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Front Pages

Athens Journal of Architecture

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Gregory T. Papanikos
President
ATINER

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The Modern Berlin Block: Spatial Evolution of a Typology through the 20th Century

By Ilaria Maria Zedda[*]

The urban block did not completely disappear from the practice of urban design with the turn of the 20th century and the rise of modernist avant-garde in architecture. Many blocks built in Berlin throughout the last century prove the truth of this statement. This paper retraces this modern development of the Berlin block. Firstly, it presents reformed urban blocks built between the 1890s and the 1930s. Secondly, it summarizes the major occurrences that marked a crisis of the spatiality of the Berlin block by the mid-20th century. Thirdly, it explores the most remarkable contributions to the architectural debate of the 1970s that brought about a rediscovery of the spatiality of the traditional city. Then, it takes a closer look at the outcomes of this debate by focusing on the blocks designed for the International Building Exhibition IBA Berlin 1987. Finally, this paper draws a comparison between Berlin's reformed urban blocks and IBA blocks. In retrospect, numerous parallels can be drawn between them. For example, they both proposed similar spatial novelties and provided new relations between public and private spheres within the perimeter of the block. This paper sheds light on two important phases in Berlin's architecture and on their analogies, which are often overlooked. These insights remain significant for the ongoing debate on the future of Berlin and of other European cities.

Introduction

The most common narrative about early 20th-century architecture recounts the disappearance of urban blocks from the practice of urban design. When referring to those years, much of the literature reports of a time of crisis, even of "death" of the urban block,[1] its housing typologies, and its traditional spatial solutions. However, this common narrative often omits that, for much of the 20th century, urban blocks mostly continued to be built.

With the transition from the 19th to the 20th century, parallel to the rise of architectural avant-garde, some blocks were still built as *Mietskasernen* ("rental barracks"), while others changed this model through important spatial and typological novelties.

The city of Berlin, in Germany, on which this paper focuses, offers many examples of these reformed urban blocks. Their reformist aspects, compared to former models, ranged from improvements in the apartments with basic services .and better floor plans, to the transformation of the form and the spatiality of

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1. P. Panerai, J. Castex, J. C. Depaule and I. Samuels, *Urban Forms. The Death and Life of the Urban Block* (Oxford: Architectural Press, 2004).

previous urban blocks. The inner courtyards were often left empty and open to exterior public spaces. Thus, the traditional spatial relations between interior and exterior of the block, between private and public spheres, were transformed, with spatial solutions that were often alien to former models.

Parallel to the building of these reformed blocks – still urban and inscribable to the model of the compact city (or, if one considers it spatially rather than morphologically, of what we could call the spatially-bound city) new ideas of city were spreading that aimed to overcome traditional urban models. These earliest avant-garde projects were the garden cities and the early estates of the *Neue Bauen*, which rejected traditional spatial solutions for urban living.

From the 1930s onwards especially, the success of these ideas implied a shift in architecture destined to last several decades and to affect architectural production. This is when the development of the Berlin block experienced a significant crisis, which lasted around forty years. The most acute phase of this crisis was in the first decades of urban reconstruction after WWII, when modernist urban models were highly influential in planning practice. It was not until the late 1960s that a trend-reversal occurred, with the spread of a new debate on the hitherto denied historical city. This debate also led to a renaissance of the urban block.

In the international architectural debate of the 1970s, Berlin represented not only a topic of discussion, but also – and most importantly – a space for the implementation of its contents. Themes such as "historical city" and "urban block" became central to the reflections and achievements of the International Building Exhibition *IBA* (*Internationale Bauausstellung) Berlin 1987*. This exhibition was organized to recover and reconstruct the former center of Berlin that in the 1980s was still affected by the damage of WWII (and divided by the Berlin Wall).

IBA 1987 aimed to restore the historical plan of the city, which it acknowledged as a basis for recovering urban identity.[2] Consequently, the IBA had to deal with the traditional components of urban design: streets, squares, blocks, and their courtyards. This was a significant trend-reversal in architectural and urban practice of the 1980s.

The section of the IBA known as *IBA-Neubau* (new buildings),[3] on which this paper focuses, recovered and reinterpreted the Berlin block in its new projects, with design proposals that aimed to mediate between the dimensions of the traditional 19th-century Berlin block, modern models of life, and the standards of social housing.[4] Obviously, in the 1980s the Berlin block could not be copied

2. C. Kromrei, *Postmodern Berlin. Wohnbauten der 80er Jahre/Residential Buildings of the 80s* (Salenstein: Niggli, 2018), 14.

3. The work of the IBA Berlin 1987 had two different focuses and approaches. On the one hand, there was "IBA-Altbau" (old buildings) that worked on restoration and modernization of existing, damaged buildings. On the other hand, there was "IBA-Neubau" (new buildings) that, with its approach known as "critical reconstruction", worked on re-building, mostly from zero, areas that were severely destroyed by bombings of WWII and by construction plans of the 1960s. This paper focuses on IBA-Neubau. From this point onwards, then, it is this sector of the exhibition that is meant with the acronym "IBA."

4. The IBA was an initiative financed by the West Berlin Senate and most of its buildings were publicly subsidized. For more information on subsidized housing in West Berlin during the

exactly as it was at the end of the previous century. Architects had to consider modern needs in their design proposals, including recent technological innovations such as elevators or underground parking spaces, which had become necessary for housing projects in the city. In addition to these functional novelties, the morphology and the resulting spatiality of the urban block were also transformed by the IBA. Instead of the small and often interconnected courtyards of 19th-century blocks, the IBA blocks feature more open spaces, with buildings distributed along their perimeter and not within them, and often with direct communication between street and courtyard.

These spatial solutions remind us of those already proposed in many reformed urban blocks at the beginning of that century. Therefore, it may be interesting to draw parallels between these two phases in the development of the Berlin block, with particular focus on their spatial characteristics.

This paper draws such parallels. Firstly, it introduces the reader to Berliner reformed urban blocks. Secondly, it sums up the major occurrences that brought to a crisis of the urban block in Berlin by the mid-20th century. Thirdly, it briefly explores the most remarkable contributions to the architectural debate of the 1970s that brought about a rediscovery of the spatiality of the traditional city. Then, this paper focuses on the blocks of the IBA Berlin 1987. Finally, after having illustrated case studies of both reformed and IBA blocks, this paper compares them, looking for analogies, underlining differences, querying their values and current relevance to urban design.

This paper brings together the themes and results of two ongoing research projects. The first is a doctoral thesis on the blocks designed for IBA Berlin 1987.[5] The second is a research project on Berlin's reformed urban blocks.[6]

Re-drawings, archival materials and photos will support the arguments of this paper, which sheds insights on two important phases in Berlin's architecture and on their interrelations. These insights remain significant for the ongoing debate on the future of Berlin and of the European city.

IBA years see for example M. Schonlau, "Die Berliner Wohnungsbauförderung," *Baumeister*, (1987): 20-23.

5. Ongoing PhD project carried out by the author at the Department of Spatial Design at RWTH Aachen University (Germany) together with Prof. Uwe Schröder and at the University of Bologna (Italy) together with Prof. Annalisa Trentin. As part of this research at RWTH, the author supervises seminars called "Learning from IBA Berlin 1987".

6. "Der Berliner Reformblock 1890-1930" is the name of a current research project conducted at the Potsdam School of Architecture (Germany) on the initiative of Prof. Silvia Malcovati and Prof. Bernd Albers, with whom the author is currently cooperating as lecturer supervising seminars called "Atlas des Berliner Reformblocks"/"Der Berliner Block".

Literature Review

Interest in reform urban architecture was particularly keen in German literary production of the early 20th century, primarily in specialized journals of the time such as *Wasmuths Monatshefte für Baukunst* (Wasmuth's Monthly Booklets for the Art of Building, published between 1914 and 1930) or *Der Städtebau* (The Urban Design, published between 1904 and 1939), as well as in other journals that are still being published and were then in their beginnings, such as *Bauwelt* (World of Construction) or *Deutsche Bauzeitung* (German Journal of Building). From those years, other monographic contributions on reformed urban architecture are also worth mentioning, such as those featured in the series of books entitled *Berlin und seine Bauten* (Berlin and its Buildings), initiated in 1870 by the *Architekten- und Ingenieur Verein Berlin* (Architects and Engineers Association Berlin), or the book *Das Berliner Mietshaus* (The Berlin Rental House), written by the German architect Albert Gessner in 1909.[7]

After the 1930s, when the climax of reform architecture was over, this interest in Berlin models seemed to wane. In most of the international literature on modern architecture of the second half of the 20th century,[8] rarely more than a few pages are devoted to this phase of Berlin's modern architecture. At best, the focus was on the reformed urban blocks of Red Vienna of the 1920s or Dutch reformed urban blocks of the 1920s and 1930s, such as those designed by Petrus Berlage and Jacobus Johannes Pieter Oud. Similar Berlin experiences were largely ignored.

It was rather in the 1970s that the interest in the reformed urban block re-emerged. In his book *Berlin auf dem Wege zu einer neuen Architektur* (Berlin on the Way Towards a New Architecture, 1st edition 1979), the German architecture critic and historian Julius Posener devoted great attention to reformed urban blocks in Berlin.[9] In those same years, the German architect Josef Paul Kleihues, about to become director of the "new buildings" section of the IBA Berlin 1987, wrote on several occasions about Berlin's reformed urban blocks of the early 20th century.[10] Kleihues saw them as an early stage of a modern development of the 19th-century urban block towards an open urban form, paving the way for the openness of the housing estates of the 1920s and 1930s. Kleihues' *excursus*

7. Architekten- und Ingenieur Verein Berlin (Ed.), *Berlin und seine Bauten* (Berlin: Wilhelm Ernst & Sohn, 1970 and 1974); A. Gessner, *Das Berliner Mietshaus* (Munich: Bruckmann, 1909).

8. Reference is made here, for example, to the following texts: K. Frampton, *Modern Architecture: a Critical History* (London: Thames and Hudson, 2007), L. Benevolo, *Storia dell'architettura moderna* (Bari/Roma: Laterza, 1960), W. J. R. Curtis, *Modern Architecture since 1900* (Berlin: Phaidon, 1982), S. Giedion, *Space, Time and Architecture. The Growth of a New Tradition* (Cambridge: Harvard University Press, 1941).

9. J. Posener, *Berlin auf dem Wege zu einer neuen Architektur* (Munich: Prestel Verlag, 1979), 319-361.

10. J. P. Kleihues (1978) "Edilizia chiusa ed edilizia aperta. Note sul caso di Berlino e osservazioni sull'isolato 270 a Wedding/Housing Blocks. Notes on the Case of Berlin and Comments on the Block 270 in Wedding," in *Lotus International*, no. 19: *L'isolato Urbano* (Milan: Electa, 1978, 62-75). In 1979, the same article was then published in German, with little changes and with the title "Berliner Baublöcke. Grundriss einer Typologie," *Werk: Archthese*, no. 31-32: Stadt-Rückseiten/La face cachée de la ville: 18-27.

concluded with the presentation of his block on Vinetaplatz, which will be mentioned later in this paper, where he proposed again the solution – neglected for almost half a century – of a perimeter block with an empty courtyard. The link between this project and some previous reformed urban blocks is thus clear to the readers.

More recently, among the most relevant and comprehensive contributions on reformed urban blocks are the texts by Wolfgang Sonne, professor of architectural theory and history at the Technical University of Dortmund,[11] as well as the doctoral thesis *Der Poröse Baublock* (The Porous Block) written at the ETH Zurich by the architect Karen Schmeink[12] under the supervision of Professor Vittorio Magnago Lampugnani.[13]

In the 1980s, after Kleihues' block on Vinetaplatz, IBA Berlin 1987 provided further opportunities to experiment with blocks. Also on that occasion, some outcomes provided spatial and formal solutions that are reminiscent of some reformed urban blocks of the early 20th century.

Literature on the IBA and its projects is very rich. It includes articles and monographic contributions in journals published not only in German but also in English, Italian, French, Spanish and Japanese. Moreover, among the most important contributions of those years are the catalogs published by the IBA itself. The most comprehensive (and updated) IBA catalogs, as far as it concerns the buildings of the exhibition rather than its theoretical contributions, are: *Internationale Bauausstellung Berlin 1984/87. Die Neubaugebiete. Dokumente. Projekte 7*. (The New Building Districts. Documents. Projects 7th volume, published in 1993) and *Internationale Bauausstellung Berlin 1987. Project Report* (Berlin, 1991).

For the sake of synthesis, this paper does not provide a complete list of all contributions on the IBA.[14] What is of interest for the purpose of this paper is the search for a continuity of compositional, formal, and spatial solutions between the two phases of 20th-century Berlin block architecture that are being examined: reformed urban blocks and the blocks of IBA 1987.

11. See: W. Sonne, "Dwelling in the Metropolis: Reformed Urban Blocks 1890–1940 as a Model for the Sustainable Compact City," *Progress in Planning*, no. 72(2), (2009): 53-150; Sonne, *Urbanity and Density in 20th Century Urban Design* (Berlin: DOM Publisher, 2017).

12. K. Schmeink, *Der poröse Baublock* (Zurich: ETH Zurich, 2005).

13. Professor Lampugnani himself wrote on several occasions about Berlin's reformed architecture. See, for example: V. Magnago Lampugnani *Die Stadt im 20. Jahrhundert. Visionen, Entwürfe, Gebautes* (Berlin: Verlag Klaus Wagenbach, 2010), 279-284.

14. For a complete overview of the IBA publications up to the end of the 1980s please refer to the commented bibliography entitled *Veröffentlichungen der Internationalen Bauausstellung Berlin 1987*, edited in 1987 by the *Deutsches Institut für Urbanistik*. Among the most recent publications on IBA Berlin 1987 see: Kromrei, *Postmodern Berlin. Residential Buildings of the 1980s*, 2018; E. Akcan, *Open Architecture. Migration, Citizenship, and the Urban Renewal of Berlin-Kreuzberg by IBA-1984/87* (Basel: Birkhäuser, 2018); A. Salgo, *Neue Blöcke für die Innenstadt. Die IBA '87 in Berlin und der Wiederaufbau der südlichen Friedrichstadt* (Berlin: Gebr. Mann, 2021) as well as the exhibition catalogue of the Exhibition *Anything goes?* (Berlin: Kerber, 2021) held in spring 2021 in Berlin's Berlinische Galerie.

Some historians and critics, such as the German Dieter Hoffmann-Axthelm, pointed out the existence of these analogies as early as the 1990s, emphasizing first and foremost the political and economic similarities between different models underlying the formal and spatial ones.[15] More recently, in his doctoral thesis on the urban blocks of IBA Berlin 1987 in southern Friedrichstadt, the German architect Andreas Salgo also wrote about a line of continuity between reformed urban blocks and IBA blocks.[16] What is still lacking so far, however, is a clear comparison of the projects, a visualization of these similarities that confirms their existence. And this is what the present paper aims to do – albeit obviously only partially due to its limited length – through texts and drawings.

From the Rental Barracks to the Reformed Urban Blocks

The problems of the late 19th-century "Berlin of stone"[17] are well known: excessive exploitation of plots, tiny yards, overcrowded and poorly lit flats, and a lack of hygiene – to name but a few. These problems are among the reasons why the so-called *Mietskasernen* (rental barracks) were highly criticized from the late 19th century onwards. In response to these problems, in Berlin, as in other European metropolises under the same conditions, it became necessary to work on alternatives. One of the earliest of these alternatives, developed at the end of the 19th century, was the one proposed by the English urbanist Ebenezer Howard with his "Garden city movement", advocating an "escape" from the city to the countryside.[18]

Less than twenty years later, the modernist avant-garde claimed the overcoming of the traditional city with its blocks. This is, at least, the information on which much of the common narrative focuses. It is seldom reiterated, however, that in those years there were also architects who wanted to improve the city as it was and not to radically transform it, nor to escape from it.

Referring to the well-known schemes drawn by both Walter Gropius and Ernst May (Figure 1), which illustrate the architects' wished development from a "city of blocks" to a "city of building rows", German architectural historian and professor Wolfgang Sonne writes:

> "Somewhere between the densely built-up blocks of the 19th century city and the rigidly north-south-oriented terraces of the late 1920s, the reformed urban block—a perimeter block which introduced light, air and greenery into the block with a large courtyard, while still defining the public street space with continuous facades—was interpreted as only an intermediary step, which must be overcome in the name of modernity."

15. D. Hoffmann-Axthelm, "Der Berliner Baublock," *Bauwelt*, no. 17/18 (1997): 922-925.
16. Salgo, *Neue Blöcke für die Innenstadt*, 2021, 358.
17. W. Hegemann, *Das Steinerne Berlin 1930* (Basel/Berlin/Boston: Birkhäuser, 1963).
18. E. Howard, *To-morrow: A Peaceful Path to Real Reform* (Sonnenschein: London, 1898).

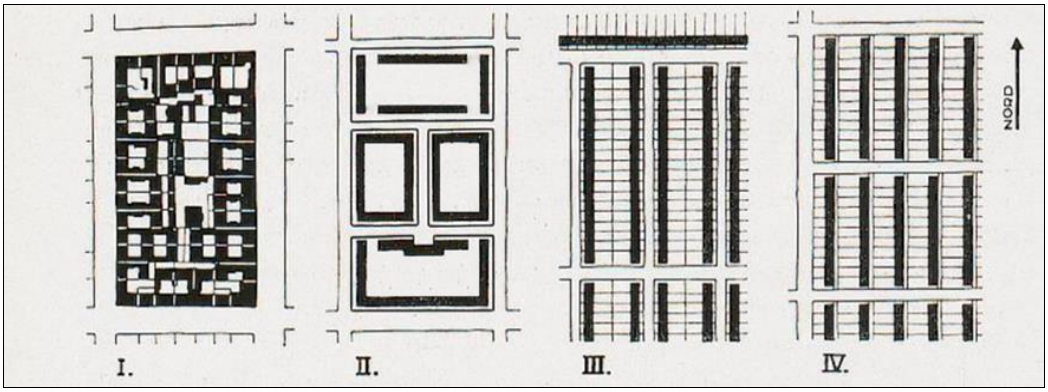

Figure 1. *Schematische Darstellung der Entwicklung des modernen Bebauungsplanes* [Diagram Showing the Evolution of the Modern Development Plan] by Ernst May
Source: E. May in *Das neue Frankfurt. Heft* 2/3 (1930): 34.

Like Sonne in his article "Dwelling in the metropolis",[19] from which this quote is taken,[20] the present paper argues that the urban block did not disappear in the early decades of the 20th century. It rather markedly changed. That is why it is possible to say that reformed urban blocks are modern blocks. In this regard, it might be appropriate to provide a definition of reformed blocks, again in the words of Sonne:

> "These are blocks intended to reform the modern city, instead of rendering it obsolete. They are blocks which define public space by directly addressing the street, and don't destroy it with an autonomous pattern. These blocks face public space with meaningful facades, instead of ignoring that space with shapeless building surfaces and finally, these are blocks which contribute to a lively atmosphere in the city with a mixture of functions rather than killing it off with mono-functionality (…)."[21]

To the definition of reformed urban blocks provided in this quotation, in itself already very comprehensive, some further remarks should be added that are significant for this paper. With these reformed blocks, Berlin made the "leap" towards the so-called *Großform* (big form) – that is, towards a way of conceiving and building architecture that departed from the traditional binomial "one house's plot = one owner", typical of residential architecture up until then. On the contrary, reformed urban blocks were conceived on a scale that corresponded to several plots grouped together. This had, of course, significant spatial consequences.

Before looking more closely at spatial issues, however, a few economic and social details should be underlined. The housing reform was primarily driven by private parties; mostly housing cooperatives,[22] but also entrepreneurs as well as health insurance companies and associations. The aim of these companies was to

19. Sonne, "Dwelling in the Metropolis: Reformed Urban Blocks 1890–1940 as a Model for the Sustainable Compact City," 2009: 53-150.

20. Ibid, 55.

21. Sonne, *Urbanity and Density in 20th Century Urban Design*, 2017, 53.

22. Among the most influential housing companies in Berlin in this respect were, for example, the *Berliner Spar- und Bauverein* (Today: Berliner Bau- und Wohnungsgenossenschaft von 1892) and the *Charlottenburger Baugenossenschaft*.

achieve quality housing for the working class, improving the tenants' life without renouncing urbanity.

Reformed urban blocks were built over a period of around forty years. Their earliest examples, such as the *Riehmers Hofgarten* (1881–1899) by Wilhelm Riehmer or the *Weisbachgruppe* (1899-1905) by Alfred Messel date back to the 1890s, while the most recent examples are from the late 1920s and early 1930s. Among these are the so-called *Sonnenhof* (1925–1927), by Erwin Anton Gutkind and the housing complex in Sansibarstraße (1928–1929) by Stephan von Zamojski and Heinrich Ivan. Even some housing estates by Bruno Taut, such as Schillerpark (1924–1930), show spatial solutions that permit us to (at least partly) describe them as reformed urban blocks, their buildings also being organized around a courtyard. These late examples, however, show clear signs of a process of opening of the interior space of the block towards the exterior spaces that are much more marked than in previous models of reformed urban blocks. One could speak of some *Siedlungen* (housing estates) of the 1920s as hybrids.

Due to the simultaneous presence of different paradigms – garden cities, reformed urban blocks, and *Siedlungen* – in some models it is questionable whether we are dealing with the one or the other case. Contrary to what Gropius and May's scheme might suggest, therefore, reformed urban blocks were not built "after" the rental barracks and "before" the uniformly oriented rows of the modern. All these phenomena existed in parallel. It is not surprising, therefore, that especially in the suburbs we can see models that result from their intermingling.

Apart from the aforementioned unity of conception, most reformed urban blocks also share the way in which they define spaces, which is markedly different from 19th-century blocks. Reformed blocks feature bigger and more open inner courtyards. These courtyards are often left empty and used as gardens, free of interior buildings and thereby providing their tenants with communal parks. Moreover, in many cases the courtyards of these reformed blocks were opened towards the street by means of gateways, allowing communication between private and public spaces. Thus, not only the community of the tenants, but also the whole neighborhood, could (and still can) profit from these urban spaces.

In some reformed urban blocks, the spatial novelty consists not so much of an empty courtyard but rather of a street crossing the block, thereby forming hybrid spaces between the public and the private spheres.

The following paragraphs will present three selected case studies, all built before 1910, that illustrate different spatial solutions.

Reformed Urban Blocks - Case Studies

Amalienpark Residential Complex (1896–1897)

The Amalienpark residential complex in the district of Pankow, designed by the architect Otto March, was built in 1896–1897 for the housing company *Landhaus-Baugesellschaft Pankow*.

March's project for Amalienpark is clearly and openly unitary, even though it is composed of nine separate houses organized around a public garden. Due to this feature, this project can be defined as an open block.

The open block in Amalienpark (Figure 2) is relatively introverted in relation to the external streets. Almost all of its houses are accessible from the interior public garden, except for the two buildings facing the Breite Straße to the south, whose entrances directly open onto this street.

Figure 2. *Amalienpark: Photo from the Inner Park and Ground-Floor Plan*
Source: Left: Photo by the author (July 2021). Right: Drawing made for the seminar "Atlas des Berliner Reformblocks" at the Potsdam School of Architecture (2020) and further edited by the author (2021). Redrawn after: H. Engel, P. -A. Albrecht, G. Wolf and C. Wolf, *Der Amalienpark in Pankow und sein Architekt Otto March. Schriftenreihe Meisterwerke Berliner Baukunst, Band 7* (Berlin: BWV Berliner Wissenschaftsverlag, 2007).

A closer look at the houses reveals an architectural language quite typical of Berlin's reformed architecture of those years, with several loggias, arches and dormer windows. The height of the houses around the garden is uniform, as is their materiality and, to a large extent, also their typological features. On the whole, the houses in the block have more than 60 apartments. All of these houses have four storeys, each of which is usually divided into two apartments (in German "*Zweispänner*"). Besides the already mentioned exceptions of the two buildings to the south, also the building to the north is different from the houses along the long sides of the block. It is a small "block within a block" that results from the grouping of two almost symmetrical "*Zweispänner*" houses. The result of this composition is a building with a closed perimeter around a small, private courtyard. This bounded courtyard represents the only exception in an ensemble characterized by a much more open spatiality, where landscape and architecture meet and combine, forming a whole that is still much appreciated by its residents.

Housing Block near the Schöneberg Rathaus (1906–1907)

Close to the city hall of the district of Schöneberg, there is a block known as the *Wohnhofanlage am Rathaus Schöneberg* (Residential courtyard complex by Schöneberg's city hall), designed by the architect Paul Mebes[23] for the housing company *Berliner Beamtenwohnungsverein* and built in 1906–1907.[24]

Figure 3. *Housing Block near the Schöneberg Rathaus: Photo on One of the Open Courtyards and Ground-Floor Plan*
Source: Left: Photo by the author (July 2021). Right: Drawing made for the seminar "Atlas des Berliner Reformblocks" at the Potsdam School of Architecture (2020) and further edited by the author (2021). Redrawn after: Schmeink, *Der Poröse Baublock. Raumbildendes Element im Berliner Städtebau um 1900*, 2005: Tafel 50.

The block (Figure 3) includes 220 apartments, all equipped with basic services. Many of these apartments face both the street and the courtyard.

The most significant differences with respect to previous 19th-century blocks lie not only in the apartments, but also at the root of the design concept itself. Indeed, this block is a single project and does not result from the composition of contiguous but separate houses, each on its own plot. This unity of its design is expressed by a uniform outer aesthetic. The facades on the street are characterized by the presence of many loggias and are more decorative than those giving onto the enclosed courtyards. With respect to this last feature, it can be said that Mebes' block in Schöneberg reacts differently to the various outer spatial situations, depending on whether its boundary fronts face inwards or outwards.

