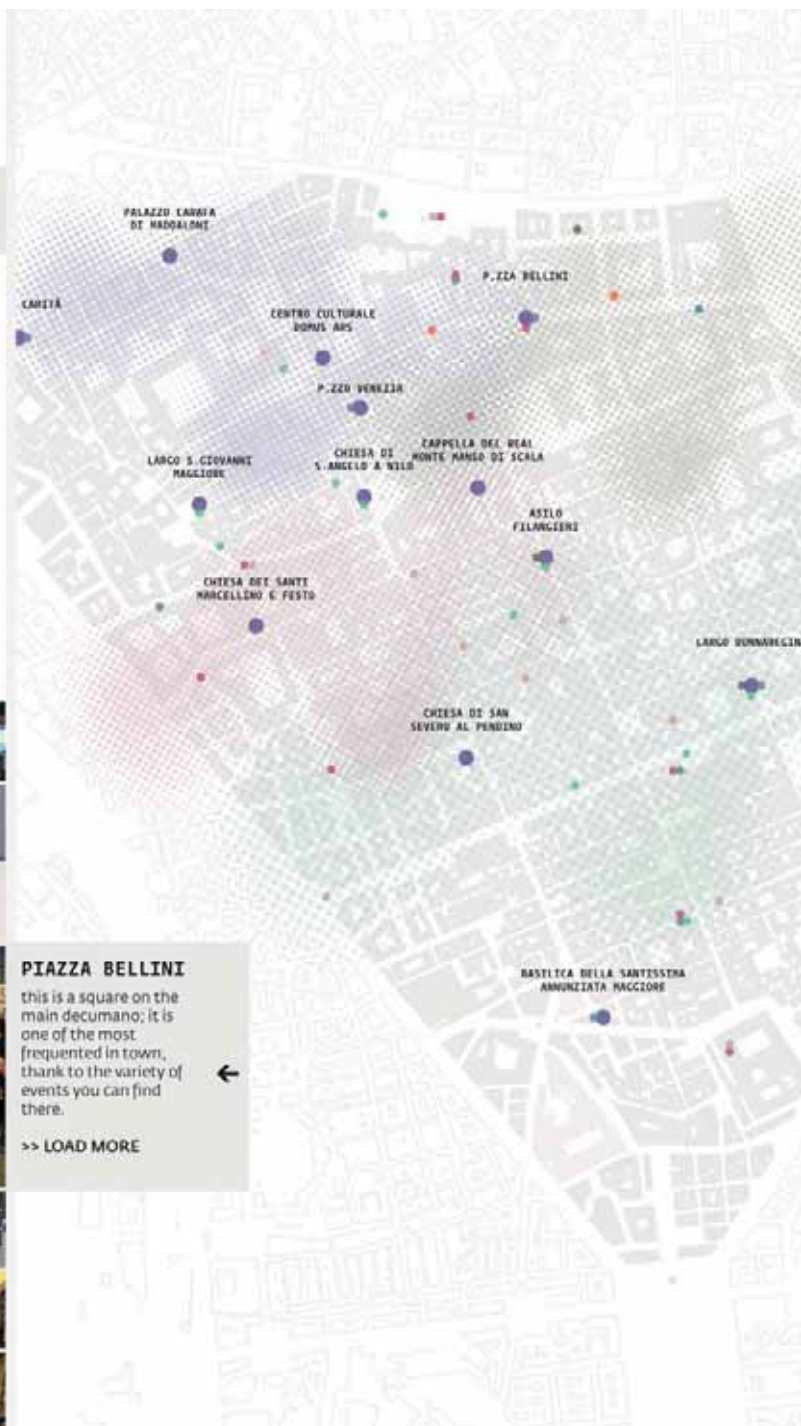
Once completed, this topological digital map would certainly be positively crowded with events, for a city that is usually chaotic and negatively asphyxiated by traffic. But it might help make the former better known, then more orderly and usable, that aspect of *creative chaos* that, as we have seen in the initial metaphors, connotes the spirit of Naples.

A project of design for services supporting the mini-systems of culture could thus represent a non-indifferent flywheel for the development of Naples, in terms of liveability, social integration and tourist attractiveness, particularly for a younger audience.