This block, which has a uniform height of five storeys, shows an interesting range of spatial hierarchies. Within its borders, one encounters different spatialities: three courtyards of honor ("*Ehrenhöfe*") open towards the street, three completely closed courtyards and, finally, a central, crossable, and semi-private courtyard. All entrances to the staircases are from the street (or from the open passage in the

23. Paul Mebes was one of the architects who, together with Alfred Messel, Erich Köhn and Paul Kolb, made the major contribution to reform architecture in Berlin.

24. See: Wohnungsbau der Architekten für die Beamten-Wohnungs-Verein zu Berlin eG (Ed.), *Paul Mebes und Paul Emmerich: Meister der gemäßigten Moderne* (Berlin, 2015), 20-23.

central courtyard/square) so that the enclosed courtyards are for the exclusive use of residents.

During the bombing raids of WWII, the building suffered extensive damage and today two of its enclosed courtyards are also open to the street after some of the buildings were lost. The project illustrated in Figure 3 corresponds to the original state of the block before the war.

Ideal-Passage (1907–1908)

Contemporary with the block in Schöneberg described above is the project for the Ideal-Passage in the district of Neukölln, designed between 1907 and 1908 by the architects Wolf and Paul Kind for a housing company called Ideal, which gave the project its name.

It was previously remarked that most reformed urban blocks either have empty courtyards, without internal buildings, or are crossed by a street. In this respect, the Ideal-Passage project is particularly interesting in that it somehow combines both these spatial solutions. It consists of four courtyards connected by a pathway that is accessible via two portals on opposite sides of the block (Figure 4). Hence, the project can be described as an enfilade of four interconnected green courtyards, allowing the crossing of the entire block.

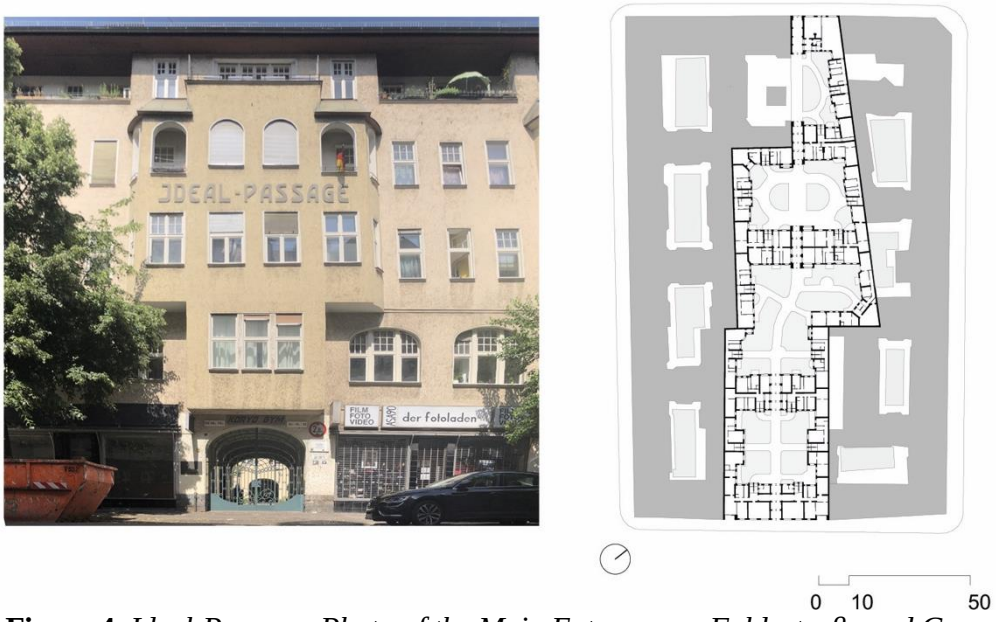

Figure 4. *Ideal-Passage. Photo of the Main Entrance on Fuldastraße and Ground-Floor Plan*

Source: Left: Photo by the author (July 2021). Right: Drawing made for the seminar "Atlas des Berliner Reformblocks" at the Potsdam School of Architecture and further edited by the author (2021). Redrawn after: Schmeink, *Der Poröse Baublock. Raumbildendes Element im Berliner Städtebau um 1900*, 2005: Tafel 29.

The size of the four interconnected courtyards is not so different from those of the adjacent 19th-century houses. Indeed, the Ideal-Passage project was realized inside of a typical, densely-built block from the late 19th century. Its major

differences from previous rental housing emerge especially when we look at the equipment of its apartment, provided with private bathroom and kitchen. In total, before being partly damaged in WWII, the Ideal-Passage had 171 apartments – mostly 1- or 2-rooms.

The houses have a uniform height of five storeys. The architectural language implemented in their facades changes according to whether these facades face the street or the courtyards, and also from one courtyard to the other. This variety was not the outcome of a fragmented development, but it was envisioned as part of the original project. Finally, all the accesses to the houses are from the internal courtyards, even for the buildings facing the streets, where the ground floors accommodate small commercial enterprises. From the public streets, the enfilade of courtyards inside the Ideal-Passage remains hidden: a microcosm in the heart of the lively district of Neukölln.

The spatial strategies outlined through the examples shown above allow us to conclude that reformed urban blocks transformed the traditional block by gradually opening it up to the outer public spaces and thereby making it "porous".[25] However, reformed blocks did not abandon the concept of the urban block. This process of abandonment was realized, in those same years, by the 20th-century architectural avant-garde.

From the Block to the Row and the City of Architectural Objects

At the beginning of the 20th century, reformed urban blocks were flanked by other architectural models that also aimed to overcome the weakness of the city of the tenement blocks. In the aforementioned sketch illustrating the development "from block to row", Walter Gropius – and, a year later, Ernst May – outlined what they wished for the evolution of urban models: from the compact tenements' blocks to the rows of the *Neue Bauen* and, thus, to the urban models proposed by the Modern Movement. For Gropius and May reformed urban blocks were, therefore, a temporary phenomenon that had to be overcome with new housing models. And yet the urban block was not completely overcome until the 1930s, but coexisted with the first achievements of modern architecture.

After WWII, however, the situation changed markedly. Berlin was significantly affected by the consequences of the war. Not only was the city severely bombed and the plans of the 1960s further transformed its urban fabric, but the city was also divided for almost thirty years by the Berlin Wall. As a result, the image and the identity of the city were destroyed.

In the first decades of post-war reconstruction, the desire to break with the past, as well as the need for rapid and cost-effective reconstruction, made the models proposed by the Modern Movement particularly appealing. Some of the outcomes of this reconstruction were welcomed by the public. A good example of this is the housing estate that resulted from the *Interbau* building exhibition of 1957. For the time, these architectures offered attractive, healthy, and well-

25. Schmeink, *Der Poröse Baublock. Raumbildendes Element im Berliner Städtebau um 1900,* 2005.

oriented apartments. The critical aspect of *Interbau* and of other similar projects of those years lies rather in the spaces between the houses: a huge, green, public space incapable of acting as meeting places and of generating identity.

Many of the urban visions proposed by the masters of the Modern Movement – Hans Scharoun's "city landscape" for example – were based on the principle of functional zoning and proposed an urban scenario of solitary buildings in a green and indefinite public space. The layout of the historical city was ignored, and the relations between street and architecture were weakened. Thus, the conception of a city of interconnected inner and outer spaces, as the historical city used to be, was replaced by a new spatial conception of the city as "a formal composition of buildings, which aimed at canceling the boundaries between inner and outer spaces".[26] This is the situation that the German architect Uwe Schröder bitterly describes using the terms *Stadtvergessenheit* ("oblivion of the city") or *Raumlosigkeit* ("spacelessness").[27]

This situation worsened in later examples of housing estates, such as the *Großsiedlung* (large housing estate) known as *Gropiusstadt*. Whereas *Interbau* still featured good solutions for its apartments and was in a central position in the city, these large estates lacked both these qualities.

In these modernist housing estates built after WWII, we can no longer speak of public and private spaces that interact and mix. Instead, these spaces melt together to the point that private exterior spaces disappear. What remains is one, generic, "fluid" public space between houses. The idea of a city of many interconnected spaces – streets, squares and courtyards – was thus replaced by the idea of a city of objects[28] in one, big space.

The dominant modernist idea of an absolute and superordinate space, which characterizes the first decades of post-war urban planning practices, also had obvious consequences for architecture and the city. The process of opening the spaces of the courtyards, which began with the reformed urban blocks and was continued by the *Siedlungen* of the 1920s, was thus taken to the extreme, especially after WWII. It was not until the late 1960s that architects returned to a discussion of the importance of the "city of spaces".

26. Quote taken from: A. Denk, U. Schröder and R. Schützeichel, *Architektur Raum Theorie* (Berlin/Tübingen: Wasmuth, 2016), 14. Translation by the author. Original quote: "[…] einer formalen Komposition baulicher Elemente, welche darauf abzielte, die Grenzen zwischen Innen und Außen weitgehend aufzuheben."

27. Ibid, 14-15.

28. C. Rowe and F. Koetter, *Collage City* (Cambridge Mass.: The MIT Press, 1978), 62.

Back to Urban Spaces: The 1970s and the "Spatial Turn" in the Architectural Discourse

From the 1960s, several architects began to question the theories and the models proposed by the Modern Movement. Consequently, the then-dominant functionalist approach to projects stood alongside others, based on the study of the typology and the morphology of historical cities.

The contributions to the typo-morphological approach already offered by Italian architects such as Saverio Muratori in the 1950s and later by younger architects like Aldo Rossi, Giorgio Grassi or Carlo Aymonino, are well known.[29] From the 1970s onwards, parallel to this "Italian discourse" and intensely interwoven with it, a widespread debate arose at an international level.[30] The protagonists of this architectural debate shared a criticism of the modernist city, of its spatial conceptions, favoring a rediscovery of the values of the historical city as it was until the beginning of the 20th century.

The concepts of "type" and "form" played a leading role in these debates. But what role did the concepts of "space" and "spaces" play? In those years, a spatial debate was largely overlooked. However, some relevant changes from modernist conceptions of space can be traced in theoretical contributions such as the book *Stadtraum in Theorie und Praxis* (Urban Space in Theory and Practice) by the Luxembourgian architect Rob Krier, first published in 1975.[31] This book, although not introducing a theory of space in the narrow sense,[32] significantly contributed to the debate against the modernist denial of traditional urban spaces, strongly urging instead that the spatiality of the historical city be recovered. Krier writes of (and designs) a city composed of courtyards, streets and squares – that is, of all those urban spaces that the Modern Movement denied. From the paradigm of the city of objects in an absolute space, Krier returns to write of a city of many spaces.[33]

One can detect in this context the earliest evidence of an architectural "spatial turn",[34] taking place, which contributed to bringing the urban block back to the center of the architectural debate.[35]

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29. On the contents of the 1970s Italian debates on architectural type and morphology see: M. Caja, M. Landsberger and S. Malcovati, *Tipologia architettonica e morfologia urbana* (Milan: Il Libraccio, 2014).

30. On the influences of the Italian debate of the 1970s out of Italian borders see: M. Caja, M. Landsberger and S. Malcovati, *Tipo, Forma, Figura* (Milan: Il Libraccio, 2016).

31. R. Krier, *Stadtraum in Theorie und Praxis* (Stuttgart: Kramer, 1975).

32. Denk, Schröder, and Schützeichel, *Architektur Raum Theorie. Eine kommentierte Anthologie*, 2016, 521.

33. The fact that the title of the book, *Stadtraum* ("*Urban Space*" in English) refers to "one" space using the singular form, even though Krier writes of a city made up of many spaces (courtyards, streets, squares), confirms that in those years the spatial conception was changing but was also still under the influence of modernist paradigms and terminology.

34. The concept of "spatial turn", related to the 1980s, is generally referred to philosophy and social sciences. However, also architecture witnessed its outcomes. See: Denk, Schröder, and Schützeichel, *Architektur Raum Theorie. Eine kommentierte Anthologie*, 2016, 8

35. Several publications and initiatives bear witness to the "rebirth" of the urban block in those years. See, for example: Panerai, Castex, Depaule and Samuels' *Urban Forms. The Death and Life of the Urban Block*, first published in French in 1977; the 19th issue of the Italian magazine *Lotus International* published in 1978 , entitled *The Urban Block*, or the book published on the

Figure 5. *Block 270 on Vinetaplatz. View from the Street and Ground Floor Plan*
Source: Left: Photo by the author (2018). Right: © Kleihues+Kleihues.

Within this context the urban block also returned to being a design issue. In Berlin, one of the earliest applications of these theories in a project was the block on Vinetaplatz in Wedding, designed in the 1970s (1971–1977) by the German architect Josef Paul Kleihues (Figure 5). This is one of the earliest projects built in Berlin after WWII based on a closed perimeter block.[36]

In 1977, when construction of the block on Vinetaplatz was in its final stages, the initiative *Konzepta Ritterstraße*[37] gave Rob Krier the opportunity to implement the theories of his book *Urban Space* in the reconstruction of an urban block in the heart of Kreuzberg. Both Vinetaplatz and *Konzepta* represent the earliest practical experiments towards the urban design approach by IBA Berlin 1987.

Back to the Block: IBA Berlin 1987

IBA Berlin 1987 was a broad initiative of urban reconstruction officially initiated in 1979 according to the wishes of the West-Berlin Senate. The IBA ran for eight years, from its foundation in 1979 to 1987, when it officially opened (and ended). Its goal was to involve architects and planners in the design process for the reconstruction of former central areas of Berlin, turned into peripheries of their

occasion of the first S.I.A.C. (Seminario Internacional de Arquitectura Contemporanea) held in Barcelona in 1980, entitled "*La manzana como idea de la ciudad*" [The block as idea of the city]. In Germany, important contributions in this direction were, for example, the book by F. Werner, F. Popp, K. Schalhorn and H. Schmalscheidt entitled *Der Baublock. Straße Wohnung Hof*, or the book *The Urban Block and Gotham City*, which illustrated the results of Berlin's 1976 Summer Academy curated by O. M. Ungers during his years of teaching at Cornell University

36. See: Kleihues, "Berliner Baublöcke. Grundriss einer Typologie," 1979: 18.

37. See: K. Friebel, *Experiment Wohnen - Konzepta Ritterstraße* (Berlin: Archibook, 1981).

half of the city because of the Berlin Wall. Within this context, and after the numerous unsuccessful urban planning initiatives conducted in Berlin after WWII, IBA Berlin 1987 provided an occasion to apply the outcomes of the debates of the 1970s in practice.

The IBA helped to converge – and re-interpret – both the theoretical principles of the Italian debate of the 1960s and 1970s, which had begun to reflect on the meaning of the historical city and of its urban structures, and postmodern spatial theories. While the former outlined the strict connection between architectural typologies and *forma urbis*, the latter overcame an absolute conception of space, which regained instead its relativity, as well as its collectiveness and sense of identity. IBA Berlin 1987 aimed, at least in its declared intentions, to recover not only the historical plan of the city, but also its spatiality and the dialectics of its spaces.

While the organizers of the IBA criticized many principles and practices of the Modern Movement, at the same time they acknowledged its architectures as an integral part of Berlin's history. Thus, the IBA, in its twofold aim of referencing the past and improving the shortcomings of previous urban models, not only returned to traditional typologies but also used solutions alien to the historical city, such as rows or towers. Despite such heterogeneity, all IBA interventions were subordinated to the main aim of recovering the historical urban fabric and the traditional Berlin block. The IBA's challenge to restore the form and image of the historical city by reassuming its former urban fabric and its blocks as a starting point in the presence of buildings constructed precisely as a reaction to these traditional urban components, can be seen as the attempt to apply Colin Rowe's advice to "allow and encourage the object to become digested in a prevalent texture or matrix".[38]

Among the spaces of the traditional city that it assumed as a reference for its designs, the IBA concentrated especially on those of the block, that is, on courtyards and interior passages. Squares and streets remained rather in the background, as "contours" to the blocks' projects.

When it comes to spatial issues regarding the IBA blocks, it can be observed that they have little in common with the spatiality of the 19th-century block. Referring to the block in Ritterstraße Nord, one of the case studies that this paper examines more closely, the architect and scholar Katharina Borsi observes "despite its formal similarities [the block in Ritterstraße] creates spaces quite differently to the nineteenth century block".[39]

Borsi's remarks are valid for most IBA blocks, not only for the one in Ritterstraße. Indeed, in several other IBA blocks we also witness a decisive opening of the spaces of the courtyards with respect to those of the traditional 19th-century block. In some cases – the block in Ritterstraße Nord (built: 1982–1988, masterplan by Rob Krier), but also in the smaller "Block 4" (built: 1987–1991, masterplan by Bohigas, Martorell, Mackay) between Checkpoint Charlie and the site of the former Prinz Albrecht Palais – the inner courtyard was left free of buildings and

38. C. Rowe and F. Koetter, *Collage City* (Cambridge Mass: The MIT Press, 1978), 83.

39. K. Borsi, N. Porter and M. Nottingham, "The Typology of the Berlin Block," *Athens Journal of Architecture* 2, no. 1 (2016): 62.

used as a communal garden, accessible also to the public. In other cases, as in the Block am Berlin Museum (built: 1984–1986 Masterplan Kollhoff and Ovaska) or in Block 7 in Friedrichsvorstadt (built: 1987–1990, Masterplan Ungers and Faskel) the block is divided by a public street. Furthermore, some examples of IBA blocks feature a sequence of interconnected courtyards, others are completely open, allowing public access to a garden bordered by urban villas.

Considering the variety of these solutions, it can be said that, if there are few links between the spatiality of the 19th-century block and of IBA blocks, some of the spatial solutions implemented in the latter are rather reminiscent of those featured in the reformed urban blocks of the early 20th century. The case studies presented below lend themselves well to illustrating this statement.

IBA Blocks - Case Studies

Block in Ritterstraße Nord (1982–1988)

In very few cases, the IBA managed to fully restore the historical perimeter of a 19th-century block. The most complete example in this respect is probably Rob Krier's block in Ritterstraße Nord (Figure 6). This project, built between 1982 and 1988, fits within the perimeter of the block as it was before being destroyed by the bombing raids of WWII.

This IBA block re-establishes the perimeter of the previous block. However, with respect to typological and spatial aspects, the former is very different from the latter. Instead of numerous small courtyards, Krier's block has only five, much larger ones. Of these courtyards, four are used as semi-private gardens. The central courtyard, from which it is possible to access all the others, is instead conceived as a public square. This square can be crossed on foot (in all directions) or by car (along the east-west axis).

In addition to its four courtyards and its square, other spatial solutions in this block are worth mentioning: the two streets that cross the block, for example, which intersect in the central square mediating between the public and the private.

Although the block in Ritterstraße resulted from a single master plan, in this block the IBA pursued a division into different houses, designed by different architects according to the overarching guidelines set by Rob Krier.[40] This diversity despite unity is clearly shown on the façade, where the houses look separate, as if reflecting a (missing) plot division in the block.

The project, which includes more than 300 apartments, features a great complexity of typological solutions. Most of its houses have two apartments on each floor that face both courtyard and street ("Zweispänner"), but there are also alternatives, such as several duplexes.

40. Together with Rob Krier, the architects who collaborated on this block are: D. Bangert, B. Jansen, S. Scholz, A. Schultes (Berlin); B. Benzmüller, W. Wörner (Berlin); A. Liepe, H. Steigelmann (Berlin); E. Feddersen, W. von Herder & Partner (Berlin); J. Ganz, W. Rolfes (Berlin), U. Müller, T. Rhode & Partner (Berlin) and finally, for the gardens, J. Halfmann and C. Zillich (Gartenund). See: Internationale Bauausstellung Berlin 1987. *Projektübersicht* (1991), 190-199.

In Ritterstraße, houses are accessible from the public streets, from the central square or from the inner streets that intersect in the square. Considering the typology of spaces it features, it can be thus said that the block in Ritterstraße is an ensemble of blocks with a central courtyard (the square).

This block features a great complexity of spaces and spatial hierarchies. The semi-private courtyards are interconnected with the other spaces of the block – that is, with the central square and, through portals, with the streets that intertwine in this square. This spatial complexity has been limited by the recent closure of many of the private courtyards following the privatization of the entire block. Although this change affects third-party accessibility to the (now no longer semi-) private courtyards, it does not affect their spatial perception as urban gardens bounded by architecture.

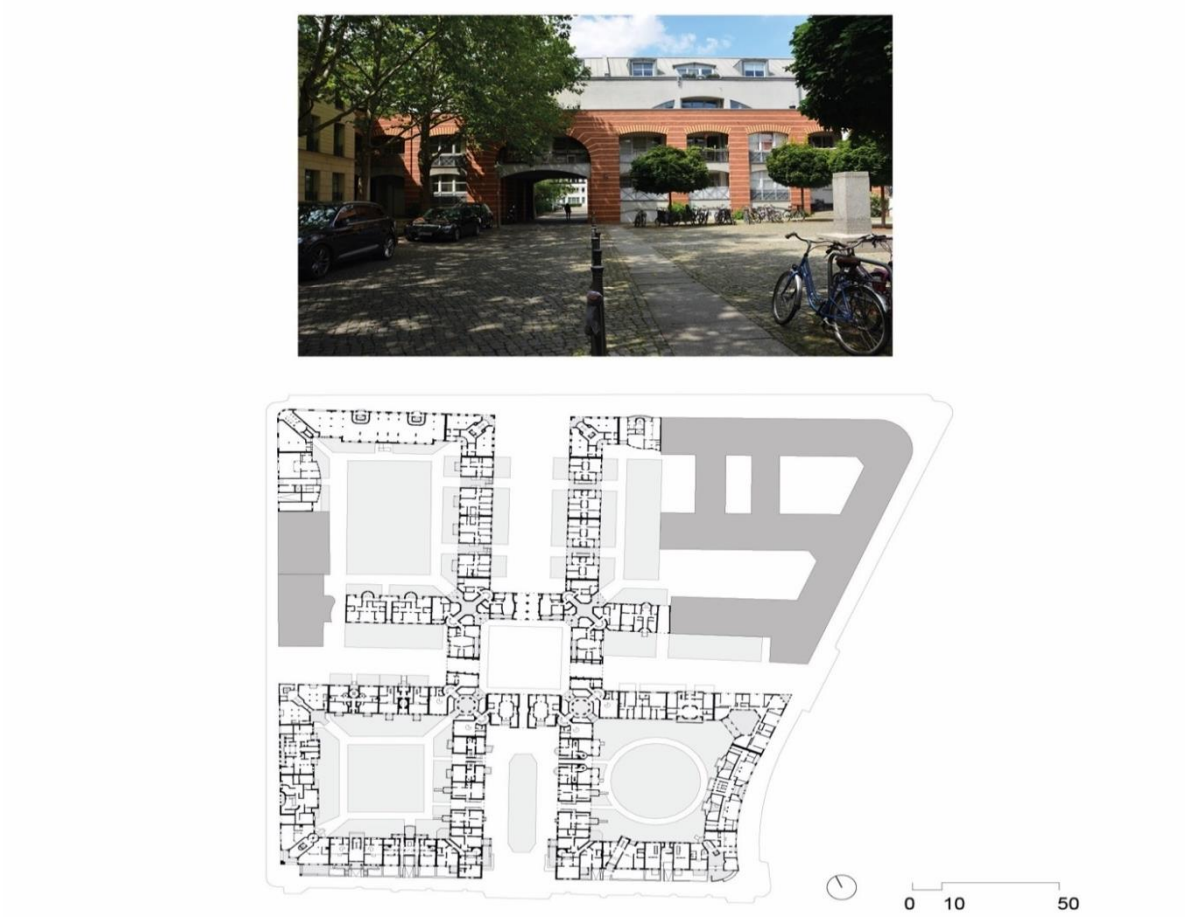

Figure 6. *IBA Block in Ritterstraße Nord. Photo of the Central Public Square and Ground-Floor Plan*

Sources Top: Photo by the author (2020). Bottom: Drawing made for the seminar "Learning from the IBA. The Block. Beiträge von Rob Krier" at RWTH Aachen University (2018/19) and further edited by the author (2021). Redrawn after: Kleihues (Ed.), *Internationale Bauausstellung 1984/87. Die Neubaugebiete. Dokumente. Projekte 7* (1993) and *Internationale Bauausstellung Berlin 1987. Project Report* (1991).

Block in Rauchstraße (1983–1984)

Like the block in Ritterstraße, the block in Rauchstraße – also a masterplan by Rob Krier – was "critically" reconstructed by considering the configuration of the block as it was before bombing in WWII. However, while the reference in the case of Ritterstraße was the compact fabric of the district *Kreuzberg*, with its small, interconnected courtyards, the block taken as a reference in the case of Rauchstraße, in the *Tiergarten* district, was markedly different. Its predecessor was a block resulting from a composition of detached villas.

Accordingly, the IBA block in Rauchstraße (Figure 7) results from the composition of eight new buildings – six of which are urban villas – that, with a former building that survived the bombings, define the space of a public garden. This garden is accessible to third parties and features a small playground. In this respect, it is possible to say that the block in Rauchstraße is an open block. It results from a composition of urban villas that are independent units, but that also clearly show similarities and strong links to each other.

Figure 7. *IBA Block in Rauchstraße. Photo of the Inner Garden and Ground-Floor Plan*

Source: Top: Photo by the author (2018). Bottom: Drawing made for the seminar "Learning from the IBA. The Block. Beiträge von Rob Krier" at RWTH Aachen University (2018/19) and further edited by the author (2021). Redrawn after: J. P. Kleihues (eds.), *Internationale Bauausstellung 1984/87. Die Neubaugebiete. Dokumente. Projekte 7* (1993) and *Internationale Bauausstellung Berlin 1987. Project Report* (1991).

As in Ritterstraße, several architects worked according to the guidelines defined by a masterplan of Rob Krier. Despite the different personalities involved in this project, [41] the unity of Krier's original idea is clearly visible.