Imagining today, the Lamont Young Crystal Palace, it would never have the features of a building. We could only think of it as a *punctiform* and *widespread* system that involves the whole city; interpret its *transparency* as a social sharing, promoting creativity and innovation, including cultures and citizens, opening Naples to an international scenario. To realise the spirit that enlivens the Crystal Palace we should use the best we are provided with today from the dimension of the intangible connection and at the same time take care of the “material” city: imagining that every little place, as unknown or “opaque” may be, would represent a small ideal crystal that could gleam again.

CULTURE ECOSYSTEM

- Music
- Visual Arts
- Literature
- Theater
- Events
- Landmarks
- Institution



PIAZZA BELLINI

this is a square on the main decumano: it is one of the most frequented in town, thank to the variety of events you can find there.



>> LOAD MORE

Formative Training

Salvatore Cozzolino

Università degli Studi della Campania Luigi Vanvitelli, Italy

Workshop teaching and experimental theses, but also the proposals of project seminars, generally include a large amount of imagination, if not visionary unworkability. Even the work of the Erasmus Intensive Programs groups does not evade this scheme and brings back up the obligation to decide which one is the right filter to select the outcomes and on what basis to argue the judgements [1].

In this case, the complex history of the Ancient Centre of Naples, the orographic variation and even the shameless habits of potential users of graphic motions, complicate the original project, where each one asks at least the fundamental question: to answer the briefing of new arguments and correct declination of techniques, or throw their heart “beyond the alley” and engage in an imaginative revolution of places without functional validations so to reach original postulates?

Choosing an evaluative path at this juncture is not easy, neither is the design discipline unanimous, alternatively establishing the prudent belief that creativity should be rewarded if moderated by its relevance to utility, or rather to promote the more artistic, brilliant, original, albeit far from any common sense.

The reckless relationship between the amount of utopia and the degree of feasibility of the proposal has engaged designers, especially architects, for at least a century, but it hasn't always been this way. When Filippo Brunelleschi lost his first design contest, these were the tiles of the north

1. R. Valente and S. Cozzolino led the group working on the theme “Reconnecting Open Spaces” in 2014 IP workshop; S. Cozzolino and F. La Rocca led the group working on the theme “Mini-Ecosystems of Culture” in the 2015 IP workshop. Carolina Girardi, Anna Chiara Menditto, Enza Tersigni supported both the groups.

doors of the Baptistery of Florence, which were then made by Lorenzo Ghiberti. The giant of architecture and Renaissance art challenged itself with the other authors, besides the expertise of working bronze, for originally imagining figures and contexts, and for having made with extraordinary expressiveness the scene of the "Sacrifice of Isaac" thus overtaking Gothic art and opening the door to the most extraordinary transfiguration of Classical Art. In practice, a discreet mixture of skilful craft and bold innovation, but without provocation.

Conversely, in the twentieth century many authors and even some Masters took the path of artistic avant-garde and solved the doubt with proposals that were deliberately far afield or cynically unattainable or programmatically "manifest" to



Figure 1 : Project from IP March 2014 "Reconnecting Open Spaces". leded by R. Valente and S. Cozzolino.
Street School/Banchi Nuovi Adriano Colussi



Figure 2 : Project from IP March 2014 "Reconnecting Open Spaces" Pixel Path
Danai Plati, Lionel Piette, Melia Abs, Palik Kishichain, Stéphane Massaut



Figure 3 : Project from IP March 2014 "Reconnecting Open Spaces" From the City's Landscape to an Open Space
Anais Velge, Camille Rossi, Gaia Pellegrini, Arthur Laurain

oppose the contemporary habits of discipline. What remains interesting, but difficult, is the third path represented by the solution that can be implemented, but surprising, complete and holistic, but equally primitive, eccentric and unpublished.