If we exclude the eastern and western head buildings, this block is composed of regular urban villas, all of five storeys, with a square base of 21 meters and a boundary around it of 25 m, dedicated to private gardens for the residents living on the ground floor.

Each villa houses several apartments, with an average of five per floor and a central staircase onto which the entrances of the apartments face. The only exceptions to this scheme are the house designed by the Italian architects Aldo Rossi and Gianni Braghieri, in the west of the ensemble – an L-shaped building, bigger than the other villas – and the eastern gate building designed (as one of the villas) by Rob Krier himself.

The perimeter of the block is defined by public streets, onto which the entrances of the houses directly face. Thus, both the streets and the block are given back their spatial boundaries, albeit not continuous. Within these boundaries, the interior of the garden between the villas is perceived as an urban field, a small microcosm between the huge Tiergarten park to the north and the denser, bustling city to the south.

Block 2 in Friedrichsvorstadt (Concept: 1981, Built: 1990)

Close to Berlin's Potsdamer Platz there is an area known as *Friedrichsvorstadt.* Historically, this area used to be extremely lively, with two train stations and a small river port nearby. However, little of that liveliness and of its urban structure survived the bombings of WWII. In the 1980s, Friedrichsvorstadt still presented itself as a desolate "no-man's-land".[42]

The masterplan for this area bears the mark of the German architects Oswald Mathias Ungers and Bernd Faskel, who designed a proposal for the reconstruction of *Friedrichsvorstadt* for the IBA.[43] Of the four blocks in their proposal, this paper focuses on the so-called Block 2, between Stresemann-, Dessauer- and Bernburger Straße. In this block, the corner building designed by the British-Iraqi architect Zaha Hadid is probably the most famous IBA building. But it is not the only IBA building in the block. Together with it, in fact, the projects of five other architectural firms[44] combine to define a set of three interconnected courtyards.

41. Together with Rob Krier, the architects who collaborated on this block are: Valentiny und Hermann (Remerschen/Luxemburg); H. Hollein (Wien); A. Rossi and G. Braghieri (Milan); Nielebrock & Partner (Berlin); G. Grassi (Milan); K. T. Brenner und B.Tonon (Berlin). The design of the garden was by architects C. Müller, J. Wehnerg, E. Knippschild (Berlin) See: Internationale Bauausstellung Berlin 1987. Projektübersicht (1991), 32-35.

42. Ungers and B. Faskel, *Studie Friedrichsvorstadt* (Berlin: 1981), 4.

43. Ibid.

44. Along with Hadid (London), the architects who collaborated on this block are: P. Blake (Washington, USA); C. Jackmann (Berlin); R. Loegler (Crakow, Poland) W. Obtulowicz and D. Karpinski (Crakow, Poland); M. Wahraftig (Berlin) and H. Kossel (Berlin) for the outdoor spaces. See: Internationale Bauausstellung Berlin 1987. Projektübersicht (1991), 106-107

In Block 2 there is no typological uniformity. In its houses, which include more than 110 apartments, there is neither an overarching rule for the rooms facing the courtyard (sometimes kitchen, sometimes sleeping rooms, depending on the house) nor one concerning the location of the entrances – from the street or from the courtyard. Therefore, it is hard to label univocally the typological solution provided in IBA Block 2 as either block or courtyard. It is rather a mixture of both.

Figure 8. *IBA Block 2. Photo of the Gate to the Southern Courtyard on Bernburger Straße and Ground-Floor Plan*

Source: Top: Photo by the author (2021). Bottom: Drawing made for the seminar "Der Berliner Block 1890-1980er" at the Potsdam School of Architecture (2020/21) and further edited by the author (2021). Redrawn after: Kleihues (Ed.), *Internationale Bauausstellung 1984/87. Die Neubaugebiete. Dokumente. Projekte 7* (1993), *Internationale Bauausstellung Berlin 1987. Project Report* (1991), and original building plans.

For the purposes of this paper, what is interesting to emphasize about this block is the way in which its green, uncovered courtyards combine, connected by small gates at the level of the ground floor. This spatial "enfilade" of courtyards is hardly noticeable from the outside since these uncovered spaces are raised above street level (Figure 8). Inside one of these peaceful "uncovered rooms" in Block 2, it is difficult to realize how close one is to Potsdamer Platz, one of the busiest areas in contemporary Berlin.

Reformed Urban Blocks/IBA Blocks: Analogies and Differences

After careful analysis of different IBA blocks, it emerges that the relation with the 19th-century block assumed as a reference by the IBA is mostly limited to morphological aspects, to its perimeter and to the height of its buildings, without reassuming many of its former typological or spatial features. Indeed, the IBA blocks lacked one fundamental prerequisite for recovering the complexity of the 19th-century block, namely the division of ownership in different plots. In an article published in the German architectural journal *Bauwelt* in 1997 and entitled *Der Berliner Block* (The Berlin Block), the architecture critic Dieter Hoffmann-Axthelm strongly criticized this aspect, observing how IBA blocks "misunderstood the block as an architectural figure instead of as a basic component of urban planning".[45] This feature suggests a parallel, and as noted by Hoffmann-Axthelm "This misunderstanding by no means begins with Kleihues and the IBA, but far earlier, at the root of modernism".[46] In fact, it was not the IBA that paved the way for the merging of small plots of land prior to the design of new blocks. As observed at the beginning of this paper, this process was already implemented in the first decades of the 20th century in reformed urban blocks.

It is interesting to note that in both reformed and IBA blocks, the *Mietskaserne* underwent similar morphological and spatial transformations, such as the emptying of the courtyards and the dissection of the block by an inner street. IBA blocks and reformed blocks share similar ways of defining the open spaces of the courtyards – green open spaces instead of the many small courtyards of the *Mietskaserne* – and an increased openness to the public space.

> "If we now approach (…) the Kleihues' block on Vinetaplatz, one thing is evident: we are back at Messel. This is as obvious in relation to the aesthetic program of the architectural block as it is in relation to the typology of perimeter block development with a gardened interior."[47]

45. Hoffmann-Axthelm, "Der Berliner Block," 1997, *922.* Translated by the author. Original: "(…) Missverständnis, der Block sei eine Architekturfigur und kein Stadtplanungsbaustein".

46. Ibid. Translated by the author. Original quote: "(…) dieses Missverständnis beginnt keineswegs erst mit Kleihues und der IBA, sondern weit früher, an derWurzeln der Moderne"

47. Ibid, 924. Translated by the author. Original quote: "Geht man jetzt auf (…) den Kleihues-Block am Vinetaplatz, dann ist eines evident: Wir sind wieder bei Messel. Bezogen auf das ästhetische Programm des Architekturblocks ist das so offensichtlich wie bezogen auf die Typologie der Blockrandbebauung mit gärtnerisch angelegter Innenfläche."

With these words Hoffmann-Axthelm further elaborates, in the same article, his critique of unitary blocks without plot division. He acknowledges that this condition can be found both in reformed urban blocks and in IBA blocks. When presenting his arguments, Hoffmann-Axthelm compares the Weisbachgruppe block, by Alfred Messel – one of the first reformed perimeter blocks in Berlin with an open courtyard used as community garden – with the example of Vinetaplatz by Kleihues already mentioned – the first block to resume this scheme after WWII and a pilot project for the IBA blocks that were designed some years later.

Both blocks were designed and built on a single plot of land. Apart from their morphological and spatial similarities, they also show aesthetic analogies despite having a different architectural language of facade. Indeed, both blocks declare their unity of design to the outside. Their facades on the public streets are uniform and do not simulate any subdivision into smaller units.

This aesthetic of "unity" is a characteristic that reformed urban blocks share with the Vinetaplatz block, but not with later IBA blocks. And here lies one of the fundamental differences between these two phases in the 20th-century development of the Berlin block.

As a matter of fact, in the IBA's critical reconstruction architects aimed to simulate a division of the block into several houses although there was no actual land division.[48] This characteristic was pointed out, for example, for the block in Ritterstraße. Thus, despite sharing with Vinetaplatz and with the reformed urban blocks the same premises in terms of land division, the IBA blocks replace the "aesthetic of unity" with an "aesthetic of variety".

Furthermore, in light of the fact that unlike the architects of Berlin's reformed urban blocks many architects participating in the IBA were from outside Germany, the IBA blocks exhibit a particularly heterogeneous variety. The projects related with very different sensibilities to Berlin, its urban history, and its blocks.

Despite the different contingencies for which they were designed, reformed urban blocks and IBA blocks share similar spatial characteristics. Alongside the parallelism that Hoffmann-Axthelm made between Messel's Weisbachgruppe and Kleihues' Vinetaplatz – two perimeter blocks with empty courtyards – other spatial solutions also recur in both phases.

The six case studies illustrated so far in this paper highlight these recurrences very well. Figures 9,10,11 help to visualize these similarities. They are *Raummodelle*, which in German means "spatial models". By representing as volumes the uncovered courtyards of each block, these models permit an understanding of what the spaces defined by the buildings look like, how they are linked to one another, and how they communicate with the outer public spaces.

If one considers the reformed urban block in Schöneberg and the IBA block in Ritterstraße Nord, for example, it can be noticed that both present a system of courtyards and intersecting streets, organized according to clear spatial hierarchies. Both models feature a central courtyard/square that is crossed by streets or

48. After WWII, most of the land in Berlin was in public hands, either owned by the city or by the State of Berlin (West).

passages, while the other courtyards are not accessible to third parties (in the case of Schöneberg) or are semi-private (Ritterstraße). The spatial models shown in Figure 9 clearly illustrate the spatial similarities between these two Berlin blocks, despite their dimensional and aesthetic differences.

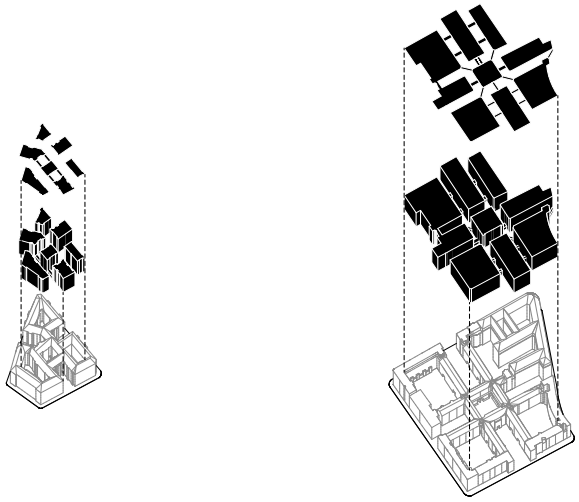

Figure 9. *Housing Block Near the Schöneberg Rathaus (1906–1907) and IBA Block in Ritterstraße Nord (1982–88): Spatial Hierarchies of Interconnected Courtyards and Streets*
Source: Drawing by the author, with B. Berbig (2021).

Another spatial solution that recurs at both moments in the 20th-century development of the Berlin block is represented by the passage, an enfilade of separate courtyards connected by a semi-public path. At the beginning of the century, the Ideal-Passage featured this solution. This was repeated about eighty years later, and adapted to a very different context, in the IBA block known as Block 2. Figure 10 shows this spatial analogy.

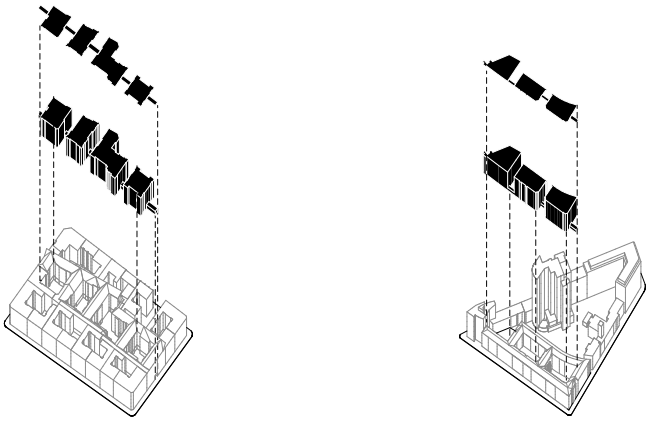

Figure 10. *Ideal-Passage (1907–1908) and IBA Block 2 (1987–1990): Enfilades of Courtyards*
Source: Drawing by the author, with B. Berbig (2021).

Finally, the theme of urban villas around a public garden is also repeated. Figure 11 shows that the spatial solution adopted by the IBA in Rauchstraße is very reminiscent of the one designed by Otto March for Amalienpark, which was planned and built some ninety years earlier.

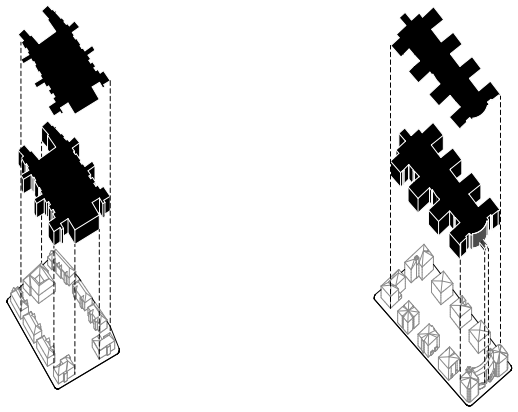

Figure 11. *Amalienpark (1896–1897) and IBA Block in Rauchstraße (1983–1984): Villas Around a Garden*
Source: Drawing by the author, with B. Berbig (2021).

In light of these similarities, we can observe that the IBA advanced the spatial development of the Berlin block from the phase before its modernist denial – that is, reformed urban blocks. However, if reformed blocks represented, after all, the earliest intermediate step towards the opening of traditional urban forms and then towards the modernist denial of the block, it can be argued that the IBA blocks worked in the opposite direction, to restore the Berlin block starting from the spatially-open city of the Modern.

Although they share several spatial features, there are also notable differences between reformed and IBA blocks. Reformed urban blocks were still embedded in a context of streets and squares, with which the spaces of their courtyards communicate. In contrast, in the 1980s the city outside the IBA blocks was no longer the historical city of interconnected spaces but rather a new one, where streets and squares were almost irremediably transformed by traffic plans. Effective communication between the spaces within the IBA blocks and those outside of them is therefore a quite complex issue. At times, this communication is missing entirely.

Further differences between reformed and IBA blocks concern their location and the reason for their construction: the former were mostly erected in peripheral areas of a growing Berlin at the beginning of the 20th century, while the latter were designed to reconstruct the historical city center of the divided (West) Berlin after WWII. Moreover, whereas reformed urban blocks were mostly the result of private initiatives (with public support), the blocks designed by the IBA, a society founded by and supporting the work of the West-Berlin Senate, were the result of public initiatives. It follows therefore that, while the large plots of land on which

reformed urban blocks were built were privately-owned, in the case of the IBA most of the land belonged either to the city or to the state of Berlin (West). It was public land that only later was given to an owner.[49]

It is very important to consider the background to the conception of these projects. Today, the growing Berlin of the German Empire (1871–1918), the Berlin of the Weimar Republic (1918–1933) and the Berlin divided by the Wall (1961–1989) are a distant memory. In this changed context, the question arises as to whether there are still possibilities to use and transform urban blocks in the great metropolis that is Berlin today. Before bringing this paper to its conclusion, the next section answers this question by illustrating some recent proposals for modern Berlin blocks.

The Berlin Block in Contemporary Urban Proposals

In 2019, the competition of ideas called "Berlin-Brandenburg 2070" was initiated by the Architects and Engineers Association of Berlin-Brandenburg to gather proposals for a future development of Berlin together with the neighboring centers of the Brandenburg region.

The winning proposal, by the architects Bernd Albers and Silvia Malcovati (Figure 12), relies extensively on urban blocks, used both in the city center and in the suburbs to reconnect heterogeneous, non-communicating urban fabrics, as well as city and countryside.

Figure 12. *Competition of Ideas "Berlin-Brandenburg 2070" (2019–2020). Winner Proposal by the Architects Bernd Albers and Silvia Malcovati, Detail of the Proposal for Tempelhofer Feld*
Source: Image courtesy of the architects Bernd Albers and Silvia Malcovati.

49. The choice of the owner of the IBA blocks usually took place after the competitions, when the projects were already partly defined. The so-called *Bauherrenwettbewerbe* (competitions for the clients) were introduced for this purpose. See: R. Emenlauer, "Wie man den richtigen Bauherrn findet," in *Das Neue Berlin. Für einen Städtebau mit Zukunft* (Berlin: Gebr. Mann, 1987), 128-131.

Yet it is another of the finalists' proposals that is particularly interesting for this paper. It is the project entitled *Stella* by the architect Uwe Schröder (Figure 13). Here, among the three "metropolitan typologies"[50] proposed for three different locations selected in the city of Berlin, one focuses on the theme of the block and experiments with it.

This proposal does not so much look back to the 19th- nor to the 20th-century Berlin block. Because of their enormous size and the large spaces fields they encompass, *Stella's* blocks, with their exaggerated dimensions, are rather reminiscent of the southern blocks of Friedrichstadt defined by Gerlach's baroque plan of the 18th century. These baroque blocks were over six hundred meters in length and embraced huge inner courtyards that were used mostly for agricultural production. At two or three-storeys, however, they were far shorter than the blocks in Stella – up to 80 meters high.[51]

Figure 13. *Competition of Ideas "Berlin-Brandenburg 2070" (2019–2020). Proposal by the Architect Uwe Schröder, Detail of the Blocks Proposed for Berlin-Wartenberg*
Source: Image courtesy of Uwe Schröder Architekt.

For the suburbs of today's Berlin, where a dialogue between architectural spaces, landscapes, and urban fields is missing, Schröder's proposal envisions blocks that embrace the landscape, giving it architectural boundaries. Parks, cemeteries, or community gardens are included in the block.[52] Thus, the interior of the block becomes a public urban field.

The blocks proposed for *Stella* are closely related to each other, connected by streets whose proportions depend on the buildings that delimit them, so that these

50. U. Schröder, *Stella. Sternbild Berlin Brandenburg 2070* (Cologne: Verlag der Buchhaltung Walter und Franz König, 2021), 27.
51. Ibid, 41.
52. Ibid.

streets are always perceived as architectural spaces. Thus, in contrast to the IBA, which sought to reconstruct the block but in doing so at times "forgot" the street, Schröder revolutionizes the spatiality of the block to adapt it to the scale of the metropolis but conceives this revolution within a proposal for urban design in which streets and squares still play a fundamental role.

Schröder's proposal re-thinks the spaces of the city and of the countryside and prompts dialogue. Consequently – and here lies one of the fundamental premises of this design proposal – city and landscape are given those necessary clear reciprocal boundaries that are often missing in the peripheries of our metropolis.

A utopia? Probably. Nevertheless, what both selected proposals for Berlin-Brandenburg 2070 show is that it is still possible to experiment with streets, squares and courtyards to solve the problems of the spatiality of the city – also in the controversial suburbs.

Stella does not copy any block from the past. In the same way that reformed urban blocks transformed the 19th-century block to adapt it to the changed conditions of an early 20th-century Berlin, Stella envisions blocks for the Berlin of the 21st century that, in the words of its architect, "embody the new scale of the metropolis."[53]

Conclusions

In the 1970s, before being appointed director of the IBA Neubau, Josef Paul Kleihues wrote with deep interest about the spatial solutions adopted in reformed urban blocks at the turn of the century. This is evidenced by several of his texts, in particular by his paper "Housing Blocks" published in Lotus International in 1978 and its numerous translations.[54] However, as pointed out at the beginning of this paper, both during and after the building exhibition of the 1980s there was barely direct reference between the reform blocks and the IBA blocks. And yet, as demonstrated by the comparative drawings within this paper, there is no lack of spatial and formal similarities.

Awareness of these affinities represented the starting point for the research presented in this paper, which aims to reconstruct – or at least to speculate on – connections between projects of Berlin blocks realized more than half a century apart. Primary sources for this research are the buildings themselves, which have been studied through photos and re-drawings, highlighting their spatial conceptions. Thereby, some considerations on the reasons, but especially on the value of the spatial solutions offered by these projects can be made to sum up the main points raised in this paper.

It was noted that reformed urban blocks considerably improved the quality of life within urban blocks for the working class by the early 20th century. These blocks can be seen as an early farewell to overbuilt rental blocks towards an increased openness of the urban spaces. Through wide empty courtyards, interior streets, and courtyards open to the street, the boundaries between private and

53. Ibid.

54. See footnote no. 10 in this paper.

public spaces become increasingly blurred. While initiating a spatial revolution, however, the reformed blocks were built in a context still strongly embedded in a traditional spatial conception. In those same years, slowly but steadily, the open form of the modern avant-garde was gaining momentum.

On the contrary, for IBA 1987 the starting point was the dominant spatial conception of the Modern Movement, of an absolute space. Rather than aiming for an opening up of urban spaces, the IBA sought to return to a city of spatially-bound, interconnected spaces, stitching together the pieces of a fragmented city – or at least attempting to render those urban fragments meaningful again by reintegrating them into a spatial continuity. In doing so, the IBA sought to free itself from modernist spatial conceptions and aimed instead to return to a city made up of streets, squares and courtyards.

Nevertheless, the IBA projects often reveal a "spatial confusion", where traditional urban spaces – courtyards, streets, squares – are present together with solitary buildings, that is, with the "objects" of the modern city – to paraphrase Colin Rowe.[55] In retrospect, the outcomes of the IBA can be read as the outcomes of the search for a compromise between the spatially-open city and the spatially-bound city. In the IBA blocks, these paradigms meet (and clash).

The present paper introduced first reform blocks and then IBA blocks, in chronological order. Besides presenting the projects, it delved into their historical and theoretical context, to allow for their contextualization. Compared to most of the existing literature on IBA and on reformed urban blocks, the major novelty of this paper lies in the fact that it presents these two moments together, allowing their cross-referencing and thus highlighting their affinities. By visualizing that the spatialities of some IBA blocks are very reminiscent of those of former reformed urban blocks, it also demonstrates that there are indeed spatial solutions whose advantages are timeless.

Furthermore, this paper's reference to recent design initiatives such as the Berlin-Brandenburg 2070 competition aims to demonstrate that – just as in the early 20th century with the reform blocks and in the 1980s with the IBA blocks – it is still possible to experiment with the typology of the urban block, adapting it to the needs of contemporary cities and metropolises. Today, almost forty years after the IBA, modernist spatial conceptions still dominate, with the major difference that the paradigm of the "car-friendly" city has been replaced by others, like that of sustainability.

In this regard, it has often been stressed that the compact and spatially-bound city offers advantages in terms of mobility in view of more sustainable cities. However, in most of the current debates on sustainability, spatial issues in urban design are somewhat disregarded. And yet these issues also deserve a mention: If sustainability means acting with a view to future generations,[56] it is consistent to claim that preserving (and developing further) the elements that have long determined the identity of our cities will be a duty for those generations. Urban

55. C. Rowe and F. Koetter, Collage City (1978), 62.

56. I refer here to the first explicit formulation of the concept "sustainability", namely that given by the Brundtland Report in 1987.

blocks, with their courtyards, are one of these fundamental elements of the city of spaces that posterity deserves to know.

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From the Landscape of Contrasts to the Landscape of Invisible Cities: A Strategic Landscape Design for the Revitalization of the Ancient Greek Colony of Megara Hyblaea in Sicily

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The present research aims at revitalising the archaeological park of Megara Hyblaea through innovative strategies developed within the PON project "An early warning system for cultural heritage/e-WAS". In this project Sicilian research institutions, universities and companies pursue the common goal of developing new technologies for the protection, enhancement and strategic management of the historical and cultural heritage. The ancient Greek colony of Megara Hyblaea is immersed in an industrial landscape that stretches along the coast of eastern Sicily from Augusta to Syracuse. The sense of the original place has been obliterated by an indiscriminate occupation of the land by industries which have left, here and there, an archipelago of "patrimonial wrecks", which are equally close to the smelly chimneys and the horizon of the sea. This landscape of contrasts, dominated by petrochemical industries, has over time hindered a cultural tourism appropriate to the representativeness and importance of the asset, despite the efforts made by the authorities responsible for its protection. The paper demonstrates the need for a holistic approach to the revitalisation project of the archaeological site: the strategic design, understood as the story of the overlapping of "invisible cities", aims to reorganise and re-conquer places through a new narrative coherent with hidden values, going as far as the experimentation of innovative technologies for the creation of facilities for the enjoyment of the park.

Introduction

The work illustrated in this contribution is part of the Research Project called *eWAS - An Early Warning System for Cultural Heritage*. It is a project financed by the Italian Ministry of Education, University and Research, whose aim is the experimentation of new technologies for the protection, conservation, management and safety of cultural heritage.

As part of a wide range of objectives, the eWAS project includes the design and prototyping of facilities for archaeological sites. To this end, the ancient Greek colony of Megara Hyblaea was chosen as a test site for the realisation of a responsive cover in composite material and an innovative visitors pavilion with low environmental

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impact. Megara represents a case of great importance in the archaeological panorama of the whole of Magna Graecia, as it provides overlapping and clearly legible archaeological evidence of the first colonial settlement dating back to the end of the 8th century BC, the archaic phase of the city, and the subsequent Hellenistic phase of the 4th century BC. Nevertheless, the site is subject to important weaknesses. Situated on the eastern coast of Sicily (Figure 1) and literally besieged by the Syracuse petrochemical complex, the site is now an enclave in the industrial landscape, excluded from the main communication axes and tourist circuits.

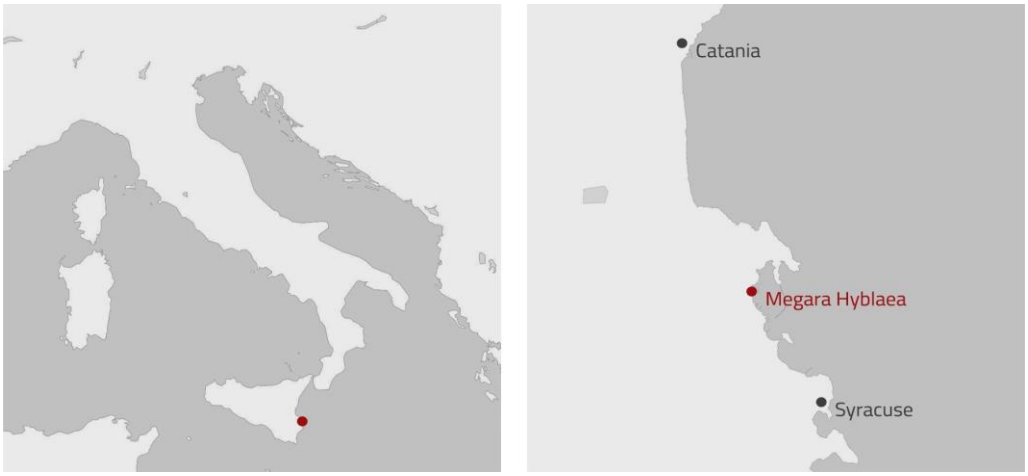

Figure 1. *Location of the Experimental Site*

On the other hand, the location of the archaeological site holds great potential from a landscape point of view, being situated on a plateau overlooking the sea and open to the coastal landscape of the Gulf of Augusta. The ancient city, therefore, with its values and threats, represents an ideal terrain for the experimentation of innovative protection and fruition support structures.

The design research concerned not only the technological aspects of the facilities, but also the framing of the architectural interventions in a strategy of global revitalisation of the archaeological site. The project was therefore approached with an interdisciplinary and inter-scalar, landscape-oriented approach, with the intention of promoting a reinterpretation of the landscape of the Gulf of Augusta that can restore centrality to the identity features of the cultural and natural heritage, triggering new relationships between places, heritage and communities.

In this text, after a brief state of the art on the concepts of landscape, territory and heritage, on the one hand the relationship between archaeological heritage and architectural design are focused on; on the other hand, an examination is made of the consolidated technological solutions in architectural constructions within archaeological sites.

The literature considered constitutes the critical design framework for the case study. The paper then focuses on the description of the methodology adopted and its implementation in the revitalisation project of the archaeological site of Megara Hyblaea. In this way, the paper aims to contribute to a wider debate on landscape and architectural design within archaeological sites, highlighting the relevance of the landscape approach in enhancing archaeological heritage.

Landscape, Territory and Heritage

The signing of the *European Landscape Convention* (ELC) in Florence in 2000 marked a turning point in the understanding of landscape. No longer confined to aesthetic-contemplative or ecological-environmental interpretations, the landscape is described as a mosaic of historical, cultural, ecological, social and economic values, as a context of life, expression of local identities and diversity. Its character is at once dynamic, relational and participatory.[57] Moreover, "acknowledging that the landscape is an important part of the quality of life for people everywhere: in urban areas and in the countryside, in degraded areas as well as in areas of high quality, in areas recognised as being of outstanding beauty as well as everyday areas",[58] the ELC attributes equal dignity to all landscapes and involves the populations in their conservation and enhancement. Landscapes are cultural entities, resulting from the relationships between communities and places;[59] if, in addition, they are conceived as resources (physical or immaterial) invested by a system of historical, cultural and identity values of places, they become *common goods*.[60] This approach to landscape resonates with the research of the Italian *Scuola Territorialista*[61] which, by considering the territory as the historical product of long-term co-evolutionary processes between human settlement (culture) and the environment (nature), recognises the existence of a "territorial heritage".[62] The principles underlying the Faro Convention (2005),[63] which emphasises the link between cultural heritage and democracy and encourages the recognition of the value of cultural heritage in the meanings and uses attributed to it by people, belong to the same cultural posture.

The historical-evolutionary and local-centred perspective of the *territorialist* approach to bioregional spatial planning is now put in tension with the paradigm of "ecosystem services",[64] whose relevance has grown exponentially since the end of

57. S. Calvagna, "Verso la definizione di un Paesaggio Vulcanico Urbano sull'Etna. Dalla città di Catania all'area metropolitana," in M. Arena and A. Villari (ed.) *PAESAGGIO 150: Sguardi sul Paesaggio Italiano tra Conservazione, Trasformazione e Progetto in 150 Anni di Storia* (Roma: Aracne, 2012), 236.

58. ELC, Preamble. Retrieved from: https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/176. [Accessed May 2021.]

59. G. Fairclough, "Essentially Cultural: Perspectives on Landscape from Europe," *Landscape Journal* 35, no. 2 (2016): 149-166.

60. P. Donadieu, *Paysages en commun: Pour une éthique des mondes vécus* (Valenciennes: Presse Universitaire de Valenciennes, 2014), 24; J. D. Gerber and G. Hess, "From Landscape Resources to Landscape Commons: Focusing on the Non-Utility Values of Landscape," *International Journal of the Commons* 11, no. 2 (2017): 708-732.

61. Born in the early 1990s in Italy by teachers and researchers of urban planning and sociology: A. Magnaghi (Università di Firenze), G. Ferraresi (Politecnico di Milano), A. Peano (Politecnico di Torino), E. Trevisiol (IUAV), A. Tarozzi (Università di Bologna), E. Scandurra (Università di Roma 'La Sapienza'), A. Giangrande (Università Roma Tre), D. Borri (Università di Bari) e B. Rossi Doria (Università di Palermo).

62. A. Magnaghi, *Il progetto locale: verso la coscienza di luogo* (Torino: Bollati Boringhieri, 2010).

63. Faro Convention. Retrieved from: https://www.coe.int/en/web/venice/faro-convention [Accessed May 2021.]

64. D. Poli, "Tracciare la rotta per iscrivere i servizi ecosistemici nella pianificazione bioregionale," in D. Poli (ed.) *I Servizi Ecosistemici nella Pianificazione Bioregionale* (Firenze: Firenze University Press, 2020), 129-135.

last century, due to changing environmental conditions.

The imbalance between human settlement and the environment and the impressive degradation of the *territorial commons* are rooted precisely in the interruption of those co-evolutionary processes emphasised by the territorialist approach. The laceration of the interaction and mutual transformation between man and the environment by the industrial and post-industrial civilisation of machines is at the origin of the current environmental crisis. The need to overcome the Manichaean opposition between uncontrolled exploitation and crystallisation of the environment in 'protected reserves' of cultural and natural assets, in favour of a planning vision in which the collectively patrimonialised territorial palimpsest produces ecosystem services capable of improving people's quality of life –and not limited to a numerical and quantitative assessment of natural resources with the risk of their commodification[65]– now seems evident. In pursuing a "return to the territory",[66] far from being a vain and nostalgic attempt to restore the original state, but rather aimed at establishing new and more efficient balances,[67] the proactive vision of the landscape promoted by ELC integrates with the logic of *re-territorialisation* mentioned above. Overcoming the nature/culture dualism, the landscape should be approached not so much as an object *on which* to act (generally in the end, in the name of an ideology of the picturesque), but rather as a *milieu* of human existence *with which* to act, in search of a confrontation with society and its spaces, of which the landscape is expression.[68] The landscape project, Pierre Donadieu observes, adapting to the period of irreversible transitions we are living through, is based on new paradigms: the aforementioned ecosystem services, the multisensory emotions, the projects over time and the places of memory.[69] Experience and time are project materials: the site is not a *tabula rasa* but «a place where the chosen form and values evoke the local history» and a *milieu* in which continuous ecological processes (R.T.T. Forman) occur. "The project guides the process but not decides the end states" and is focused on the experience of users, which are "sentient beings to their environment with their five senses".[70]

The Archaeological Heritage between Memory and Identity – The Ruins Project

An important role in relation to the landscapes of places of memory is certainly played by archaeological areas. Archaeology, in fact, as the physical materialisation of memory, is an important factor in the creation of identity, referring to a

65. A. Franchina, "Servizi ecosistemici in chiave progettuale e proattiva," in D. Poli (ed.) *I Servizi Ecosistemici nella Pianificazione Bioregionale* (Firenze: Firenze University Press, 2020), 59-64.

66. A. Magnaghi, "Mettere in comune il patrimonio territoriale: dalla partecipazione all'autogoverno," *Glocale. Rivista Molisana di Storia e Scienze Sociali*, no. 9/10 (2015).

67. Ibid, 52.

68. J. M. Besse, *La nécessité du paysage* (Marseille: Éditions Parenthèse, 2018), 111.

69. Donadieu, "Landscape Architecture to Morrow: a Democracy of Landscape Commons?", in *Tasting the Landscape: 53rd IFLA World Congress*. Torino, April 20-22, 2016) (Firenze: Edifir, 2016), 36-37.

70. Ibid, 36.

temporal and geographical extension which intersects different regions, cultures and events on a wide scale and activates a plurality of belongings.[71] The problem of the transformation of the archaeological landscape can be approached from two perspectives, that of memory and that of identity. Their integration leads to an approach that is not "from the traces" but "on the traces", i.e., instead of "discovering the ruins" (the task of the archaeologist), it enhances them and makes them readable.

Architectural design therefore interprets the concept of ruin differently from archaeology. While for archaeology the ruin, even after discovery and related study, remains a "document" or "find" to be attested chronologically and included in the framework of a wider scientific knowledge, for architecture the ruin is revealed as the primary image of the architectural form. The memory contained in the ruins expresses the existence of "a pure, undated time, absent from this world of images, simulacra and reconstructions of ours".[72] Moreover, it can be observed that "ruins have a 'physical' nature, as materials subject to degradation and transformation, and a 'mental' nature, as bearers of ideas, values and cultures linked to a given environment and a given historical period".[73] According to Georg Simmel, this degradation confers great fascination on the ruin, since it makes man's work perceived as a product of nature:[74] in this sense, the ruin mitigates his severity by becoming absorbed into the natural environment. The ruins are therefore presented as "semiophoric objects" (bearers of meanings): they do not have an intrinsic and univocal communicative capacity but represent the result of dynamic parameters such as space, time, energy and information. The attribution of meaning to the ruin must take place following a cognitive process that does not close it off in the interpretation of "an oppressive and paralysing legacy" but considers it "a wealth for the present that is projected into the future; a cognitive process that therefore builds around the ruin a 'monumental' character that distinguishes it from the idea of 'rubble', placing it halfway between *project* and *memory*".[75]

The attribution of meaning to archaeological settlements and the definition of a contemporary role for ruins have varied over centuries depending on the relationship between archaeology and architecture. While in the nineteenth century the two disciplines were presented as clearly distinct – the former being concerned with archaeological sites and the latter with modern cities – since the 1970s a rapprochement between the two subjects can be observed.

Thus, the conservative or transformative approach to the valorisation of archaeological sites has been debated. In recent decades, there has been a renewed

71. L. Basso Peressut, "Archeologia/Archeologie: identità e rappresentazioni museografiche", in S. Canepa, V. Minucciani and M. Vaudetti (ed.) *The Archaeological Musealization* (Torino: Umberto Allemandi & C., 2012).

72. M. Augé, *Rovine e macerie: Il senso del tempo* (Torino: Bollati Boringhieri, 2004), 135.

73. V. P. Bagnato, *Nuovi interventi sul patrimonio archeologico: Un contributo alla definizione di un'etica del paesaggio* (Barcelona, 2013), 51.

74. G. Simmel, "Die Ruine," in *Philosophische Kultur: Gesammelte Essays* (Leipzig: Klinkhardt, 1911).

75. Bagnato, *Nuovi interventi sul patrimonio archeologico: Un contributo alla definizione di un'etica del paesaggio*, 2013, 53.

focus on the context: the increasing need to musealise archaeological sites and to provide them with new buildings for accommodation and exhibition purposes has generated a more "contextualist" attitude, seeking "integration" between the environmental and archaeological context through the dialogue of forms and materials. The ancient-modern dichotomy was also overcome by contrasting the idea of "archaeological find" with that of "architectural fragment"; [76] the idea of the ruin has merged with that of the architectural object, making the fragment independent of its unique relationship with the past, and also becoming an architectural element that generates new forms and new meanings.

What happens "is not the transfer of the ancient object to the present time, but the codification of an idea of architecture in 'archaeological' terms; it is not the ruin that becomes modern, but the new that becomes archaeology, in a timeless dimension".[77]

Sustainable Technologies for Archaeology

The design approach for interventions in archaeological contexts is usually directed to the preservation and conservation of the findings as priority focus. For this reason, design research efforts are mainly focused on roofing structures or protective shelters for artefacts that are more subject to the degradation of the material. The numerous design workshops on this subject, which aim to bring together a multidisciplinary approach, demonstrate the complexity and importance of this research topic.[78] In addition to the approach often measured to the idea of building in an already built environment, which in this case has great testimonial value, the attempt to use non-invasive technologies is a constant element (minimal foundations, light and reversible structures, large free spans, compatible materials). As a result, the use of experimental technological solutions is often undertaken for innovation with respect to construction practice. The high value and uniqueness of the findings also means that particular attention must be paid to the choice of envelope materials so that no unfavorable thermo-hygrometric conditions are created that could lead to alteration of the protected material.[79] The technological innovation that today seems to respond most to the demands of sustainability (economic, environmental and cultural sustainability) concerns the use of so-called

76. F. Purini, "Il frammento come realtà operante," *Firenze Architettura*, no. 1 (2006): 2-9.

77. Bagnato, *Nuovi interventi sul patrimonio archeologico: Un contributo alla definizione di un'etica del paesaggio*, 2013, 31.

78. M. Vanore (Ed.), *Archaeology's Places And Contemporary Uses* (Venezia: IUAV, 2010); G. Parrello et al., "Architecture for Archeology: Identifying New Modular and Flexible Types of Shelter Adaptable to the Diverse Needs of Archaeological Sites," in *XII International Forum Le Vie dei Mercanti Aversa*. Capri 12, 13, 14 June 2014.

79. Ç. F. Yaka and B. İpekoğlu, "Impact of Transparency in the Design of Protective Structures for Conservation of Archaeological Remains," *Journal of Cultural Heritage* 14S (2013): e21-e24.

textile materials or *fabric structures.*[80] These are preferred to the use of glass or plexiglass because their degree of transparency can be calibrated in relation to specific needs. In fact, they are made with a polymeric matrix with a natural or artificial textile reinforcement. Their transparency could be changed in relation to the choice of a specific fabric wave.

However, design interventions for archaeological area should also encourage the use and communication of the findings,[81] as well as aiming to safeguard the materials. This because knowledge and use certainly play a driving role in the process of safeguarding. In order to achieve these further aims, roofing structures can play a prominent role, but a series of service facilities and an overall design of the use system should certainly be flanked. These facilities must also employ technological solutions that guarantee minimum impact on the ground and the possibility of being easily dismantled and reassembled. To guarantee this performance it is necessary to use technologies with a high level of environmental sustainability, using recycled or recyclable materials. The Atelier Peter Zumthor project in Sauda, Norway, is emblematic in this sense. The design of the service facilities in the industrial archaeology mining park consists of a series of small volumes with minimal impact on the land thanks to the presence of a wooden frame. The frame rests on the rocky ground below with specially shaped metal load distribution plates, without creating any alterations. Given the difficult accessibility of the site and the need not to affect the context, the volumes were entirely prefabricated in the nearby town of Sauda and transported to the site.

The Crossing-Scales Project between Landscape, Archaeology, Architecture and Technology

The project has been framed in a wide-ranging and inter-scalar strategic landscape design. The aim was at the reorganisation and reconquest of places by means of a new narrative innervated by the system of local values, going as far as the experimentation of innovative construction technologies in harmony with the archaeological landscape. The project is intended as a story that brings together the site's future in *federating themes*: by encouraging a process of territorial government that includes the transmission of heritage, it aims to help people rediscover the pleasure of living together in a specific place.

The landscape posture of the archaeological area project is based on the following principles:

- Places of memory extend to the whole territory and are not limited to the archaeological site itself; if the landscape is everywhere, even in everyday places, the archaeological site must enter into dialogue with landscape of

80. A. Zanelli, "Architectural Fabric Structures in Refurbishment of Archaeological and Cultural Heritage Areas," in J. I. Llorens (ed.) *Fabric Structures in Architecture* (Cambridge: Woodhead Publishing Limited, 2015), 481-527.

81. P. M. Militello, "Archaeologists and Archaeological Cover," in M. Vanore (ed.) *Archaeology's Places and Contemporary Uses* (Venezia: IUAV, 2010), 49-65.

surroundings, even when it is a degraded landscape.

- Landscape is a *relational entity*; therefore, the project tends to build networks of physical and immaterial relations and to interlace the heritage stratifications (of which the archaeological site is part) with the territorial and ecological ones.
- In order to implement the two principles described above, the project must therefore *cross the scales*[82] as to be able to grasp the systemic dimension of the landscape: the traces of archaeological site acquire meaning by resonating both with the landscape and with the intervention on architectural scale, in a reciprocal and continuous exchange.
- The landscape project has a strong heritage connotation: the landscape is itself heritage, because it has a cultural dimension, and at the same time it contains heritage, because it represents as a whole the framework on which local identities are based.
- The project for the revitalisation of the site is dynamic: it is not limited to the control of the result, of the configuration of a final crystallised layout, but intends to manage the process, on several time scales.
- Being based on the relationships between communities and places, landscape design is a sensitive process, which takes into account multisensory emotions: the approach to the archaeological site tends therefore not to be limited to visual aspects, but uses the synesthetic experience to favour the appropriation of places by the users.

In order to initiate a re-weaving of the network of physical and immaterial relations between archaeological heritage, place and community, the design process was intertwined with a dialogue with stakeholders. It was considered necessary to understand to what extent the local community identifies with its territorial heritage,[83] as to identify a shared hypothesis of general interest to be pursued. The idea of an archaeological park emerged as a space of integration between archaeology and nature and between the different historical stratifications. From a strictly planning point of view, the project imagined the future of the site not from the point of view of protection, but of guided co-evolution of the processes in place.

The Experiential Pavilion Project: The Intersection of Two Processes

Extrinsic Method: From Landscape to Architecture

The archaeological site has been interpreted as an "open-air" exhibition place, in which ruins remain where they were found, "musealizing" the archaeological area itself. Architectural interventions are therefore conceived in relation to

82. M. Corajoud, "*Le projet de paysage: lettre aux étudiants*," in J. L. Brisson (ed.) *Le Jardinier, l'Artiste et l'Ingénieur* (Lagrasse: Éditions Verdier, 2000), 37-50.

83. Magnaghi, *Il progetto locale: verso la coscienza di luogo*, 2010.

topographical aspects (relationship between ruins and landscape) and visual aspects (relationship between the aesthetics of the ruins and the morphology of the landscape), and not only to the control of the architectural elements themselves.

Through architecture, the ruin becomes not only a precious trace of the past, but a trace open to new possible configurations and new meanings. Architecture claims its right to coexist alongside archaeology and, while working with an analogical approach, acquires conceptual and material autonomy and recognisability.

The design experimentation embraces the coastal strip between Augusta and Thapsos and is developed on three scales of observation: territorial (masterplan), intermediate (archaeological park) and architectural (exhibition pavilion). Two alternative hypotheses for the arrangement of the facilities within the area of the excavations have been developed, based on two different concepts: a more radical one, which gathers the visitor support facilities around a strong sign, a linear metal structure containing seats, shelters, pavilions, raised terraces and belvederes; another solution, instead, emphasises the sedimentation of the places, making the single facilities emerge in strategic points, near the remains of the most relevant monuments along the main routes of the ancient city. The latter solution was considered the most suitable for the pursuit of the objectives of the e-WAS project because is able to enhance the immersive approach advocated by the archaeologists of the Ecole Francaise de Rome (EFR) and is also more compatible with the time and resources available. Therefore, it was developed up to the prototyping of some elements. The first solution, on the other hand, is reported in the discussion of this paper as useful working material to outline an alternative path emerged from the same strategic design, confirming its fertility.

Intrinsic Method: From Detail (Technology) to Architecture

The e-WAS project envisages the definition of innovative technologies for the construction of equipment to support visits to archaeological sites whose performance meets the requirements of sustainability in the broadest sense of the term. In order to be sustainable, an intervention in an archaeological area must not only be economically and environmentally sustainable, but must also meet the requirements of minimal impact on the context in which it is built, be light and completely reversible. This translates into building objects that must meet a number of requirements:

- Ease of transport and assembly of components, as archaeological sites are often difficult to access by vehicle.
- Unobtrusive surface foundations, so as not to alter the site.
- Easy reconfiguration in the event of a change in visitor routes for further study, excavation or restoration campaigns.
- Energy self-sufficiency, due to lack of connection to the electricity grid in the most isolated sites.

The research therefore envisaged the definition of a basic component, a prefabricated panel in wood and cardboard, light and easy to assemble, which

constituted, with its possible variations, the alphabet with which to construct the words of the project.

The Case Study of Megara Hyblaea, a Heritage Hidden among Contrasts

The coastal area of the province of Syracuse is profoundly marked by human activity, which has irrevocably altered the original layout of the area, creating a complex palimpsest of physical and temporal stratifications of archaeological, urban and industrial elements (Figure 2). From a geomorphological point of view, the surrounding sequence of limestone hills, the Climiti mountains, are an identifying feature of the entire local context. A sequence of natural 'caves' carves these mountains down to the sea, housing a rich spontaneous vegetation alternating with ancient 'gardens' of citrus fruits set below a drier landscape of fallow land or pastureland.

The favourable natural conditions – conformation of the gulf, ease of landing and abundance of water – have allowed man to settle here since prehistoric times, building up a rich and stratified historical and archaeological heritage (Stentinello, Megara Hyblaea, Thapsos, etc.). The same resources that led to intense and 'refined' anthropisation in ancient times, have led to the current problematic concentration of settlements and uses. The heavy transformation of the territory began in 1949 with the establishment of the first mineral oil refinery south of Augusta. The progressive flourishing of highly polluting industries, power stations, purifiers, incinerators and refineries disrupted more than 20 kilometres of coastal territory. This abrupt transition from a backward agricultural society to forced industrialisation profoundly changed the physical image and identity of the area. In less than twenty years the beautiful south-eastern coast of Sicily was defaced and altered. It cannot be ruled out that there was also the destruction of what was still buried and unknown at that time. Today it is possible to recognise that the industrial policy has partially failed and has not succeeded in achieving the aspired self-propulsive development of the territory. The consequences of the petrochemical revolution on the health of inhabitants and workers are dramatic, and they are accompanied by irreparable environmental damage, air, water and soil pollution.

Having escaped the threat of being obliterated by the construction of the Petrochemical Pole thanks to the significant intervention of the Superintendency in the early 1960s, the archaeological site of Megara Hyblaea is now partially hidden among the industrial installations. The site preserves the vestiges of the ancient city born during the massive Greek colonisation that involved Magna Graecia and the eastern coast of Sicily from the 8th century BC. Megara Hyblaea was founded in the second half of the 8th century BC.[84] For its first 245 years, in the so-called

84. A. Tullio (Ed.), *Itinerari archeologici in Sicilia* (Palermo: Dario Flaccovio Editore, 2002), 222-224; M. Gras, "La colonizzazione greca e la Sicilia, Megara Hyblaea e la nascita dell'urbanistica in Sicilia orientale," in *La colonizzazione Greca e la Sicilia, Megara Hyblaea e la Nascita dell'urbanistica in Sicilia Orientale* (Palermo: Ed. Regione Siciliana, 2006); G. Vallet, F. Villard and P. Auberson, *Megara Hyblaea 3: guida agli scavi* (Roma: École Français de Rome, 1983).

Archaic phase, the city was one of the richest and most flourishing centres in Sicily. During the 6th century BC. Megara allied itself with neighbouring Syracuse and was completely destroyed between 482 and 483 by Gelon the Syracusan. In 415 BC the city was reduced to a Syracusan stronghold until 340 BC and was subsequently repopulated by Timoleon, but never reached the size and splendour of the city of the Archaic period.

Figure 2. *Aerial View of the Archaeological Site of Megara Hyblaea*
Source: Photo by L. Valenti.

The Hellenistic phase began here: in the 3rd century Megara Hyblaea played an important role in the Second Punic War against the Roman Empire, which determined its ruinous fate: shortly afterwards, it was besieged and destroyed by the Roman consul Marcellus. A small settlement was established on the ruins of the city and remained there throughout the 2nd and 1st centuries BC, followed by a further period of abandonment. It was only in the 4th century AD that a small village arose, which used the remains of the ancient city, especially the fortifications, as a stone quarry.

The excavation area today occupies a limestone plateau overlooking the Gulf of Augusta. The area of the settlement, characterised by a very regular division of plots of land, is completely flat, without an acropolis, and surrounded by imposing walls: it is about 1 km wide (east/west) and about 800 m long (north/south). The full realisation of the urban space was reached in the second half of the 7th century BC, with a clear distinction between private spaces (plots of land with associated dwellings) and public spaces (roads, religious and civic buildings and areas). The agora, the civic place par excellence in the Greek city, was already in the urban layout of the 8th century BC, identified as a large trapezoidal open space of about

2370 m^2 between the dwellings. After Gelon's destruction in 483 BC, following the repopulation by Timoleon after being abandoned for about a century, the streets, the agora and the city walls were restored in a smaller size, but the regularity that characterised the archaic city was lacking.

Figure 3. *Georges Vallet and the First Excavations of Megara Hyblaea*
Source: Archive of N. Privitera.

As the city has not been extensively occupied after 483 BC, part of its archaic levels can be clearly traced below ground level and is therefore of great importance in the panorama of archaeological studies of Greek Sicily. Megara, abandoned and forgotten for centuries, began to arouse interest in 1864 with the visit of Julius Schubring.[85] It was only a few years later, at the end of the 19th century, that Francesco Saverio Cavallari and Paolo Orsi inaugurated an archaeological survey of the area. Studies of the site were then continued by François Villard and Georges Vallet, young members of the EFR, who in 1949 led the first French archaeological mission to Megara Hyblaea (Figure 3), with the aim of refining the chronology of Corinthian pottery. In more recent times, research on the site has been continued by several members of the EFR (including Mireille Cébeillac, Michel Gras, Henri Tréziny, Jean-Christophe Sourisseau, Claude Pouzadoux and Laurence Mercuri), who have been working in the area since 2012, making it a reference point for colonial archaeology.