In this point of view one can attempt an analysis of the educational experiment of about thirty students, mixed by nationality and concentrated in eight groups on eight themes. Clearly, the proposals are rather diverse and are affected by different geographical and educational backgrounds. Some projects try to “place in system” the blubber of initiatives that burst into the heart of the city, according to a process that we could call strategic design that faces rare material proposals and powerful immaterial communication, places which are totally “empty” like Largo Tarsia (phytomorphism



Figure 4 : Project from IP March 2015 “Mini-Ecosystems of Culture”, leded by S. Cozzolino and F. La Rocca. From Material to Ultra - Material. Rania Faquir, Zena Farhat, Adele Impinto, Isabelle Kern, Gabriele Leone, Rossella Ragosta, Martina Venturelli

and furnishings just sketched to live a truly singular site) and Largo S. Giovanni in Porta, where small musical actions are unfolded and everything is redesigned with light. In other contexts, choices were made, ranging from the digitization of spontaneous urban signs obtainable with parietal projections, to cases where more conventional and luminous furnishings are articulated to rethink the places. A further part of the projects is pushed towards the sustainable declination of interventions as in the attempts of vertical visions of Largo S. Giovanni in Porta and the elementary and modular urban equipment of Largo Banchi Nuovi. Several groups face the subject with a more analytical approach, defining in some cases the space with interesting soil corrugations made of traditional and durable materials. Finally, a good synthesis of pragmatism, dreams and needs is found in the project for



Figure 5 : Project from IP March 2015 "Mini-Ecosystems of Culture". Micro Music
Elena Cioffi, Antoine Daubon, Fabio Mauro, Olivia Paoli, Fulvio Perrone

Largo S Giovanni in Porta, where a system of products for private use in the public space is proposed.

All in all, a positive experience but improvable through a formative and informative integration of the students prior to the workshop, so as to achieve even more aware and structured projects, estimating in advance the grid of evaluative principles. Not to mention that the urban scene project is perhaps the most complex because it involves architecture and design, anthropology and politics, plant and immaterial techniques, history and conservation protection.



Figure 6 : Project from IP March 2015 "Mini-Ecosystems of Culture". Visual Street Art
Louise Brunet, Lucie Louppe, Jane-Lee Montmayeur, Marica Romeo, Marika Russo



Figure 7 : Project from IP March 2015 "Mini-Ecosystems of Culture". Naples Windows
Donnia Azouini, Yordanka Cholakova, Giovanna D'Avino, Federica D'Alise, Germana De Angelis, Karim Najem, PietroPaolo Verazzo.

One Hundred Concerts

Renata Valente

Università degli Studi della Campania Luigi Vanvitelli, Italy

In 1770 Wolfgang Amadeus Mozart spends a period of six weeks in Naples with his father Leopold, being deeply inspired by the cultural environment of the city, which he compares to capitals such as Vienna and London. Several years later the young composer writes to his father:

“I have an inexpressible longing to write another opera and once I have composed for Naples, I shall be in demand everywhere.” [...] “one opera in Naples would bring me more honour and credit than if I were to give a hundred concerts in Germany.”

Dealing with the study of the sustainable project for the ancient centre of Naples, dense in history, monuments, tradition, functions, materials, rules, also involves challenging complex social needs of a special context such as a European urban centre. Concerning different users, residents, visitors, workers, students, artists, volunteers, activists, social needs form the immaterial part of environmental sustainability, to be integrated with those of the urban ecosystem.

With regard to these considerations and to the solicitations coming from the context of study, we have proposed the reflection on some design topics too, also very intertwined between themselves as phenomena involving the users of the town, recalling contemporary trends that involve the Neapolitan centre as well as the BMW Guggenheim Lab travelling from NY, Berlin and Mumbai. The conviction is that these issues should come back to be presented together with traditional didactic contents, to found and reinforce them, linking to the evolutionary processes of society and the world of culture. The repetition of this educational trend in

various parts of the planet bears witness to the renewed era of social participation that reappeared in the second decade of 2000 following a major economic crisis.

Activism (Protester). "It is obvious that all design is design activism. Every design action is a political act that realizes power and authority." (R. Hester) [1]. The awareness of the general value of this statement is declined every time in the context of application: the reuse of abandoned building containers redesigned for the benefit of the community, the revitalization of degraded streets and squares, the recovery of artifacts in poor condition due to the impossibility of expensive maintenance, but also the determination of new opportunities for social aggregation, development of citizenship initiatives and protest against non-democratic structures. Activist design also plays a central role in the mediation with local administrations, being able to help correctly represent sustainable needs and opportunities for transformation [2].