From the Landscape of Contrasts to the Landscape of *Invisible Cities*

The construction of the cognitive framework, carried out by means of a technical-spatial immersive analysis, covered a wider study area than the one

85. Gras, H. Tréziny, "Mégara Hyblaea: le domande e le risposte," in *Alle Origini della Magna Grecia, Mobilità, Migrazioni, Fondazioni* (Taranto: Ed. Istituto per la Storia e l'archeologia della Magna Grecia, 2012), 1133-1143.

involved in the eWAS project, including the entire coastal strip of the Gulf of Augusta. The first step was the dialogue with the stakeholders, implemented with a qualitative survey. After identifying the subjects to be involved among the economic, cultural and political actors of the territorial context, interviews were administered remotely, between March and May 2020, due to the lockdown imposed to contain the spread of Covid-19 pandemic. The interviews were conducted as conversations, following specific drafts according to the category of interlocutors and leaving the interviewees as free as possible to express themselves.

Interpretative Report of Interview Results

The dialogue phase made it possible to understand the stakeholders' representations of places and the perspectives they imagined. Ideas were collected around three general themes: the perception of the area over time; the potential and weaknesses of the area; the visions for the future suggesting project strategies.

Figure 4. *Restitution of the "Visual Scale" of the Landscape of the Gulf of Augusta Dominated by Industries. Graphic Elaboration of Photograms Taken Crossing the Industrial Area*
Source: Own elaboration.

The interviews revealed that the presence of industry inevitably dominates the visual perception of this area (Figure 4). The landscape of the Gulf of Augusta is often described in terms of "contrast" between the modern world, represented by industries, and the historical-archaeological and naturalistic aspects present in the area and perceived only on the "tactile" scale of the landscape (Figure 5), i.e., *from inside*.[86]

The interviewees recognised, each in their own way, the beauty and the

86. B. Lassus, "L'obligation de l'invention: du paysage aux ambiances successives," in A. Roger (ed.) *La Théorie du Paysage en France (1974-1994)* (Seyssel: Ed. Champ Vallon, 1995), 424-428.

potential, albeit under-exploited, of the site of Megara Hyblaea and the surrounding area. They also recognised the ecological-environmental resources – including mountains, rivers, salt pans and the wealth of their fauna – that enrich the historical and archaeological traces of this complex territory.

However, the interviewees identified several critical issues that limit the potential of the site. It was found that the site is mainly visited by school children from neighbouring areas because it is not included in the tourist circuit. Many tourists visit the section dedicated to Megara at the Paolo Orsi museum in Syracuse without ever reaching the archaeological site, as there are many difficulties in accessing it (uneven road surfaces, lack of signposting and the absence of a public transport network). In addition, the site is very difficult to visit: information panels are few and old, there is a lack of well-defined paths and weeds, which are not regularly cut, invade the excavation areas, making it difficult to read the archaeological layout. Added to this is, there is the negative visual and environmental impact of the surrounding refineries.

Figure 5. *Restitution of the "Tactile Scale" of the Landscape of the Gulf of Augusta. From Left to Right: Saline di Priolo Nature Reserve, Excavations of Megara Hyblaea, Marina di Priolo*
Source: Archive of authors.

The interviewees then expressed their vision and ideas regarding the future of the Megara Hyblaea site, suggesting strategies and actions for its redevelopment: from the opening of the antiquarium and the realisation of service facilities (such as cafeteria, shade canopies, picnic areas) to the use of innovative technologies, such as augmented reality. Furthermore, in imagining a new future for Megara Hyblaea, many interviewees see collaboration with surrounding industries as crucial for the protection, redevelopment and promotion of the site, along with the involvement of educational institutions and cultural associations operating in the area. The promotion of the site of Megara cannot be separated from its reconnection with the neighbouring areas, the enhancement of the road and public transport

network, and the activation of soft mobility routes. Some interviewees suggested the creation of itineraries connecting the numerous historical and cultural sites present along the entire coastal stretch between Syracuse and Augusta. In this way the archaeological site (Figure 6), rethought as a landscape park immersed in a network of naturalistic and cultural value, would become an attraction node while providing the community with leisure spaces and ecosystem services. Finally, everyone sees the reconversion and/or progressive dismantling of the refineries as the only solution to make the area more sustainable, in order to safeguard the health of people and the environment and protect historical and cultural resources.

Figure 6. *View from the Agora of Megara Hyblaea in a Westerly Direction*
Source: Photo by I. Pillitu.

From the "Landscape Atlases" to the "Landscapes of Cities"

Taking its cue from the methodologies developed in Europe for the study of landscapes according to the principles of ELC (in particular the French *Atlas* and the Catalan *Catálogos*),[87] the landscape of the Gulf of Augusta is described in terms of its identity by means of *Landscape Atlases.* Composed of cartographic tables or graphic suggestions, the *Atlases* represent the components of the landscape by aggregating them into thematic systems of "characters":

- *Territorial characters*: territorialising elements, i.e., all the anthropic features that testify to land use.
- *Ecological-environmental characters*: geomorphology and the ecosystem singularities.
- *Heritage features*: historical and cultural heritage elements defining the

87. https://objectif-paysages.developpement-durable.gouv.fr; http:// www.catpaisatge.net [Accessed May 2021.]

identity of the landscape.

- *Sensory, social and symbolic characters*: linked to the intangible dimension of the landscape, represented by means of an evocative collage of the social representations of the communities that live in and/or pass through these landscapes (Figure 7).

Figure 7. *Collage of Sensory, Social and Symbolic Features*
Source: Own elaboration.

The subsequent interpretative reading has returned the sedimentation of the different layers of identity, considering them as complex systems indicated by the term "city", so as to connect the terminological origin of the word to the concept to which these levels of interpretation metaphorically refer. From the Greek *polis*, the city in fact indicates the "settlement of a community of individuals and families held together by multiple ties".[88]

88. Retrieved from: www.treccani.it. [Accessed May 2021.]

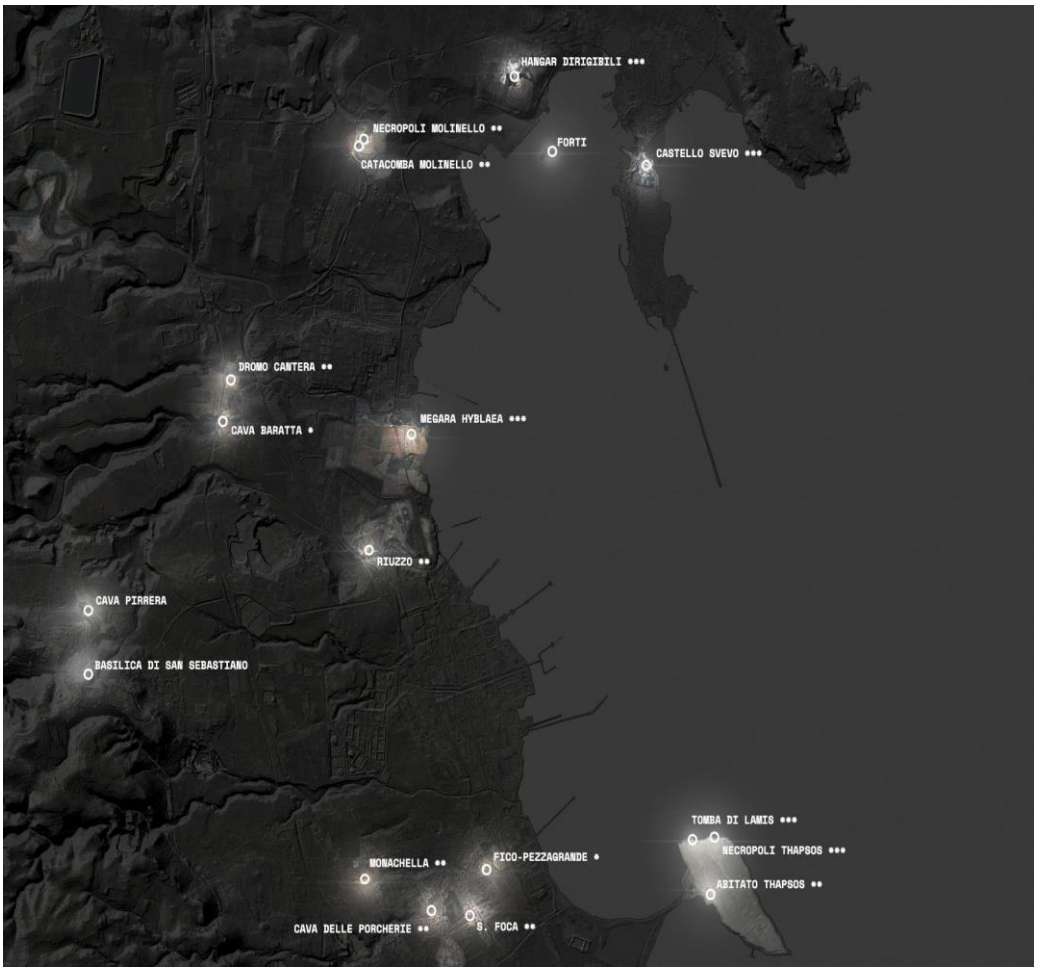

Figure 8. *The 'Invisible Cities' Map*
Source: Own elaboration.

At the base of these overlapping layers a "natural matrix" has been identified, understood as the mineral and biotic support consisting of the geomorphological substrate, the former salt marshes, quarries and watercourses and agricultural crops.

Three *cities* were then identified:

- The "city of steel": it is the emblem of a dreamed progress that has crumbled over time, a portion of space that is both frightening and fascinating, the symbol of an industrialisation that produces scenarios of pollution and artificial contrasts between rusty metal sheets and smoking chimneys.
- The "inhabited city": it is the city of people, of daily life, of the history of the individual intertwined in the unfolding of time with other existences, which reveals its intangible past in the patterns of its streets, in the lights of the street lamps, in the windows of the houses that contain life.
- The "invisible cities": they speak of those places that the eye cannot see, heritage of the past, remote areas almost forgotten and brought back to light, which come to life today through the voices of those who reinterpret them (Figure 8).

The different cities are brought together in the *Landscape Map*, a graphic synthesis of the relationships between them (Figure 9).

Figure 9. *The Landscape Map*
Source: Own elaboration.

The Masterplan. A Territorial Strategic Design

The design questions emerged from two SWOT analyses, carried out (one on a territorial scale and one on a local scale) critically reflecting on what emerged from field surveys, dialogues with stakeholders and photographic, cartographic and archive research. The SWOT analysis returned the image of a territory marked by complex contradictions. The system of natural and environmental assets – the *natural matrix* – is discontinuous and interrupted by infrastructures and industrial settlements; the system of diffuse cultural assets – the *invisible cities* – consisting of numerous archaeological sites and isolated assets, is severely underused due to difficult access and poor social appropriation; the urban centres – the *inhabited city* – lack facilities and leisure areas; finally, the industrial areas – the *steel city* – constitute impassable enclaves, which are less and less capable of ensuring the well-being of the inhabitants of the area.

The need has emerged to reinterpret widespread cultural and landscape

resources as a system and to consolidate their identity value in the collective memory. So, the Masterplan has the primary objective of strengthening the characters of traditional local landscape connected to nature, traditional rural landscape and historical assets through the implementation of four main strategies.

The first strategy aims at linking heritage and landscape. The creation of a network among the available territorial resources (Figure 10) is possible through the definition of itineraries connecting destinations able to make attractive the high number of assets that alone do not have sufficient attractiveness. The potential catchment area has been identified as mainly linked to proximity, cultural and sports-naturalistic tourism. The system effect is realised in the organisation of itineraries, in the integration of the offer and in the multifunctional use of facilities, with, in particular:

- The setting up of a network of paths for soft mobility allowing access to naturalistic, heritage and touristic areas.
- The construction of "gateway" facilities that allow, in addition to a comfortable stop and information points, the interchange of vehicle.
- The strengthening of public transport systems by converting the existing railway line into a surface metro, increasing its frequency and creating new tourist stops, and by creating a system of small moorings along the coastline.

The second strategy is to enhance the historical and cultural heritage. The Masterplan proposes redevelopment and enhancement measures, the inclusion of new facilities and functions, and active management involving the promotion of events, shows and exhibitions. The tourist accommodation system is increased promoting the recovery of widespread heritage of the old abandoned farms.

The third strategy aims to restore and enhance the environmental network (Figure 10). Agriculture is a primary activity in the production sector, but it also fulfils more complex functions such as landscape protection, sustainable resource management, preservation of biodiversity, and support for economic and social vitality. The redevelopment of the traditional agricultural landscape is proposed through agreements and conventions for the revitalisation of uncultivated or abandoned land. Traditional crops are to be combined with non-food crops that can absorb and degrade pollutants dispersed in the land near areas that have been heavily affected by the presence of industrial plants. The necessary reconnection of the ecological network takes advantage of residual and marginal areas, such as road and railway buffer strips or wooded riverbeds. Along the coastal strip, the redevelopment of wetlands (former Regina and Punta Cugno salt pans), streams and canals is promoted.

Finally, the fourth strategy consists in planning the transformation of industrial plants. In a long-term vision, an evolutionary process that involves the partial and progressive abandonment of part of the industrial activities currently present in the area is imagined. This possibility opens up new and unpredictable opportunities for structuring spaces and functions. The resolution of conflicts of use along the coastal strip can allow the development of a range of leisure time facilities which can include, as evidence of the disused activities, the preservation of part of the

imposing and suggestive set of warehouses and cisterns, metal structures, chimneys and smokestacks, converted to accommodate new functions for production or cultural, educational and recreational uses. It is possible to imagine a revitalisation of the production sector through the insertion of high-technology and low-impact products to replace the activities affected by the processes of dismantling.

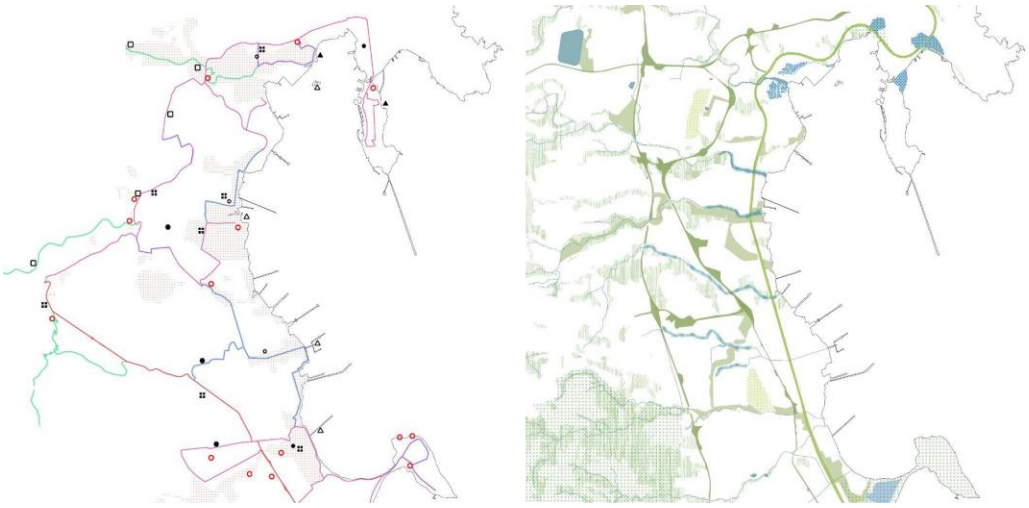

Figure 10. *The Network of Naturalistic-Cultural Routes and the Ecological-Environmental Network*
Source: Own elaboration.

The Intermediate Scale Project of the Archaeological Park and *Traces*

The lack of an overall vision of the potential of the archaeological park of Megara Hyblaea has led in the past to the realisation of punctual interventions, which were insufficient to guarantee the inclusion of the site in the broader tourist circuits (Figure 11). To achieve this aim, the revitalisation project aims to improve the accessibility of the park and its integration within the territorial dynamics, and finally to facilitate the comprehensibility of the excavations and their stratigraphy too. Therefore, the project is intended as a tool to tell the story of the area of the excavations, today difficult to interpret and read due to the presence of only the remains of the foundations and the lack of elevated structures. To this end, the proposed intervention starts from a new system of routes. By following the traces of the archaic urban road system, the new routes become the instrument to bring out the urban structure of the city and to accommodate punctual interventions within the area of the excavations, mini-architectures and responsive roofs.[89] In addition, the new paths allow a more functional circulation and the reorganisation of the accesses to the park. Besides the introduction of new elements (paths and facilities), the project includes the re-functionalization of the complex of buildings

89. The eWAS project also includes the prototyping of responsive roofs to protect the most degradation-prone areas of finds. The responsiveness allows the control of the comfort levels of visitors under the shelter.

inside the park (the Cantera lighthouse, the Antiquarium and the Baglio). A guesthouse for the archaeological mission, exhibition spaces for the archaeological remains coming from Megara Hyblaea and now housed in the Paolo Orsi Museum in Syracuse, and services (café and toilets) will be provided. Finally, the project aims to restore agricultural functions to the western part of the archaeological park, expanding an existing citrus grove to progressively regenerate the traditional agricultural landscape, creating a "park within a park".

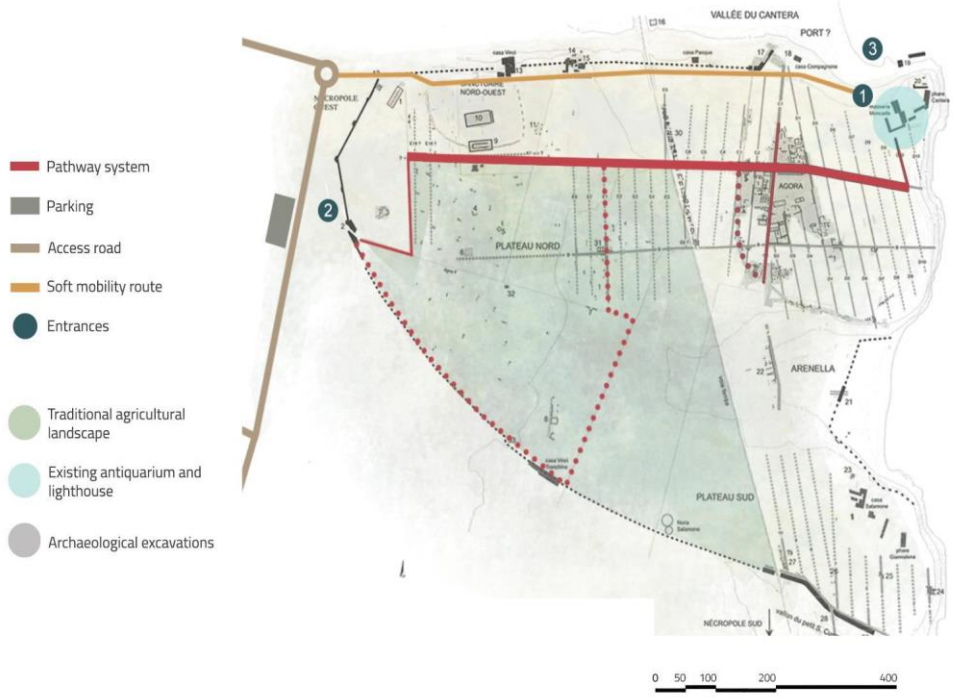

Figure 11. *General Planimetry of the Archaeological Park*
Source: Own elaboration.

A new system of entrances enhances the historical accesses to the city and solve the weaknesses emerged during the analysis phase in relation to the accessibility of the site. The opening of the new access in the western part of the park will allow the construction of a parking area suitable for tourist bus. The existing access road, which is undersized for vehicular traffic, is converted into a soft mobility path for cyclists and pedestrians. The opening of a new landing place on the coast also makes it possible to connect the park by sea with other points of interest in the Gulf of Augusta, such as the Forts, the Thapsos site and the tourist port of Augusta.

Figure 12. *Planimetry of the Excavation Area*
Source: Own elaboration.

As suggested by the archaeologists M. Gras and H. Tréziny,[90] a primary route axis – a thick red line in the plan – is inserted, which crosses the park along the west-east axis, following the same route as the main road of the archaic polis (axis A). Walking this route, the visitor is able to cross the northern plateau in its entirety, passing over the railway trench by means of an elevated walkway, to reach the western entrance of the Hellenistic city walls and finally the Agora. This primary axis is connected to three other main routes in a north-south direction that contribute to structuring mobility within the park (Figure 12). The primary axis is created by means of a wooden footbridge slightly raised above the ground level, which visually marks the route. This axis is intersected perpendicularly, at the Agora, by a main north-south route that follows the archaic road axis C1. To allow access to the internal areas of the excavations, at different altitudes, a system of secondary routes has also been inserted, consisting of raised walkways, which also follow the course of the road network of ancient Megara. In this case, too, a functional necessity becomes a design pretext for revealing the traces of the past and making them legible to the visitor, marking the ancient road axes both materially and visually and thus the structure of the urban fabric. One of these footbridges gives the visitor an idea of the original size of the archaic agora, one of

90. Gras and Tréziny, "Megara Hyblaea tra presente e futuro," in *Selinunte: Restauri dell'Antico* (Roma: De Luca Editori D'Arte, 2016).

the largest in that historical period, which is difficult to perceive because of the successive stratifications that have confused the traces.

The Architectural Scale Project of *Traces*: The Experiential Pavilion EP

Moving down to the architectural scale, the project defines the devices that enrich the visitor experience through information content, visitor support equipment and sensory experiences. The latter are conceived as suggestions (visual, olfactory, sound or tactile) linked to natural elements – such as water, which recalls the ancient presence of thermal baths, springs and the relationship with the sea – and to the activities of the settlers' daily life – arts and crafts, vegetable gardens and recreational gardens –.

The inclusion of architectural elements within the archaeological site cannot, however, be separated from a profound reflection on the relationship between the new and the ruins.

In this regard, the words of Salvatore Settis come to our aid:

> According to Western tradition, ruins signal both an absence and a presence: they show, or rather are, an intersection between the visible and the invisible. What is invisible (or absent) is highlighted by the fragmentation of the ruins, by their "useless" and sometimes incomprehensible character, by their loss of functionality (or at least of their original functionality). But their obstinate visible presence testifies, well beyond the loss of their use value, to the duration, and indeed the eternity, of the ruins, their victory over the irreparable passage of time.[91]

Architectural objects have been conceived as mini-architectures that allow a deeper reading of the remains. They take the form of projections of the *traces of the past* capable of revealing the absence of what is no longer there. The new devices are thus generated from the projections of the planimetric footprints of the most representative buildings along the main routes. The mini-architectures are thus *traces* that can take on different configurations depending on their position and function: seating, shelters, information totems, privileged observation points and pavilions housing exhibition or service (Figure 13).

Among the mini-architectures identified in the plan of the excavation area, the *Experience Pavilion* (EP) was chosen as a pilot project because of its strategic position within the excavation area, barycentric and tangent to the Agora. The project has been developed up to the executive level, making full-scale mock-ups, preparatory to the construction of the prototype in situ. The planimetric imprint of EP is generated by the projections of two of the most representative monuments of archaic Megara: the *South Temple* with its central colonnade, datable to around the end of the 7th century BC, and the *Pritaneo*, a public building of the 6th century B.C. probably intended for the banquets of the city's magistrates. The projections generate a system of two opposing elements in relation to the route: the first, with a triangular plan, is the projection of the remains of the south temple, while the

91. S. Settis, *Futuro del "Classico"* (Torino: Einaudi, 2004). Translation from Italian by authors.

second, with a rectangular plan, is the projection of the remains of Pritaneo (Figure 14).

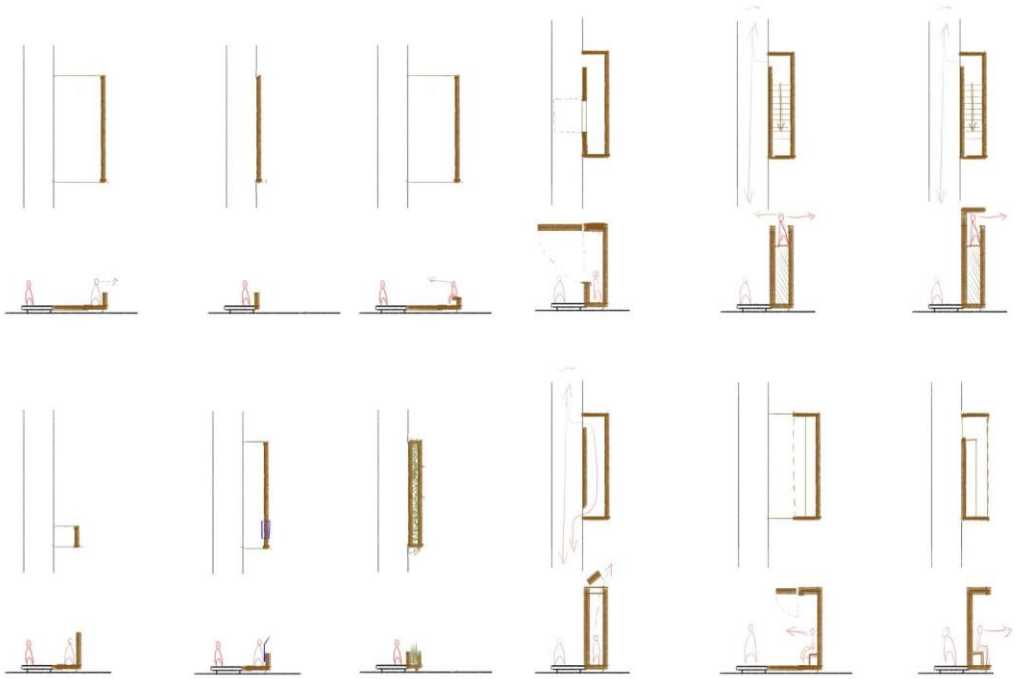

Figure 13. *Possible Track Configurations*
Source: Own elaboration.

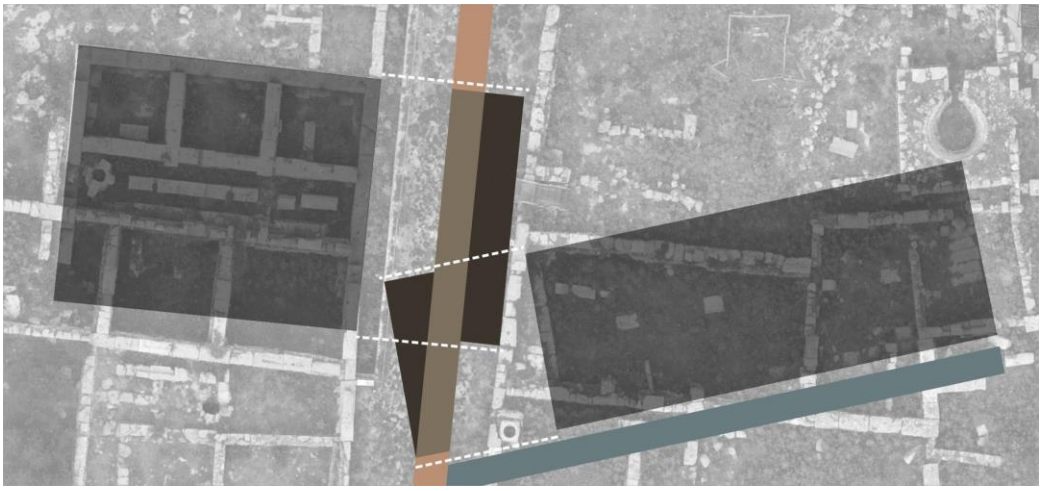

Figure 14. *Plan Genesis of the Experience Pavilion*
Source: Own elaboration.

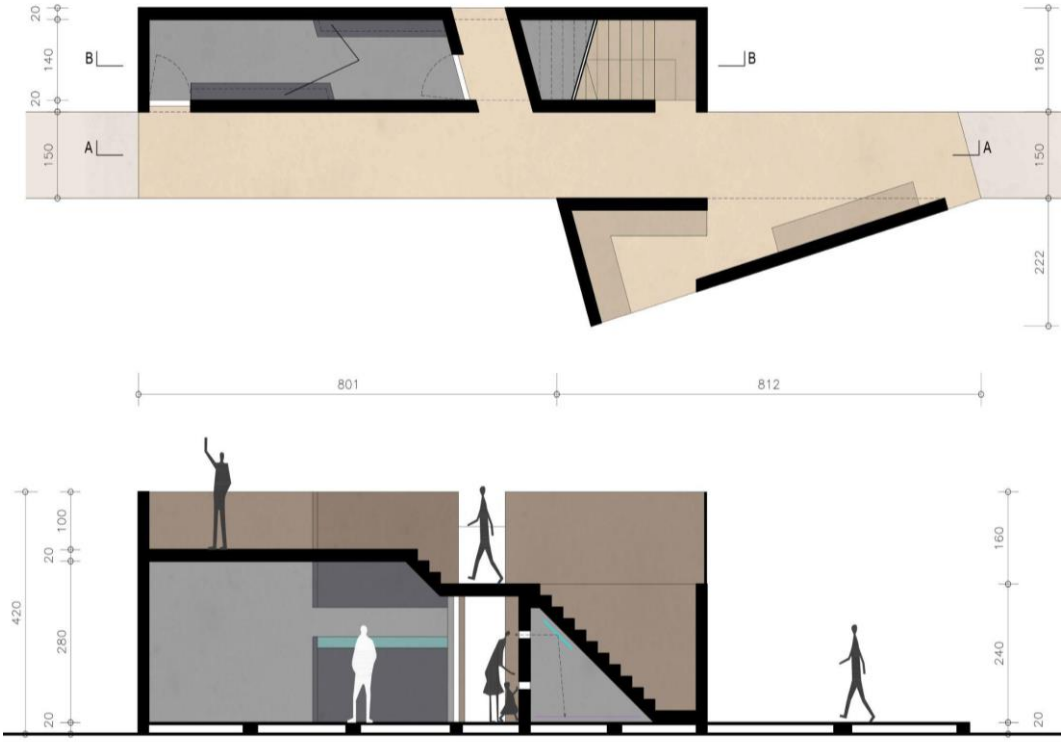

Figure 15. *Plan and Longitudinal Section of the EP*
Source: Own elaboration.

The triangular projection generates a hollowed-out volume to accommodate a seating system for a moment of rest along the route. The seats, open on two different fronts, evoke the loungers on which the Pritanes used to lie during banquets, while creating a direct visual relationship with the archaeological remains. A high volume emerges from the rectangular projection, cut off at the intersection with the trace of the temple to create an opening towards the excavations. A staircase leads to the panoramic roof with information panels on the parapets. In the space below the staircase there is an inaccessible room that can be observed through a slit, inside which there is an installation that evokes the Hellenistic baths through a play of mirrors. The inner space of the pavilion is accessible to only one visitor at a time and gives the visitor different temporal readings through multimedia content. From the inside of the mini-architecture it is also possible to observe "from above" the excavations through two periscopes placed in the thickness of the walls. An analogical periscope, through a system of reflections, projects the view of the Pritaneo area inside the room; a digital periscope allows the observation of the Agora through the installation of a video camera. The images projected inside the pavilion are flanked by additional information layers that help the reading of the stratifications of the site (Figures 15-16).

Figure 16. *Photo-Insertion of Interventions - View from the Agora in South-West Direction*
Source: Own elaboration.

Alternative Hypothesis for the Accommodation of Facilities

A second alternative hypothesis for the arrangement of facilities was also developed at an early stage of the project. This hypothesis shares the same layout of archaeological park but establishes a different type of relationship with excavations.

Figure 17. *Elevated Walkway across the Depressed Area Excavations*
Source: Own elaboration.

Figure 18. *Photo-Insertion of Interventions - Aerial View of the Undeveloped Alternative Hypothesis*
Source: Own elaboration.

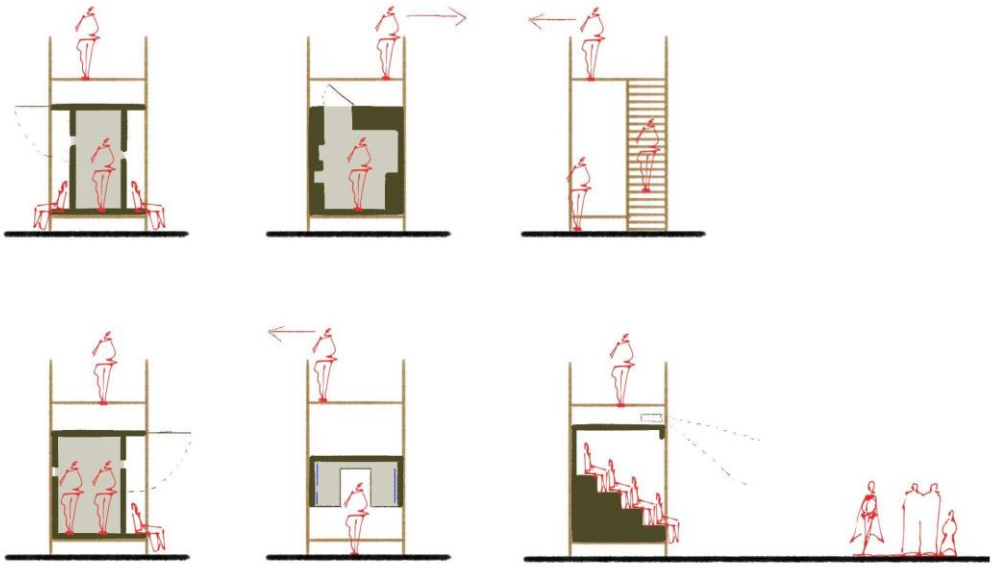

Figure 19. *Cross Sections of the Pavilions Grafted under the Footbridge*
Source: Own elaboration.

Taking advantage of the natural slope of the Megara plateau towards the sea and the depression of the area of the archaeological excavations, in this solution the main route, which always follows the A axis of the archaic city, leaves the ground near the area of the excavations (Figure 17). The elevated route crosses the railway line and the excavations and then continues towards the sea, reaching the perimeter of the town on the opposite side. The new landscape sign is a slender jetty stretching out towards the sea (Figure 18), offering a new perspective of the park. The solution aims to overcome one of the critical aspects of the Megara excavations, namely the difficulty in understanding the site due to the absence of elevated structures. The raised walkway makes it possible to decipher more clearly the urban layout of the two overlapping cities, the archaic and the Hellenistic one, looking down on the perfectly preserved traces of the foundations. At ground level, near the Agora, once again a series of mini-architectures are inserted into the structure of the walkway to offer new services to the visitor: experiential pavilions for multimedia installations, seating and steps open towards the Agora (Figure 19).

The Panel, Innovative Technologies

The requirements defined for the service equipment for the archaeological site led to the decision to build EP using a prefabricated panel made of lightweight and economical materials.

The prefabricated panel is the basic component, repeatable in a serial manner, consisting of a multilayer wooden frame. Two studs and five nogging constitute the frame in which rectangular tubes of corrugated cardboard are inserted with triple waves arranged vertically.

The noggings are fixed to the studs via slotted connections which allow them

to move vertically. This is necessary to facilitate the insertion of the cardboard tubes and to put the system under compression. In fact, the technology provides for the pre-compression of the panel in order to improve its structural performance. Two metal tie rods pass through the noggings and cardboard tubes and are tied to the last and first noggings. After positioning all the elements of the system, the tie rods are put in traction, the noggings slide and put the cardboard in compression, which is thus stopped in its final position. Thanks to the pre-compression, the cardboard tubes also stiffen the wooden frame and act as bracing elements. The panel can be pre-assembled off-site and then easily transported and mounted on site due to its low weight, without the need for lifting and moving machinery.

EP's envelope, made with the described panels, is placed on a platform that consists of a grid of wooden beams, resting on a foundation of rubble, in interposition with the archaeological soil, without the presence of deep foundations.

The cardboard tubes of the panel can also be filled with different materials in relation to the thermo-acoustic comfort that must be guaranteed in the interiors. The described panel is the modular element to be composed in order to define EP, but it has variants that allow to meet specific needs, while respecting the dimensional modularity. This is the case with the door-panels or the panels with periscopes, which are free from the presence of the cardboard tubes to accommodate vertical channels with mirrors system that guarantees a view of the surrounding context.

The panel is also completed by a ventilated façade system made of burned wood siding that refers to the traditional Japanese Shou Sugi Ban technology.

The ventilated façade system of the south short side of EP is instead made of wooden boards covered with composite textile material incorporated with photovoltaic cells. The system is patented.[92] It ensures the energy self-sufficiency of EP, which is equipped not only with a lighting system but also with multimedia devices for narrating the archaeological site. Each facade photovoltaic module is made of fifteen high-efficiency monocrystalline silicon solar cells (made by SunPower Maxeon) 125 mm x 125 mm. According to the hypothesized use scenario, three pairs of photovoltaic panels are needed to ensure self-sufficiency, powering two lithium batteries.

The methodology followed for the definition of the panel included two prototyping phases.

In the first, scale models were made to analyse different methods of pre-compression in order to put the cardboard elements in position and stiffen the panel. Preliminary solutions with wooden tie rods or a single metal tie rod were discarded because of the difficulty of assembly and the complexity of the connections. The most efficient solution was the one with two metal ties for each panel, positioned at the centre of the corrugated cardboard tubes.

The second phase involved the construction of a full-size panel (Figure 20), called "Pannello ZERO" (PZ). With the realisation of this it was possible to check the feasibility of the hypothesised realisation phases and to verify the handling of the panel during the laying and fixing phases on the base grid. During the realisation

92. V. Sapienza, G. Rodonò, A. Monteleone and F. Giusa (2019), *Adaptive Kinetic Device for Architecture*, patent request no. 102019000025819.

of PZ, it was also possible to verify that the cardboard tubes, during the pre-compression phase, could go out of the wooden frame plane due to rotations linked to the imperfect planarity between the noggings and the tubes. This problem has led to a return to the design workflow for the definition of wooden positioning rods for the tubes.

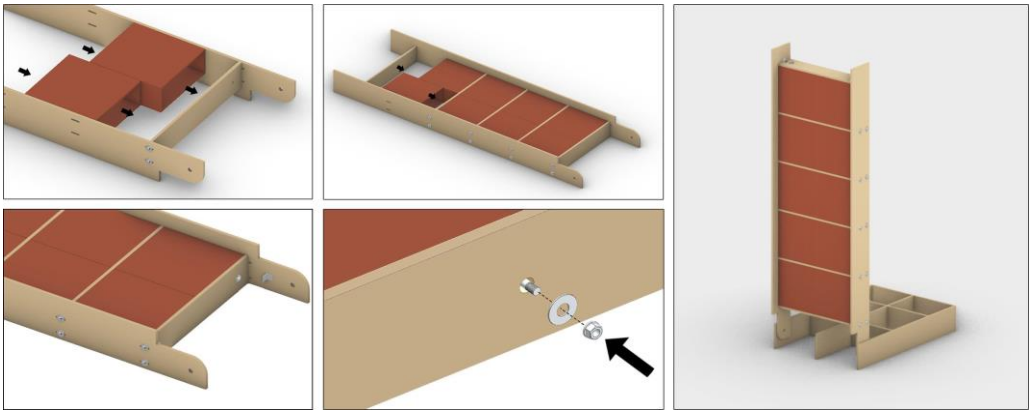

Figure 20. *Simulation of the Assembly Phases of the "Pannello ZERO"*
Source: Own elaboration.

Finally, it is foreseen to manufacture an adequate number of PZ to be subjected to laboratory tests to verify their mechanical performance. Once the performance characteristics of the panel have been defined, the production of the panels to be transported to the site for EP assembly will be started.

Conclusions

Based on the idea of landscape as a 'common good', landscape itself – the representation of the territory by the populations – has been understood as a tool for the governance of the territory and, therefore, of public action.[93] Thanks to images and words, maps, plans and public debates, *landscape as a project*[94] allows spatialised values (memory, work, heritage, beauty, biodiversity, safety) and projects (urban, agricultural, tourism, infrastructure) to be shared. Mental and iconic representations of landscapes, as spaces perceived by human senses, become objects of mediation within a democracy that is both representative and participatory. In this sense, public decisions cannot but be more legitimate and therefore more authoritative.

In this perspective, the landscape project becomes a project of relationships, a construct of specific elements that intersect with each other to best represent the territory and produce landscapes the local community desire. Realizing what

93. Donadieu, *Scienze del paesaggio: Tra teorie e pratiche* (Pisa: Ed. ETS, 2015).

94. F. Zagari, "Il 'quid' del progetto del paesaggio," in R. Priore (ed.) *Convenzione Europea del Paesaggio: Il testo Tradotto e Commentato* (Reggio Calabria: Centro Stampa d'Ateneo Edizioni, 2006), 30.

Donadieu calls *Inventive Conservation,*[95] the landscape project articulates the past and future of an area, associating three forms of knowledge – scientific, technical and artistic – to invent a new system of forms attributed to existing functions and uses. New forms are often based on a synthetic sensory perception capable of integrating existing topographies with their past (history and memory) and their ancient and future uses. Landscape design is not expressed through landscape aesthetics that forges perceivable realities satisfying the senses, but by presenting reality as such, including rejected, marginal and abandoned places. It can thus represent a tool to regain the lucidity necessary for human survival on the planet[96] through the perception and understanding of places as they are, according to the socio-political issues that characterise them and not according to an outdated aesthetic; from this assumption it can reweave human links with perceptive values (visual and experiential), cultural heritages (memory, landscape identity) and anthropo-socio-ecocentric values (biodiversity, solidarity, freedom and peace, social justice and equity, greater well-being).

The consequence of this approach is that the revitalisation of the Megara site is part of a more general process of reconfiguration of relations at different scales. The same interpretive key is experimented at the territorial and architectural scales: just as the landscape project brings out the *invisible cities*, obliterated by industrial transformations, in the same way the design of the archaeological park and the mini-architectures brings out the traces of the *ancient city* of Megara Hyblaea. On the other hand, by integrating all places into the design vision and not only those of quality, the long-term strategic vision also envisage the dismantling of industrial plants and their reconversion, including marginal and borderline places in the construction of the new spaces of contemporary life.

Within the nationally funded project "e-WAS" will be given a concrete start to the general project by launching a first phase through the creation of a prototype of the EP on the site of Megara. This prototype will serve as a demonstrator of the general strategy and to concretely put in place the cooperation between management and preservation bodies (Archaeological Park and Superintendence of Cultural and Environmental Heritage), designers (University of Catania) and territory (inhabitants and associations).

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95. Donadieu, "Pour une conservation inventive des paysages," in A. Berque (ed.) *Cinq Propositions pour une Théorie du Paysage* (Seyssel: Champ Vallon, 1994), 51-80.

96. Donadieu, *Scienze del paesaggio: Tra teorie e pratiche*, 2015, 255-256.

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Decision Making in City Planning: Processes of Visioning and Stakeholders Engagement and their Relation to Sustainable Land-Use in the SATURN Project

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The EIT Climate-KIC SATURN project deals with rural-urban territories, their landscapes and environmental challenges. The land of our cities and regions is fragmented and prone to several challenges in terms of ecology, governance and social coherence. As a result of unregulated overlapping of different land uses and complex governance patterns, landscape fragmentation creates severe challenges in the ways the land is perceived, identified and therefore managed. The SATURN consortium is working on different models to help address the governance and decision-making process and support on a policy level by applying holistic ideas of visioning and stakeholder engagement at a city scale. The diversity of the three hubs (Birmingham in central England, Gothenburg in western Sweden, and Trentino in northern Italy) is reflected by their approaches to stakeholders' engagement and visioning processes as well as especially adopted activities in each location. Within the SATURN project, we are investigating how these approaches could change perceptions and impact on landscape strategic actions. Through a series of especially designed workshops on landscape visioning and stakeholder engagement, the project aims to create a toolbox supporting urban, peri-urban and regional planning. This paper reports on the visioning and stakeholder mapping and analysis tools, and shares examples where these processes were tested during the broader SATURN scheme. Results demonstrate how the visioning exercise has changed public perceptions about an area and how this has affected the decision-making process of each city towards a more effective planning of sustainable landscapes. The stakeholder engagement activity demonstrates the importance of "mapping and analysis" of the various actors involved in a city and the ways a landscape project can effectively engage with them and seek further collaboration. Questions on how the results differ in cases where the stakeholder engagement process focused on a broad policy level or targeted specific actions for a certain region are being explored. Both the visioning and stakeholder engagement tools are subject to a holistic approach and a collaborative and open process between the stakeholders and the trainers, allowing the participants to build a vision for their regions and be one-step closer to systemic change.

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Introduction: The Saturn Pan-European Project

This paper is based on the experience and the findings gained through the pan-European project named "System and sustainable Approach to virTuous interaction of Urban and Rural LaNdscapes" (from now on referred as SATURN) co-funded by the EIT Climate-KIC. The SATURN project covers three specific urban-rural regions in Europe, Birmingham in the centre of England (United Kingdom), Gothenburg in western Sweden, and Trentino in northern Italy (Figure 1). These three territories have very different geographic and topographic conditions, yet they share similar challenges in terms of landscape management and adaptation to climate change.[1] Each region has been investigated through understanding the relations between urban cores, their surroundings and especially the food networks that contribute to a sustainable use of landscape and resources. In urban-rural regions, challenges posed by climate change are more complex due to the lack of systemic planning approaches and fragmented governance.

In order to develop a more comprehensive approach to such challenges, the SATURN project is underpinned by a three-tiered, interrelated approach. The first step is focused on establishing a methodology to generate a holistic multi-scalar spatial vision that can be applied in different contexts to put under discussion the current fragmented governance. To further support this holistic vision, a second step is based on a set of tools to map and clearly highlight the natural capital and the ecosystem services available in urban-rural fringes. This contributes new evidence to the wide benefits of the landscape as a whole. Stakeholders connected to such ecosystem services that can foster or hinder their development are then mapped and linked to the territorial vision. The third and last tier seeks to assess and translate the acquired knowledge into daily planning practice, to grow organisational capacity of local stakeholders and policy-makers. While going through the three steps of the process, stakeholders challenge their idea of territorial development through the visioning exercise, then they are asked to highlight the values of landscape and its actors identifying key players or beneficiaries through the engagement exercise, and finally, they focus on bringing this transformational change into planning routine, local strategies, and governance schemes. The outcomes of this process will need to be evaluated on a long-term basis going far beyond the 3-years project duration.

This paper is structured in three sections looking to build a comprehensive narrative around the topic and the experience of the SATURN project. In the first part, the authors build a preliminary literature review to set the frame in which the research is rooted. The interconnection between climate challenges and the inadequacy of planning frameworks are investigated to understand how the SATURN approach can improve the capacity of landscape planning frameworks. In the second section, therefore, the activities and the underpinning the activities of the SATURN project are presented and assessed in relation to the preliminary analysis of the challenges. An in-depth description of the activities and a

1. A. Nikologianni, A. Betta, A. Pianegonda, S. Favargiotti, K. Moore, N. Grayson, et al., "New Integrated Approaches to Climate Emergency Landscape Strategies: The Case of Pan-European SATURN Project," *Sustainability*, 12, no. 20 (2020): 8419.

comparison between the three different case studies is then presented. Trying to build a more extensive framework to understand positive and negative aspects and unpack different factors hindering or boosting the effectiveness of the framework looking at similarities or differences between the three. Finally, the first findings and operational possibilities are presented and discussed. The broader SATURN project looks at the governance of nature and landscapes and focuses on the relationships among cities, food growing, and the rural landscape across Europe. This paper examines one of the project's pillars, exploring the impact of visioning and stakeholder engagement on decision making. The methodology of the SATURN project has been previously published.[2]

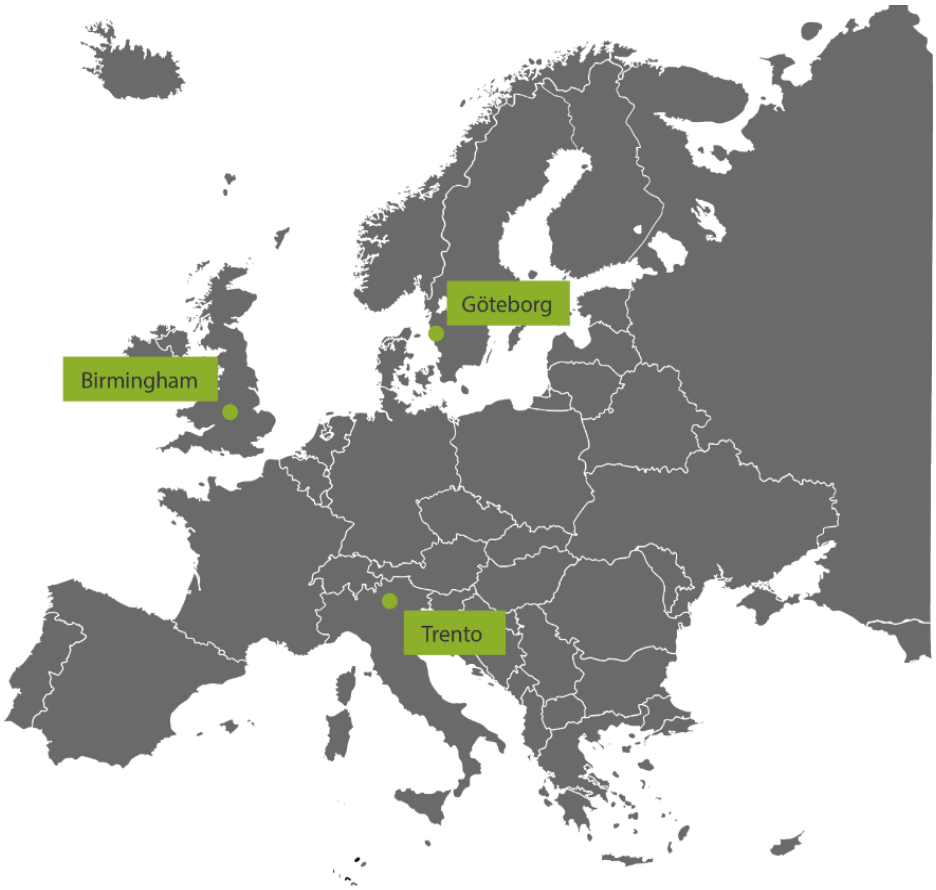

Figure 1. *Map Showing the Three Locations of SATURN Hubs, (Trento-Italy, Birmingham-UK and Gothenburg-Sweden)*

2. Ibid.

Climate Change Impact on Planning and Governance in Urban-Rural Regions

Researchers are suggesting that the population in urban areas is constantly growing and is expected to reach 70% of the overall population of the globe by 2050 adding more than 2.5 billion people to urban dwellers compared to 2000.[3] The movement of people from rural to urban regions will occur mostly in developing countries in Asia or Africa (especially China, India, or Nigeria) but also European cities will see a progressive concentration of population in metropolitan areas while abandoning more rural or poorly connected areas. The combination of inbound migration from rural areas and progressive abandonment of buildings and infrastructures is creating enormous pressure at the edges of cities, making urban–rural fringes and peri-urban areas amongst the fastest-changing landscapes in Europe.[4]

The progressive urbanization, with its consequences such as the expansion of urban sprawl, in Europe goes together with the process of de-industrialization of the oldest factories located in the urban-rural fringes. These two processes are not contributing to strengthening urban cores or dense urban fabric but favours a seamless extension of urban-rural regions where built and open spaces are intertwined in an intricate system of processes and relations. Such 'hybrid regions' merging partially urbanized and partly rural landscapes could become increasingly common in the future. Also counter processes of deindustrialization, which are more common in Western countries, are also contributing to a growing presence of nature in the interstices of urban regions. Such intermediate landscapes pose several challenges to the current planning framework as their ecological and socio-economic structure is complex, fragmented and constantly evolving. The complexity and the changing pace of urban-rural regions differ from the rigid and sectoral structure of most planning tools and processes. The planning tools are instead mostly focusing their attention on slow land use transformations and sectoral challenges such as mobility or waste management rather than understanding the connections between phenomena and the impacts on land use.[5] Moreover, most planning policies seem to be inadequate to deal with rapid transformations.[6] Planning schemes still rely mostly on zoning or functional and transportation schemes linked to a specific vision of the city as an organism based on buildings, artificial infrastructures and engineered processes. This approach, which architectural counterpart is rooted in the Le Corbusier's model of the "machine a habiter" looks at the city as an entity separated from its surroundings where the main aim is to maximise the efficiency of single processes rather than looking at the complexity of the environment. This kind of approach looks at urban and rural areas as separate entities and does not contribute to reduce governance fragmentation since

3. Department of Economic and Social Affairs - Population Division, *World Urbanization Prospects: The 2018 Revision (ST/ESA/SER. A/420)* (New York, NY, USA: United Nations, 2019).