Bottom-Up Urban Engagement. This aspect involves the interest in encouraging the citizens' role at the root of urban change. As a consequence of the approach derived from the previous point, the designers' action inspire social cooperative models, give strength to skills that may fruitfully improve the quality of life of neighbourhoods. Moreover, specific questions coming from everyday living in a place can be highlighted and positively solved by stakeholders.

Participatory Urbanism. Still evolving the previous topics, through a constant process helped by participatory design, people may be supported to contribute and collaborate with city decision makers, as continuously happens worldwide, constructing action processes in which inhabitants responsibly live their own town transformation interventions. Therefore the training of designers must include preparation for these practices with the testing of concrete action.

Collaborative Urban Mapping. The reflections proposed by this group of teachers and researchers [3] all refer to a context whose reading by the user constitutes a gesture of interpretation and project, contributing to building and offering their own narration of the place through technology, beyond inspiration and directions for transformation. The plurality of data and the connected revolution no longer request and designate only a single cartographer, but communities or users, depending on thematic maps. These may concern the presence of vegetation, monuments, meeting places, special landmarks, cultural events. The surplus value is then given by the network of indigenous skills, by interconnection, which enhances the individual event. The overlapping of thematic

1. Hester, R.T. (2006), *Design for Ecological Democracy*, The MIT Press, Cambridge, Mass, US.

2. Cfr. R. Valente (2017), "American Design Activism" in *Techne* n. 14, Firenze University Press, pp. 147-157.

3. Renata Valente, Francesca La Rocca, Salvatore Cozzolino.

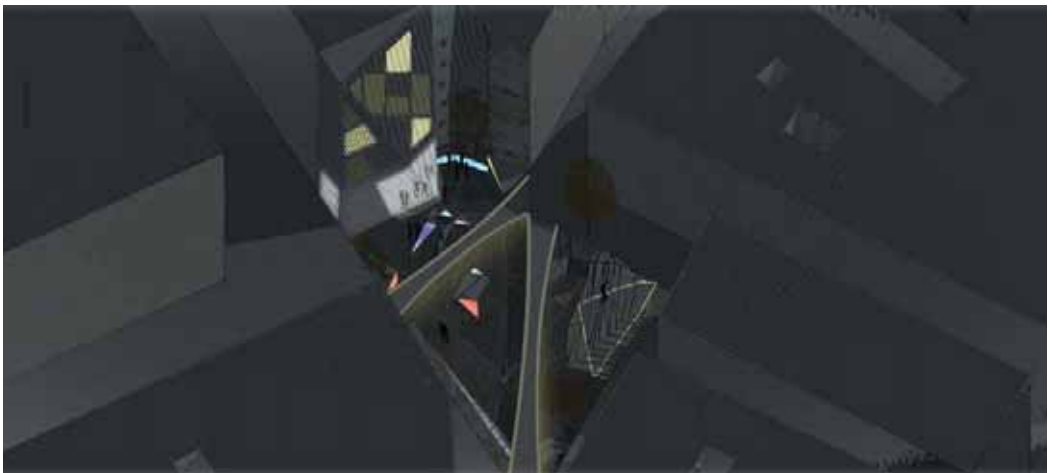
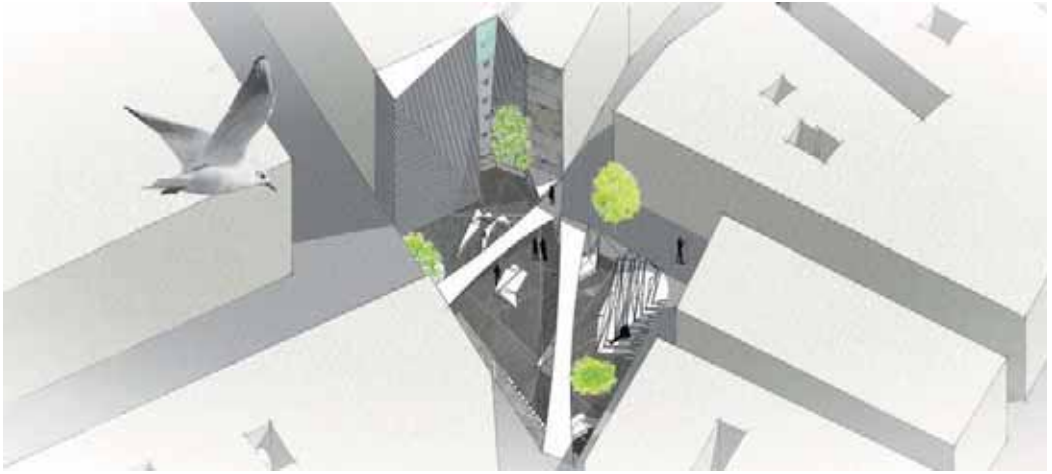
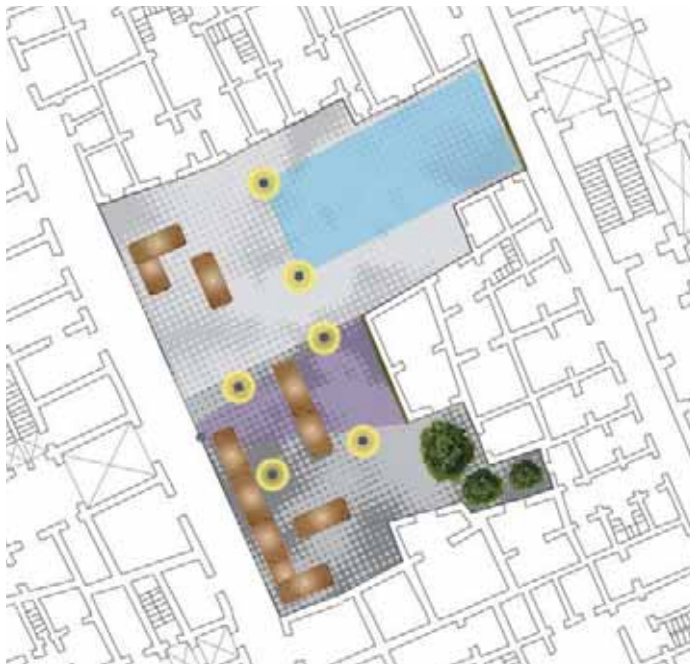