4. K. Nilsson, S. Pauleit, S. Bell, C. Aalbers and T. A. Sick-Nielsen. *Peri-Urban Futures: Scenarios and Models for Land Use Change in Europe* (Berlin-Heidelberg: Springer Verlag, 2013).

5. K. Hill, "Climate Change: Implications for the Assumptions, Goals and Methods of Urban Environmental Planning," *Urban Planning* 1, no. 4 (2016): Paradigm Shifts in Urban Planning

6. A. Piorr, J. Ravetz and I Tosics, *Peri-Urbanisation in Europe: Towards a European Policy to Sustain Urban-Rural Futures* (Nødebo, Denmark: University of Copenhagen, 2011).

it is underpinned by the idea that challenges and visions for urban and rural areas are completely different and without common concepts underneath. However, it is increasingly clear that climate change challenges, such as sustainable supply of food and water or the mitigation of extreme events, require a more comprehensive approach to landscape to encompass the wide range of processes and social, ecological or economical cycles involved.

The inefficiency of contemporary planning tools together with the urgency to face climate challenges requires for a deep and immediate systemic change. Most of spatial or environmental planning and management concepts in use are focused on "the over-arching concept of spatial suitability" of different functions on the landscape.[7] Yet, the concept of "spatial suitability" is now being substituted by the idea of constant and permanent adaptation to extreme events and changes. The implications of such a shift are vast and profound and are affecting the practical sphere of planning practice as well as its very epistemological, ethical and ontological assumptions.

As it is unclear how and when environmental governance could differentiate from one mode to another,[8] the SATURN project is exploring how this can be achieved based on collaborative governance processes and a more continuous involvement of local stakeholders.

Issues posed by climate change to urban and rural landscapes go far beyond merely affecting ecological processes or the physical structure of landscape, they are questioning deeply how we plan and manage the territory, its features and the ecosystem services it offers. Climate change will increase the number of extreme events and their unpredictability, causing growth in instability of ecosystems and risks of failure of infrastructures.[9] Such a scenario in an already complex and fragmented context such as urban-rural regions can represent an unavoidable obstacle to local administrations unless a more holistic, systemic, and integrated approach to planning would not be taken.[10] In order to reach an effective adaptation of land and water use the missing links and the strong bonds between agriculture, forests, water, biodiversity and energy have to be highlighted together with the reciprocal influences. An Integrated Landscape Management (ILM) strategy requires all actors to be involved on a shared basis of knowledge.[11]

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7. Hill, "Climate Change: Implications for the Assumptions, Goals and Methods of Urban Environmental Planning," 2016.

8. P. P. Driessen, C. Dieperink, F. van Laerhoven, H. A. Runhaar and W. J. Vermeulen, "Towards a Conceptual Framework for the Study of Shifts in Modes of Environmental Governance–Experiences from the Netherlands," *Environmental Policy and Governance* 22, no. 3 (2012): 143-160.

9. S. I. Seneviratne (Ed.), *A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC)* (Cambridge, UK, and New York, NY, USA*:* Cambridge University Press, 2012).

10. M. Winn, M. Kirchgeorg, A. Griffiths, M. K. Linnenluecke and E. Günther, "Impacts from Climate Change on Organizations: A Conceptual Foundation," *Business Strategy and the Environment* 20, no. 3 (2011): 157-173.

11. C. Mann, M. Garcia-Martin, C. M. Raymond, B. J. Shaw and T. Plieninger, "The Potential for Integrated Landscape Management to Fulfil Europe's Commitments to the Sustainable Development Goals," *Landscape and Urban Planning* 177 (2018): 75-82.

The increasing frequency of extreme events questions the current planning approach based on sectoral and fragmented strategies with several institutions and local authorities or administrative bodies involved often lacking clear and precise guidance. Another challenge is related to the recognition of landscape's value system and the preservation of traditional sustainable practices from local communities.

Yet these challenges could become important opportunities for a radical change on how society approaches landscape, in particular to such landscapes that are often neglected and hidden from "mainstream" processes.

The Saturn Process: Building Capacity through Engagement

The SATURN project is based on the experiences the three hubs develop in their respective territories in order to investigate how to improve relations between urban areas and their surroundings. The consortium established a process made of three interrelated parts which are the holistic vision practice, the stakeholders' engagement practice and finally the capacity building practice to understand how to enhance urban-rural engagement.

Together with this process, various innovative actions are being shared across the HUBs to further enhance the impact. As the landscape morphology and the governance structure of each location of the three HUBs are very different, each one is developing tools at different scales and with different levels of stakeholders' involvement. In addition selected case studies work on the process to engage stakeholders and support them in building adequate capacities to face future challenges in their territories. This engagement process is built around a set of "exercises" and workshops that involve researchers and local actors in building a vision for their territory. Through several tools and reflection processes, the participants build an in-depth understanding of stakeholders' universe profile, their needs and the potential barriers related to their involvement in landscape management. The tools used are based on the EIT Climate-KIC Visual toolbox for system innovation integrated with the specific knowledge and experiences of the SATURN consortium. Therefore, few tools have been edited and others have been added and shared by the different members of the consortium. The tools included in the toolbox come from some best practices happening within the territory of consortium's members looking at reconnecting cities to their surroundings and that can be replicable and scalable. Some of the tested tools are linked with mapping and acquiring diverse knowledge on landscape features (such as the rural-urban metabolism tool of Trentino or the investigation on abandoned farming plots in Gothenburg). Others are related with fostering sustainable farming and businesses (as the model-farm in Gothenburg, the mentoring activities done in Trentino or the capacity building workshops help in Birmingham).

Having all HUBs working together on this process allows for cross-national and comparative analysis of the effectiveness of the engagement and offers important insights on how to scale up these tools and methods to different territorial and planning frameworks.

As described at the beginning of this paper, the complexity and the fragmentation of urban-rural regions calls for more systematic and holistic approaches in order to tackle challenges in a more effective way, therefore the strategic vision must be clear and shared among actors. A series of visioning workshops have been designed and tested across the three regions aiming to support the creation of overarching spatial visions for each area. The stakeholder engagement process focuses on both upscaling the consortium methods, but most importantly providing efficient ways to key actors of each area, such as cities and institutions, to improve their knowledge on their own stakeholders. The SATURN project has set up a tool to engage with stakeholders on a series of activities that dive progressively deeper into the landscape concept while participants get more conscious of their territory.

Aiming to address governance and landscape fragmentation, stakeholder engagement is a crucial part of the SATURN project process together with the co-development of a territorial vision to tackle governance challenges and build management capacity at the same time. As a key aspect of the project is to enhance systemic thinking regarding landscape planning, the three parts (vision development, engagement and capacity building) are strongly related and thought of as a comprehensive process.

The communication process with the local stakeholders that underpins the entire SATURN project is well described by the continuous engagement through workshops, training sessions and dissemination events between the different actors that contribute to the complete process. The best and stronger results are obtained when the different parts of the process interact with each other and when the outcomes are reciprocally shaped.

The stakeholder engagement tool is used to identify the key stakeholders of each location (public, private, companies, education, landowners, entrepreneurs) and the most urgent landscape management issues. Through a series of activities and continuous communication between the SATURN team and the identified stakeholders, the challenges are being translated into a territorial vision that identifies most promising solutions and contributes to build internal capacity in local administrations through sharing knowledge, plans and strategies. Understanding which and how to engage with the most significant stakeholders is a key moment and requires a strong multi-level and cross-sectoral approach to include all possible interested people. The result of the first phase is an extensive mapping of local actors and their relations with climate change challenges while possibly identifying new actors or previously unknown relations.

The second phase is based on the visioning practice which aims to go beyond the usual and daily practice to imagine how a different scenario could be developed in order to also inspire others to act consequently. The visioning practice is based on spatial and visual exercises to allow thinking out-of-the-box. Finally, summing all the work previously done, local actors are involved in capacity building activities in order to set a continuous learning process about climate challenges resulting in increasing coordinated efforts among different actors and scales.

The Activities: Process and Examples from the Hubs

The Stakeholder process consists of various stages such as mapping, analysis, evaluation, management and engagement. The engagement process of SATURN is based on gaining knowledge in order to describe certain components and achieve network mapping and therefore to further contribute to decision-making and planning at a local and regional level. The Stakeholder Engagement Process has been designed to take the participants through a journey of understanding, identifying and analysing with the aim to improve their chances to firstly identify the most beneficial connections and secondly to increase the level of engagement with actors. It is based on a series of workshops and activities with the aim to work in a holistic way from establishing the challenge and goals of each project to the point the team can increase capacity internally but also externally (to their partners and collaborators).

The first step of any workshop is for the most important issues and challenges related to the landscape evaluation to be identified and described, in order for the stakeholders to understand the impact these have on their territory and the key actors influencing decisions in the area. Based on the use of specific tools and an open discussion, the choice of a problem statement is being generated, summarizing all the current issues in the region. A potential support to the process can further be achieved through the use of visioning workshops (another tool tested within SATURN and generated by CATiD BCU) that involve local actors in the definition of a future scenario for their landscape and contribute to identify most urgent issues. Following this first initial, but essential phase, an in-depth analysis of the stakeholders' mapping and engagement is conducted through the use of various canvases dressed with design thinking and stakeholder management tools. During this process, stakeholders are being identified and mapped, and each stakeholder is examined in relation to the problem statement as well as other actors in the region.

The SATURN project has created a dynamic process for stakeholder engagement, looking at the relations of various stakeholders involved in strategic development and regional design schemes. This process consists of a systematic series of challenges to enable identification of stakeholders as well as the project goals and values, through a series of stakeholder management (stakeholder mapping, analysis and engagement exercises) and multilevel perspective to give better insights of the relationships within the challenge (project barriers and solutions). The process is based on a mix of visual tools and discussion/reflection sections, run by a trained coach and facilitator who has supported the hubs throughout the process. As mentioned in the previous sections, the existing challenges to actual planning processes in light of climate change require a more holistic and wide approach to the topic. To build more holistic strategies there is the need to include a larger set of expertise but also to change the way officers and practitioners involve local stakeholders and take advantage of their own expertise. The involvement of such stakeholders should be more extensive and should start from the very first phases of the planning processes through the establishment of a shared vision on the landscape in order to contribute not only to more comprehensive planning tools but also to build management capacity at local level.

The "Cooking Recipe Challenge" is a problem and goals identification and stakeholder management process developed by the Birmingham Hub of EIT Climate-KIC SATURN. It is the outcome of various workshops and visioning tools, leading to a tailored stakeholder engagement tool. The "Cooking Recipe Challenge" is a combination of several stakeholder mapping and analysis tools that allow to create a new methodology for stakeholder analysis and build capacity within the team. A selection of some of the EIT Climate-KIC stakeholder management tools (which are included in the Visual Toolbox and can be retrieved at https://www.cli mate-kic.org/insights/visual-toolbox-for-system-innovation/) together with other tools developed by the Birmingham Hub aim to set the scene of the project regionally and provide support to the different teams to engage with their local and regional stakeholders. Mapping key national and European actors (e.g., decision makers, politicians, civil servants, local authorities, researchers and professionals), evaluating their needs and demonstrating what SATURN can offer them, increases the actors' understanding and engagement level, supporting a smooth transition of circular use of landscape. Moreover, such a process can foster a reconsideration of the view of landscape as a whole as well as an improved knowledge of the specificity of landscape elements, thus upgrading the capabilities of local stakeholders. One of the most important elements is that this process allows to build a sense of ownership to the different actors creating a community working collaboratively on the project. The starting point of the process is a flexible brainstorming session to allow everyone to express their position and opinion while building trust and a common ground between actors and facilitators. Following this step, the specific challenges are analysed and understood to build a roadmap to be followed for planning future actions. Among the tools used in the process are the Pentagonal Problem, the Goals Identification, the Actor Tree, the Relations Pie and the Empathy Map. Once the Stakeholder Universe has been developed, the research ("Fishing") for Barriers can start in order to foster the search for solutions and next steps of the project. There are several benefits when involving stakeholders in the projects dealing with landscape value, peri-urban spatial strategies, local authority mechanism and decision-making processes. By building a process where the stakeholders are asked to actively participate, the team reduces the chances for absent stakeholders to disturb the process and it is likely that conflicts are also reduced.

Birmingham, Trento and Gothenburg Experiences

The Birmingham Hub worked closely together with the Naturally Birmingham (a new governance model for cities green spaces), the Tame Valley Wetlands Partnership and the Urban and Food Growing Network. A specifically designed process was developed in order to address the needs of each case study. The selected case studies for Birmingham, are focusing on governance and management, awareness and community engagement and visioning retrospectively and therefore the workshops were all using the SATURN tools but in a sequence, form and pace that suited each individual case study. As it is understandable, in real life

scenarios, tools need to be adjusted to the goals and challenges of each project. Starting with the Tame Valley, the Birmingham Hub, aimed to use the SATURN tools to explore further the vision developed in the Tame Valley and identify if this has been useful and successful or it has not, what are the barriers and who are the key stakeholders to support with its development. At the same time and using the same tools, very different discussions and outcomes occurred from the 'Urban and Food Growing' workshops since, this project focuses on urban farming with the aim to support community, spread awareness on landscape identity and the climate challenges and share support on mental health issues through landscape engagement. The third case study explored is the "Naturally Birmingham" project, a national scheme that aims to support the creation of green spaces in urban areas. As this is a major project for the city of Birmingham, it has been very significant in developing a new governance model for the city. This is still an ongoing project (due to finish in 2022), however it has managed to engage with several parts of the local authority and provide advice and a vision for a greener city. The SATURN workshops have helped to improve understanding of the territory and open up new ideas and opportunities for the Naturally Birmingham project team. Therefore, in this case the SATURN stakeholder engagement, visioning and capacity building tools were used with the aim to unlock new regimes and identify any blockages towards a systemic change.

Meanwhile, the Trentino HUB organised four different workshops with different stakeholders at both regional and municipal level starting with general propositions before going deeper into four main topics highlighted during the meetings. These topics are related to the most critical issues of the territory such as mobility within the region, sustainable forms of agriculture, circular economy processes and landscape preservation. The process has been developed following the results of the four workshops in order to get a more detailed and more structured idea about how stakeholders see the future of the territory. The four workshops spanned across half a year and involved a wide number and variety of actors (more than a hundred different people from the institutions and NGOs). The results have proven to be extremely useful for the people and institutions involved as this has allowed for new visioning approaches that differ from common practice. Prior to meeting the local stakeholders, an internal meeting was held by the SATURN research group in order to build the vision to be tested and challenged in the following meetings. The scope of this first step has been to set a reference "image" developed by local researchers that at the same time are not directly involved in landscape management processes. The first workshop was held in the autumn of 2020 involving officers and political representatives from the municipalities part of the SATURN project and from the government bodies of the Autonomous Province of Trento. Participants were asked to present their vision for the landscape in 2040 or 2050 which was then discussed in groups in order to define the most aspirational topics and challenges and investigate the role of every citizen or association in accelerating or hindering the development of the vision. In particular, the most cited broad challenges have been mobility, agriculture, touristic and cultural development, demographic changes. After the first workshop, extremely positive feedback was received, that practitioners used to

confront themselves only with colleagues with similar backgrounds, and therefore they did not have the possibility to broaden their scope and highlight the interrelations among different landscape challenges. The main topics which have been highlighted are all linked to a call to increase territorial connectivity and diversity both for humans, wildlife and plants. The main findings that have been highlighted in these first meetings have been used to define the working groups for the following workshops and contributed to build a set of scenarios also used in the successive meetings. In this way we held further work with specific municipalities in Trentino (such as Arco or Pergine Valsugana, both pilot cases of the project and with youth representatives from Rotaliana District including 8 different municipalities) where the topics and scenarios have been investigated more deeply and the analysis has been tailored to the specific context.

The case of Gothenburg is of importance as it brings together several projects related to multifunctional and sustainable peri-urban land use and green entrepreneurial models. As the work in the Gothenburg hub builds on a tested model of land lease in urban and peri-urban areas (Model Farm) it supports the sustainable ecosystem based on local management and cultivation of peri-urban areas in order to enhance the supply of ecosystem services, protect the environment and meet the needs of a growing population. The case consists of four different pilot actions connected to the enhancement of urban agriculture, stakeholder engagement, redevelopment of abandoned sites, and education of green entrepreneurs with the aim to create opportunities for more people to pursue a farming career, from "a farm box to hectares". The city has also developed a Farmers Incubator together with the company Xenophilia to train and increase the number of ecological farmers committed to sustainable land management. Agripreneurship training (agricultural entrepreneurship) supports the farmers for the duration of the programme. Underutilized land and basic infrastructure is offered to the programme's participants at favourable costs and is connected with the LAB190 action of mapping and developing land lease schemes. Gothenburg's pioneer farming model, called the Model Farm, is a highly productive small-scale farm unit, providing education to potential farmers and entrepreneurs while supplying the local community with food. By creating a business model based on a sustainable and successful small-scale farming enterprise run within the Gothenburg municipality, the Model Farm serves as a driver for the integration of regenerative farming practices in the continuous evolution of urban and rural multifunctional landscapes. Test sites in Angered and Skogome aim to increase urban food production and promote green entrepreneurship in and around the city centre of Gothenburg. These test sites offer a leverage for small scale agricultural businesses, with minimum investment, and allow for incremental growth within the test sites as well as the possibility of relocation to larger plots of land within the municipality.

Discussion and Initial Findings: Changing Approach, Re-Imagine the Future

The overall process designed by the EIT Climate-KIC SATURN project and the combination of the different tools used, help local administrators, stakeholders

and researchers to build a bigger more holistic vision for the future of their region. This is a key step to bring systemic change in governance processes and foster strategic partnerships. The integration of different tools in a specifically designed process supports the identification of strategic aims and wide goals based on an exploration of issues and the potential of the landscape in each region. This precise identification is fundamental to avoid broad, yet unclear territorial strategies, and therefore their lack of effectiveness in land management. Diving in the details of a specific challenge is then helpful to connect different stakeholders and face challenges with a trans-disciplinary perspective, pursuing the quest for systemic change in landscape management. This perspective also gives researchers and universities a different role within society and acts as a support to collaborative and shared solutions for local problems. The design or management team can make better decisions about the most relevant and influential stakeholders, work on new engagement methodologies and prioritise the barriers of every challenge or project. This is strongly connected with the need to overcome the actual potholes in climate or landscape strategies that are being developed across Europe often at borough or municipal level but that are missing a coherent regional or national framework.

Despite the different approaches and structure of the visioning/engagement processes, both Birmingham and Trentino HUBs have highlighted a positive impact on daily practice of local stakeholders and an improvement of the understanding of climate challenges to urban-rural landscapes.

In the case of Trentino a strong increase of the awareness of the value of the landscape and the current challenges has been recorded with several activities initiated by the local authority with the aim to increase landscape value and awareness. While in Birmingham SATURN has supported the creation of the City of Nature vision for the city as well as worked together with the groups aiming to share awareness on the value of the landscape and increase the food growing community initiatives. Local actors, responding to Trentino's and Birmingham's workshops, have highlighted the importance of multidisciplinarity, inclusivity and working collaboratively during the workshops despite the wide participation of several sectoral agencies and administrations. Such statements help to spread the concept that landscape challenges are interconnected and cannot be tackled one by one as separate challenges or be assigned to one national agency over the other.

Another important achievement is related to the participation of both NGOs and public authorities to the same process with equal participation rights allowing for more cooperative approaches on governance going beyond a sort of competitive scenario that reduces effectiveness of landscape planning. One of the municipalities that joined the initial visioning workshops held in Trento, has since contributed to organise one of the most successful workshops, is the city of Arco, a medium-sized town located on the Northern side of the lake Garda (Italy). The stakeholders that joined the process were both from the public authority and from the private sector (either for profit or non-profit), all aged under 40 years old, creating a multidisciplinary group of people that has already been identified as a success story due to its diversity and open mindfulness. Moreover, reflecting on the backcasting and the necessary actions to develop the landscape in a more sustainable and

coherent way contributes to identifying the most promising stakeholders to be involved according to the actions needed. The whole process resulted in the municipality redrafting its planning priorities according to the most urgent issues emerging from the SATURN process. At the moment the local administration of Arco is actively looking for external funding and resources to finance further actions aimed at recovering abandoned and underutilized land, enhance environmental management of green areas and improve youth engagement in territorial development.

Even though the three areas are developing their work at very different scales and, in the case of Gothenburg, they are working on very 'hands-on' activities, the possibility to widen the perspective and rethink the broader vision through the engagement and visioning process has proven to be useful. The visioning and stakeholder engagement processes helped to increase the impact of the work done within the SATURN project thanks to the possibility to reconnect practical actions to a wider conceptual framework, therefore ensuring that resources and energy are not split across an excess of many different processes across scales or actors resulting in a lack of coherence and holistic approach to landscape management.

Conclusions

The impact of Stakeholder Engagement and Visioning on the decision making process are significant. While they create a platform to collaborate and discuss these processes developed and tested throughout the SATURN project, have allowed for new actions taken by local authorities and key decision makers. While we cannot talk about a full systemic change yet, SATURN has demonstrated new possible ways in which a spatial approach can be developed at a city and regional scale.

The stakeholder engagement tool can create systemic change and a new way of operating in spatial strategies and climate related strategic decisions in our cities and regions. The teamwork required by this process has allowed for several productive discussions between the partners and has also helped utilize past experience and knowledge of each team member which have been shared introducing innovative ways to cooperate across European local administrations. The identification of new actors and networks has been one of the most valuable outcomes, allowing the SATURN partners to involve additional, often very interested and engaged actors. It has also given access to the local ecosystem of start-ups working on topics related to this project. As a way to further test the process of stakeholder engagement and reassure a smooth transition to build capacity for both the members of SATURN consortium and its key actors, the Birmingham Hub has opened this process to selected case study partners who have been willing to dedicate their time to evaluate the different tools, and the overall process developed by the Birmingham Hub.

The visioning approach developed by CATiD (BCU) and the WMNP Lab BCU, has been used to engage and mentor a wide range of stakeholders within and beyond the region. The approach was adapted for use with our SATURN partners in the Swedish and Italian hubs and to deal with the restrictions and

challenges of the COVID-19 pandemic. The outcomes of these workshops have been used to inform the development of the visioning tool that could be applied in a wide range of contexts and situations. During the activities carried out across all SATURN locations, the spatial visioning exercise changed the nature of the discussions about the stakeholder engagement and impacted on the "problem statement" set for each location. The main finding of this process is to demonstrate that no part of the process is objective and neutral but is always contingent. Perceptions as to the significance or importance of specific stakeholder changes subject to the definition of the problem to be solved or the vision to be implemented. A related finding is the suggestion that the spatial vision needs to be articulated as far as possible before workshops are undertaken.

The two processes presented by this paper will need to be further developed and adapted to accommodate natural, morphological, social and cultural characteristics of each country, however they are recommended to allow for systemic change and open new ways of thinking on spatial strategies.

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Forms of the Void: Gorizia and the Border that No Longer Exists

By Thomas Bisiani[*] & Vittoria Umani[±]

For almost 60 years, the city of Gorizia has been divided by the state border separating Italy and Slovenia, where on the other side, the twin city of Nova Gorica has developed. In the past, these two urban realities have not been communicating on the urban and architectonic levels, negating each other's existence, but are now a continuous entity and must find new ways to grow and develop together, even if they belong to two different nations. The University of Trieste, along with the Comune di Gorizia (Gorizia municipality), has developed a laboratory called the RRR lab, with the objective to redevelop and regenerate those urban spaces and buildings that have been put back in play after the fall of the border and the new urban geography that it has created. It is a landscape made up of areas and structures without use or significance, generated by the Dadaist collage of the two cities, that together were, at the time of the laboratory, candidates for the 2025 European Capital of Culture. Starting from this specific case, a more general theme of the research deals with the void. This aspect is easily recognizable in its architecture, where for the purpose of the quality of the work, the single parts that make up a building are not as important as the spaces that are indirectly determined by them. The void, then, can assume an architectonic quality and become the element on which to base the opening principle, "where there is nothing, everything is possible".

Introduction

For almost forty years, the Iron Curtain has divided the European continent. From 1947 the Muro di Gorizia (Gorizia's Wall) has been part of this system. It separated the city, situated on the edge between Italy and what at that time was Yugoslavia, divided into two, with the city center of around 35,000 people on one side, and outskirts and Transalpina Station on the other (Figure 1).