Figure 1 : Project from IP March 2014 "Reconnecting Open Spaces", led by R. Valente and S. Cozzolino. Squilibrio. Clorinda Capozzi, Mathilde Dumonceaux, Camille Micht, Alessandro Zilio.



**LARGO SAN GIOVANNI
IN PORTA**

STATO DI FATTO:

- PARCHEGGIO
- PIAZZA

STATO DI PROGETTO:

- Panche trasformabili
- Area Verde
- Area proiezione
- Area Gioco/Sport
- Punti Luce



Figure 2 : Project from IP March 2014 "Reconnecting Open Spaces" Extenso
Gabriele Pontillo, Roberta Angari, Maria Del Vecchio, Tania Falco.

layers makes the intermittent and dynamic wealth of the mapped places. An example in this sense is the website experiment Mappi-NA [4], exported worldwide from the first experiment on Naples. Meant as an alternative map of the town it reports indications from mappers about sounds, abandoned buildings, undefined spaces, street art, urban furniture, recovered buildings and open spaces, alternative paths, events and visual notes. Another example is the experience of artist and researcher Christian Nold [5], interested in mapping the ways in which people feel spaces and places. Participants in the so-called bio mapping are generally gathered in centres and artistic communities, where they receive a special device designed for the researcher. The instrument combines the GPS system and recording of the galvanic resistance of the skin. A digital camera completes the kit with which the participants take pictures while walking around the area for an hour. In this way maps of the cities of San Francisco, Greenwich, Stockport, Newham, Westminster, Silvertown, Brentford, Paris and Rio de Janeiro were prepared, with the aim of providing for each one, new types of data to rethink public spaces [6].

City Apps. As a consequence of the described approaches, digital technologies offer and even impose new ways to live the town, generating what has been defined hybrid spaces, simultaneously both real and virtual. The aim is the revitalization of spaces, through the re-appropriation of places, abandoned or improperly used. As also indicated in the text by Francesca La Rocca in this section of the book, outcomes of these types, although diversified, may prove useful both at the larger scale in the study of the planimetric recurrences of notations, and in a more detailed examination of the type of observations reported, for an updated categorization of new needs and uses.

The set of themes illustrated contributes to defining the interests of the figure of who has been described as the New Designer, a professional, non-iconic, non-architect, considering him/herself as a catalyst, community organizer, facilitator for organizing space and urban relationships. This is the profile we believe we must form again, but, finally, this is the very old role of the designer, as lately underlined. [7] In fact, the complex interdisciplinary vision required by the avant-garde design in recent decades is linked to cultural positions as Carlo Olmo's one that calls instructors to refer to the culture of the project that the good schools of architecture and engineering share. The concern is that the increasing amounts of technical specialisms distract from the authentic figure of polytechnic cultures, fearing that

4. <http://www.mappi-na.it>.

5. <http://www.emotionmap.net>.

6. Cfr. R. Valente "Pedonalità e Percorsi: confronti internazionali per progetti sostenibili di spazi lineari" in S. Cozzolino, L. Nardi, R. Valente, *Teorie di progetto ambientale attraverso l'Europa, Messaggeri della Conoscenza, Collana Tecnologia e Progetto*, CLEAN edizioni, Napoli 2014.

the multitude of specific knowledge will bring the collective memory of students to imaginations taken from cultures other than architectural. [8]

Such reminder has its serious foundation when it is framed in the current period of progressive extinction of liberal professions, of a crisis in the culture of social responsibility. The solicitation to explain the social and civil function of the designer is therefore extremely appropriate as this profile is in a deep crisis of recognition and reliability. In 1983 in "The Reflective Practitioner", Donald Schoen described the fall of confidence in the profession of the project and the need to recover it through the return to paths of critical and social reflection. He investigated the operative methods, highlighting how, rather than on the formulas studied in books, the skill is always founded on the ability to improvise in practice. In this process, in fact, reflection takes place during the contingent action on the basis of experience as a profound, complex and integrated personal culture.

This composite and humanist vision also refers to the figure of Giancarlo De Carlo, whose professional and cultural history constantly recalls the importance of political militancy, the impossibility of detachment from the central themes of the inequalities of society, from that system of values to which the architectural culture naturally referred to the global scale, up to the advent of expressive personalism and the removal from the social role of the designer. Within the departments of architecture, such positions often do not belong to official programs or in-depth initiatives.

The opportunity for international comparison on methods of approach, reading and design in a context full of different and yet pressing social implications has stimulated all teachers to review their own schemes. The difficulty of sharing spaces full of functions between groups of users with opposite needs has brought attention to issues of social organization, considered not simply parallel to the project issues, but naturally belonging to them. The workshop, with its wide range of contributions, under the pretext of presenting a complex environment like the ancient centre of Naples, wants to represent the aspects to be considered so to become new designers, proposing visions of integrated and complete approaches. The incentives coming from a place so full of agitation and contradictions, needs and potential, have given different and interesting ideas that this book tries to testify. Having faced many doubts and having reflected on these issues together was certainly a demanding test, both for teachers and students: the effort is rewarded by the hope of listening, hereafter, to their "one hundred concerts in Germany".

7. Carlo Olmo, "I don't want a happy cannibal!" in *Domus* n. 1016, September 2017 pp. 15-16.

8. "At both faculties but in different ways, the perception is missing that architecture and engineering are a social production of sense rather than objects, and that in order to be capable of dominating a cultural and production-related dimension that has changed almost by the year, we need to know how to educate people in the critical dimension, in teamwork, in dialogue between relational types of knowledge that are not technical."

Carlo Olmo, *ibidem*.



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 Orsola Foglia, Rita Pastorelli, Angela Tecce.

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Perhaps because it was the last stop on the Grand Tour, surely because its beauty is highly seductive, one cannot remain indifferent to the millennial city of Naples. Naples, where students and professors from urbanism, architecture, architectural engineering and design from Northern and Southern European universities met twice a year between 2013 and 2018 to capture the qualities of Naples's specific territory and respond to the contemporary situation. The first part of the book relates to lectures given by local researchers. The second part concerns the tentative designs inspired by them. The kaleidoscopic result of the plural approaches enables the reader to capture the portrait of Naples, from its historical background and resilience in the face of modern challenges. Again, the proposals at multiple scales and the variety of suggested contemporary spaces evoke Naples's persistence in hosting Europe's historical richness through time, and its great diversity of people and uses throughout space.

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