With the laying of the first stone on June 13th 1948, the city of Nova Gorica was born and its role was to become an administrative center for the territory annexed to Yugoslavia. It is a new town of almost 13,000 inhabitants and was drawn up from a modernist design elaborated by the Slovenian architect Edo Ravnikar.

With the Slovenian entrance into the European Union in 2004, the state line that divided the two cities has disappeared and a new urban condition worth studying was born.

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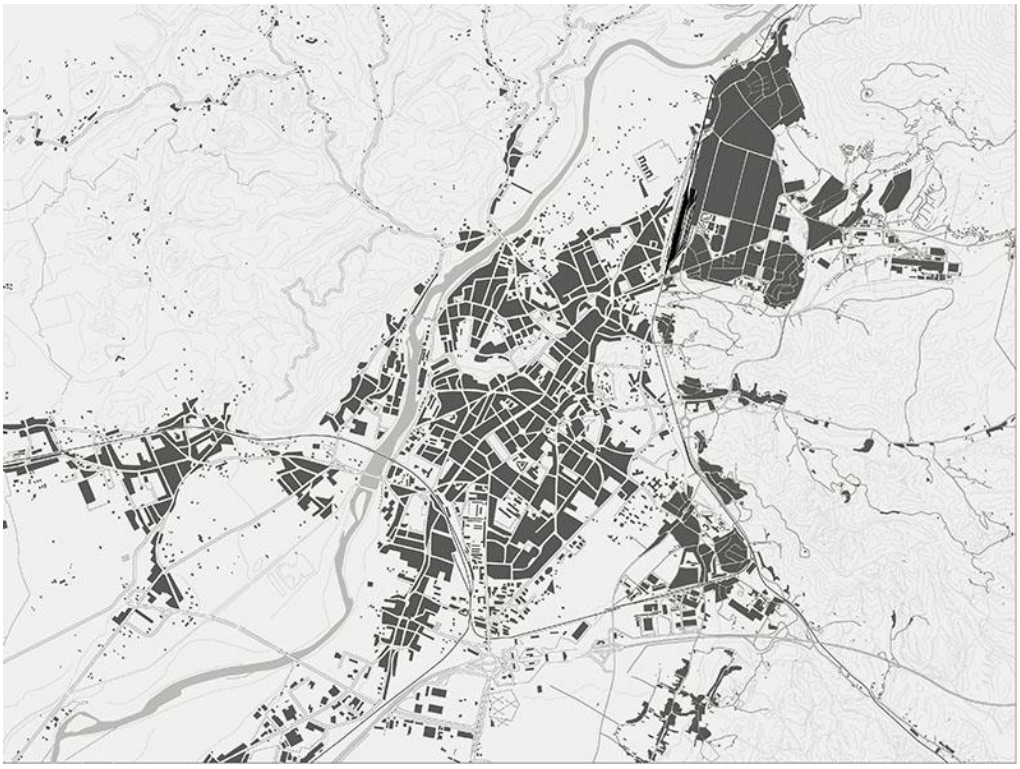

Figure 1. *Gorizia and Nova Gorica*

It is not an isolated case; the Iron Curtain had developed over 12,500 km from the Baltic Sea to the north, all the way to the Black Sea in the south. Starting from 1990 this border area, which was actually just an empty strip of land, has gone from impenetrable to a permeable edge, and instead of dividing, it has begun to connect different realities.

What are the theoretic and disciplinary basis needed in order to study this special condition?

The Iron Curtain today has drawn up a new system, the European Green Belt, a green infrastructure of continental scale where nature has taken over and re-appropriated these areas previously neglected by men.

An initial investigation made for the environmental and landscape sciences can already spark interesting ideas before concentrating on the specific aspects linked to the architectonic spaces and the urban dimension.

Edge lines interpreted as limitations along the Iron Curtain don't exist anymore or are progressively disappearing; these spaces are being replaced by other, more ambiguous, forms of spaces.

The biologist Stephen Jay Gould has based his research on indeterminism as a premise to the majority of innovative biologic processes.[1] Gould distinguishes within the natural ecologies two types of edges: limits and borders. The limit is where things end; the border is where different groups interact.

On the borders, the organisms become more interactive because of the meeting with different species and physical conditions. This is a concept also expressed by

1. S. J. Gould, *The Panda's Thumb* (New York: WW Norton & Company, 1980).

Gilles Clément in the *Third Landscape*[2] where he recognizes the margins abandoned by men as residues that form groups of rich biologic diversity. Typical examples include all the resulting spaces directly linked to the organization of the territory and also, but not exclusively, the edges, portions of territory, and in some undetermined cases, on the limit of national states.

These marginal spaces also correspond to edges of infrastructure or rivers, to borders of fields, to residues of planned areas. They are not only natural places to protect the environment, these are places marked by imperfections, where evolution and development, not only biological, can be accelerated. They are places where the mixture between heterogeneous elements can be more frequent, where the imbalances can be emphasized, and where indecision rules (at the beginning). They are sites that do not completely belong to the city nor to the natural environment.

These analogies of biologic and environmental nature tell us that the areas on the edge, of any kind, can be the most stimulating from the design point of view, and for this reason must be investigated in order to understand their potential and development. This is where the use of the architectural design artifice can slow or accelerate the evolution processes of the city, knowingly orienting the transformation.

The first part of the following study is an analysis of the relationship between built objects and surrounding emptiness, a reconstruction of a disciplinary and theorical image in order to individuate some architectonic strategies, functional to the operative interventions on these edge urban areas, which are empty, abandoned and marginal, not only geographically.

Starting from this image, in the scope of the didactic laboratory RRR lab, seven projects have been developed. The results, commented and then organized into two categories, have allowed for the development of some final considerations on possible intervention strategies in these particular disused urban areas.

Literature Review

There are two main types of spatial structures: the space made up from the contraposition of architectonic objects that look to one another but are separated by vast voids, and from the opposite condition, where the shape of the established volumes is not autonomous but is determined by the empty space that is subtracted or dug from a built fabric, understood as homogeneous.

It is the classic contraposition between fullness and void traceable to the models of the Greek Acropolis[3] and of the Roman Forum.[4] Starting from these two extremes, it is possible to develop an infinite series of possibilities.

In 1748, Giovanni Battista Nolli designs the *Nuova pianta di Roma* (the new Plan of Rome), where the void is not only represented for the first time as a structural element of urban space, but the logic of the two spatial structures start to become a hybrid. The reading of the city through a sequence of "empty" spaces brings Nolli to represent the streets and squares in continuity with the large internal

2. G. Clément, *Manifesto del Terzo Paesaggio* (Macerata: Quodlibet, 2018).
3. K. A. Doxiadis, *Architectural Space in Ancient Greece* (Cambridge, Mass.: The MIT Press, 1972).
4. G. Corbellini, *Grande e Veloce* (Roma: Officina Edizioni, 2000).

spaces of the churches and major Roman palaces, while the rest of the built fabric becomes an indistinctive mass of edifices. The derivate is a fabric with porous margins, where the difference between the void of the outdoors and the indoor space of some buildings is continuous.

A few years later, *Campo Marzio* by Giovanni Battista Piranesi is understood as an assembly of fragments extracted from the typological repertoires of the antiquity, creating a short circuit between these two originating spatial structures as a demonstration of the possibilities of evolution of these two concepts.

In the iconography of *Campii Martii*, in fact, the ancient models, taken singularly as recognizable and identifiable objects and through their specific geometries and the internal composite logics, also determine the rules of their over-all assembly to the point of constituting a continuous and homogeneous fabric that contradicts the originating identity and uniqueness of every single manufacture.

The modernist movement of the 20th century, in its dogmatic and ideologic declinations, will recognize both models. The first will birth the concept for which buildings generate, in analogy with the principle on the relationship between figure/background of the artistic compositions and the empty spaces around them; for example, in the case of the project for the competition of the Soviet building by Le Corbusier.[5]

The second model will find application in the isotropic and homogenous grids that regulate and dimension the space within which the architectonic objects are systematically repeated or are adequate formally; for example, Ville Radieuse also by Le Corbusier.[6]

In 1960, Kevin Lynch publishes *The Image of the City*,[7] a different approach of perceptive character, to question the spatial models that put the observer and the mental image of the urban space at the center of reasoning, with particular attention to the architecture of movement, a new parameter that characterizes the modern space.

Lynch recognizes five elements that concur to define the mental image of the cities, the landmarks and the districts refer to two originating spatial structures; to these, edges, paths and nodes are added. They are all elements of linear characteristics —in some cases closer to the world of infrastructure than that of architecture—with which our cities were being developed in those years. In particular, the edges are elements that the observer perceives as linear interruptions of continuity, elements of separation between areas, zones, contexts, like riverbeds, railway paths, urban walls, rows of trees, limits of districts.

The paths are the "passageways", the different "fluxes" along which the observer moves (habitually or occasionally). For many individuals, the paths are the prominent elements of the personal urban image (structural elements), streets, pedestrian ways, water ways, lines of public transportation. People observe cities moving along them, relating its image to the routes utilized through sequences and

5. Ibid.

6. M. Gandelsonas, M. *X-Urbanism: Architecture and the American City* (New York: Princeton University Press, 1999).

7. K. Lynch, *The Image of the City* (Cambridge, Mass.: The MIT Press, 1960).

narrations. The ends of the paths are the nodes, punctual places from which and toward which the observer moves.

On the architectonic value of linear infrastructure, contemporary or ancient, Costantino Dardi[8] also goes back to the same aspects, when he talks about the Roman aqueduct, the Great Wall of China, the Maginot line or Le Corbusier's Plan Obus for Algiers and how they assume, on the landscape, a specific role as distinguishing elements, division thresholds, rupture lines and so, based on the paradoxical ambiguity between background/figure, even as in meeting places, relation spaces and suture lines.

In *Die Stadt in der Stadt. Berlin: ein grünen Archipel*[9] Oswald Mathias Unger and Rem Koolhaas propose an urban and special structure formed of large parts, a city archipelago of coherent and recognizable architectonic units, isolated in a large green connective element. The question of dimension comes to play, the architectonic objects are being substituted by larger and more complex elements where entire parts of urban fabric are disconnected and isolated.

At the same time, in *Collage City*,[10] Colin Rowe and Fred Koetter develop a new and creative vision of a city, linked to the poetic of the fragment. The book cover, from this point of view, is significative; it shows the plan of Wiesbaden in Germany where the two special models are juxtaposed: the compact historic city and the modern one, made up of groups of isolated buildings.

Through reading the urban form as a collage or as a collection of fragments, Rowe overcomes both the logic of the classic models and the modernist inventions, allowing access to a vast repertoire of architectonic figures as base materials for design, regardless of their historic or ideologic collocation. At the same time as Colin Rowe's studies, in 1978 twelve internationally-acclaimed architects including Rowe himself and Dardi, are invited to participate to the project *Roma Interrotta* (Interrupted Rome).

Two-thousand-fifty years after Nolli's *Nuova Pianta di Roma* (New Plan of Rome), which is considered the last coherent urban plan of the city, it is taken as base for twelve design interventions, juxtaposed like a collage, through the manipulation of its urban fabric from the inside. The result is the image of an unreal city, fantastic and suggestive.[11]

Rem Koolhaas with *Urbanisme: Imaginer le Néant* (Imagine the Nothingness)[12] starts to describe a new approach to the structuring of space. The starting concept is the unequivocal: where there is void, every design option is possible. This vision is very closely related to the oriental one[13] that frees large quantities of creative energy and invites experimentation.

8. C. Dardi, *Semplice, Lineare, Complesso* (Roma: Edizioni Kappa, 1987).

9. O. M. Ungers, R. Koolhaas, P. Riemann, H. Kollhoff., and A. Ovaska, *The City in the City. Berlin: a Green Archipelago* (Zurich: Lars Muller Publisher, 1977).

10. C. Rowe, and F. Koetter, *Collage City* (Cambridge, Mass.: The MIT Press, 1978).

11. P. Sartogo, "Il Progetto," in *Roma Interrotta. Dodici interventi sulla Pianta di Roma del Nolli* (Roma: Johan & Levi Editore, 2014).

12. R. Koolhaas, "Immaginare il Nulla," in *Oma. Rem Koolhaas* (Milano: Electa, 1991).

13. G. Pasqualotto, *Estetica del Vuoto. Arte E Mediazione nelle Culture d'Oriente* (Venezia: Marsilio, 1992).

Starting from a disappointing misjudgment on the quality of the contemporary built fabric and the incapacity to be incisive with architectonic projects, in 1987 Koolhaas develops a plan for La Ville Nouvelle Melun Sénart, formally defining only a system of great linear voids, the only elements worth preserving, and on which to invest design resources, abandoning the surrounding built fabric to its doom.

According to Ludovico Romagni,[14] mankind has always used existing parts in order to repurpose them into new forms. The artistic technique of the collage, similar to music being remixed, is based on this principle. These techniques, like assembly, montage and juxtaposition, require a possibly painful concept: the selection of the necessary parts to the new composition requires a sacrifice, the destruction of the original.

These recovered parts, usually leftover, hold their own origin, a past that makes them recognizable. In any case, this past cannot be completely recovered, the attempt to preserve memory always results in a selection of fragmentation and modification.

In architecture, the presence of unaccomplished, interrupted or abandoned areas push us to rethink the manipulation devices of the existing, besides the typical categories of restoration and renovation. In *Remix Theory*,[15] Eduardo Navas individuates four categories, four actions to manipulate the existing.

The first category is the extension of the original, by punctual manipulations in its growing areas. The second is to subtract or to add elements with the objective of culminating the originative element, integrating new functions or removing crisis elements, without losing overall recognizability of the base object. Deconstruction is the third; disassembly of the significative parts and re-composition of the same in a new organism, giving up on the maintenance of all the other parts. Last is regeneration, which is a selection of the existing elements based on their functionality, and a re-composition with the loss of any link to the origin. This logic acquires value if applied circularly, a dynamic form in continuous evolution.

A final study on specific themes and references of authors that have studied the area of the Italian-Slovenian border, and in particular of Gorizia and Nova Gorica, of the cross-border concept as space and as separation of space, as a bridge where cross connections become layers of a border spatial concept.[16]

Piero Zanini[17] reconstructs a complete path for the meaning of the border. From the initial trace, from the furrow dug in the ground to recognize what is "inside" and what is "outside", a series of significant passages are identified. The border can be understood as a clear, recognizable border, at which the contents expelled from space defined by the border itself, tend to accumulate, as they are considered extraneous to it. Where the border does not divide two contiguous, diverse but known spaces, they become frontier. It turns toward the unknown; it

14. L. Romagni, "Remix," in *Recycled Theory: Illustrated Dictionary* (Macerata: Quodlibet, 2016).

15. E. Navas, *Remix Theory. The Aesthetics of Sampling* (New York: Springer Wein New York Press, 2012).

16. P. Gabrijelčič, *Internationalisation of the Border: The Place of Global Initiative. Development of Border Region in View of European Integration Efforts* (Borderlink_Newsletter, 2004).

17. P. Zanini, *Significati del Confine* (Milano: Edizioni Scolastiche Bruno Mondadori, 1997).

has an unstable character, it goes from a sharp edge to a wide margin with a depth, where "to give a place to differences". A third place is a threshold to be inhabited and constructed. Natural borders are a specific category in which mountain ranges or rivers are examples. Ideally impassable, they are activated as margins of exchange and meeting places as soon as they are "violated" by paths, passages, crossings. These original dimensions of the construction of borders today can generate a phenomenon that Zanini defines as "ecological borders", citing the cases of Mexico/United States and Gorizia/Nova Gorica borders, in correspondence with which, almost naturally, those parts of urban settlements accumulate, judged as most inopportune, unhealthy and harmful.

Similarly, Sara Basso[18] adds that the threshold represents the synthesis of the border construction process. However, this figure also refers to the idea of transition, of passage. It is the "in-between"; a sign in the space that separates and "tends towards" at the same time, a conceptualization that allows to think about the border as something that places two different realities in communication, an interface between two distinct universes. This shows the ability of the "spaces between" to foster exchanges and encounters, assuming the role of "generators of innovation" of the identities that constitute them. The border can therefore be understood as a place of suspension, but also of the constructive and non-conflictual mixture of identities.

These disciplinary references have been the theoretical basis for the development of the design experimentation established as a didactic laboratory according to the methodology described in the next section.

Methodology

The objective of the architectural design laboratory is to individuate and redesign strategic spaces of the city by intervening on the areas that need re-qualification or regeneration in order to reactivate life cycles through the redistribution of functions, resources and architectural fabrics not yet efficient, that is, individuating new solutions for deconstructed places, left without residual values.

As it is an integrated architectural design laboratory of architecture and of the built environment, other disciplinary modules are part of the curricula. Some include: Architectonic Composition, Advanced Survey Techniques and Plastic Modeling, Requalification of the Built Environment, Architecture of Big Infrastructures and Infrastructural Complexes along with numerous seminaries and workshops, all taught by different professors.

The didactic activities have been divided into two semesters, the first is more lecture-based where the students experience a combination of multidisciplinary lessons and its focus is to provide a theoretical basis for the more hands-on approach of the second semester, the students are divided into small groups and

18. S. Basso, *Nel confine. Riletture del Territorio Transfrontaliero Italo-Sloveno* (Trieste: EUT - Edizioni Università di Trieste, 2010).

are asked to propose a design solution to an area of their choosing. The two semesters have been further broken down into lectures, seminars and workshops.

The first exercise has been titled "Atlante". The titan Atlante, after the defeat of Cronus in the Theomachy has been obligated by Zeus to withstand the weight of the globe.

Because every project begins with the elaboration of information, it is at this stage that the students have been asked to begin to recognize the possible themes of the project they will be developing through the collection of useful examples and theoretical references for which they were instructed to create and organize a collection of materials. The assembly of this Atlas is the first act on which they will be sustaining their project. The Atlas will be constructed by the thematic collections of significative projects selected by the groups of students and the editorial and graphics aspects will be determined by a coordination group.

On the final day of the first seminary, a presentation will be organized, defined and directed by the coordination group where each group of students will present their collection of projects.

The second exercise, "Filling Voids", sees the void as a content, objective and design instrument. The students are asked to design the void between abstraction and figuration. The outcome will be a first theoretical-design "synthesis", an urban-architectonic morpheme, a pre-dimensioning and a first review of the functional program. Practically the students are expected to produce a model of the voids for each study area of Gorizia, highlighting the existing and design condition along with a general planimetry of the seven study areas of Gorizia/Nova Gorica showing where every project is located.

To mark the end of the first semester, the summary workshop "Laboratorio Gorizia: Masterplan" will be organized by the students. There is only one defined assignment: to elaborate a synthesis masterplan that foresees the overlap of Antonio Lasciac's 1913 plan for Gorizia and the seven new study areas developed, along with a critical selection of parts of the city added or removed after the First World War (Figure 2).

Figure 2. *Development of the Urban System of Gorizia in Three Phases, 1797, 1915 and 1947*

Note: The last phase includes the institution of the state line border and the foundation of the city of Nova Gorica to the North-East.

This way a new map will be developed, able to highlight the contact points, able to resolve interferences, able to recognize and make most of the shared elements, constructing a unified and coherent design, starting from the way each project area relates to its context. The students have set up one of the classrooms as an interactive "museum" where the materials from the previous seminars will also be shown, creating a coherent narration for the birth of each individual project while still maintaining a united image. The Comune di Gorizia (Municipality of Gorizia) was also invited to participate.

The second semester was highly characterized by the beginning of the pandemic and Italian lockdown from March 2020. As a consequence, all the activities planned underwent some changes in order to adapt the curricula to the impossibility of classroom work. Each group of students was asked to keep developing their project and each week an online group revision was held with all the students and all the teachers in order to guide each project in a good direction. At the end of the semester an online workshop was organized alternating lectures open to the public via streaming, working hours and revisions. On the final day, the students organized an online presentation of all seven projects. Sometime later the students were asked to represent their projects. After some minor adjustments, "Outcomes", a one-day seminary was planned and would be evaluated as the final exam where the Comune di Gorizia was also invited.

Findings

Here are the seven projects developed during the course of the laboratory:

Group 1, Transport Interchange

The project is located where Gorizia's tram depot once was. It is infrastructure-based and connects the modern-day Italian railway station, the public transport system and the hospital. A pedestrian passageway directly connects the station with the building of the hospital along with a series of new constructions (Figure 3). These include car parking, bicycle parking and a hybrid building that hosts a series of services and facilities in support of travelers along with study and reading area dedicated to student commuters. The bicycle parking is designed as a ribbon with two levels and covered by a large canopy.

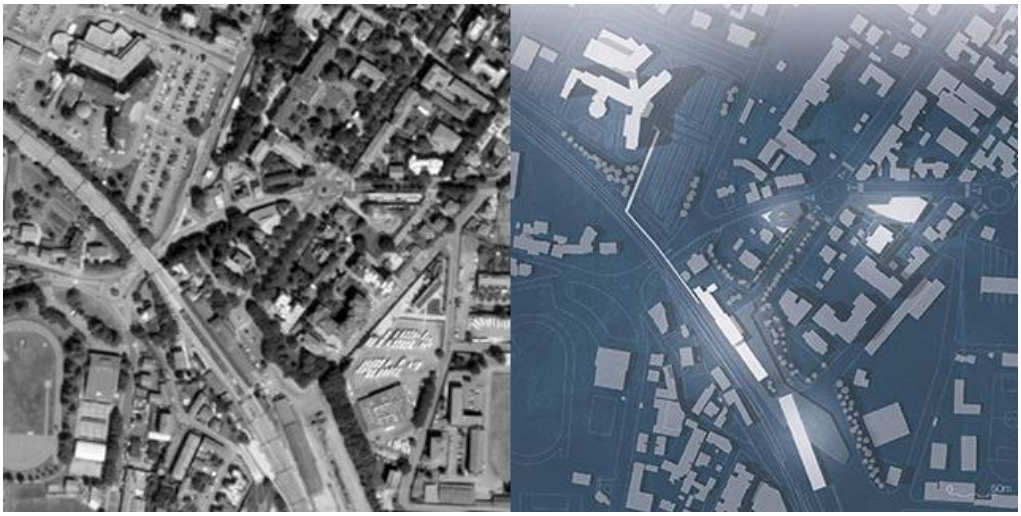

Figure 3. *Group 1, Transport Interchange, General Plan*
Source: Elaboration by Collenz, M., Di Ferro, S., and Lauricella, L.

Group 2, Casa Rossa

The Casa Rossa project fills the large void of the forecourt of the old checkpoint, born as service to the Slovenian border crossing of Casa Rossa.

The new park is made of many open spaces and elements.

On one side, a large terracing along the hill of the university overlooking the state line, as a sort of land art piece that takes direct inspiration form the Cretto di Gibellina by Burri.

At the center, it is possible to see a large covered area dedicated to open air markets or other events.

The abandoned building of the Casa Rossa border breach is being monumentalized by a large slit that connects the two sides of the state line and it is transformed into a museum of itself (Figure 4).

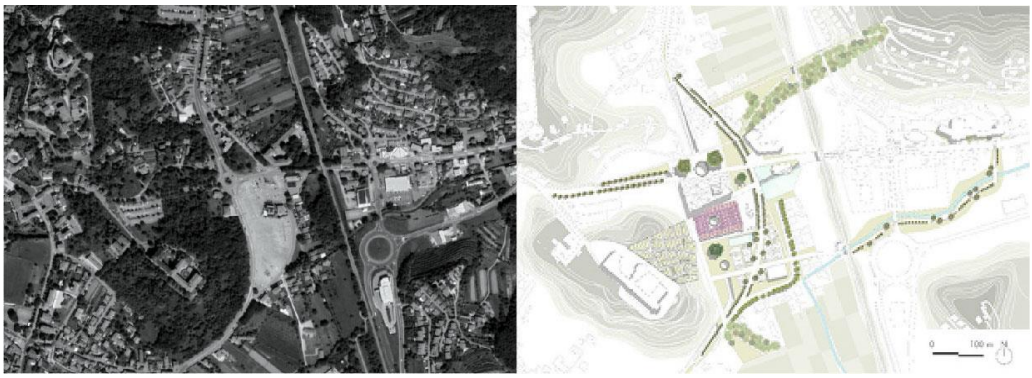

Figure 4. *Group 2, Casa Rossa, General Plan*
Source: Elaboration by Barbiani, P., Ladrero, M., and Morgera, I.

The project is designed by slots and phases, adding a layer of feasibility where the construction stages have also been developed.

Group 3, Points, Lines And Volumes

Points, lines and volumes is the title of this project and is located on the Piazzale della Transalpina.

It takes into consideration the scenario of Gorizia/Nova Gorica as the European Culture Capital for 2025 which is why the infrastructure along the border line is constructed by functional architectural elements used as support for the events.

Useful connections are added, able to take the user across the two cities and all the way to Piazzale Transalpina (Figure 5).

Figure 5. *Group 3, Points, Lines and Volumes, General Plan*
Source: Elaboration by De Conz, G., Lippiello, T., and Pigat, N.

These passageways are particularly symbolic as the Transalpina station is a place of great symbolism as it is a half Italian and half Slovenian square that physically connects the two cities.

It used to be a stop for the trainway line that connected Vienna to Trieste.

After the new border definition for both Slovenia and Italy, the Transalpina station itself remained on the Slovenian side while the Piazzale right in front of it is in Italy.

Group 4, A New Boulevard

This project revolves around traces. It deals with a primary connection axis between the city of Gorizia and the access to the highway, that passes across the state line and reaches the capital of Slovenia, Ljubljana.

Besides its relationship with the highway, the area is intersected by the sediment of the railway and individualizes a series of areas, in-between these two traces that are underdeveloped. In particular, a large ex-military area that is now in the process of disposal (Figure 6).

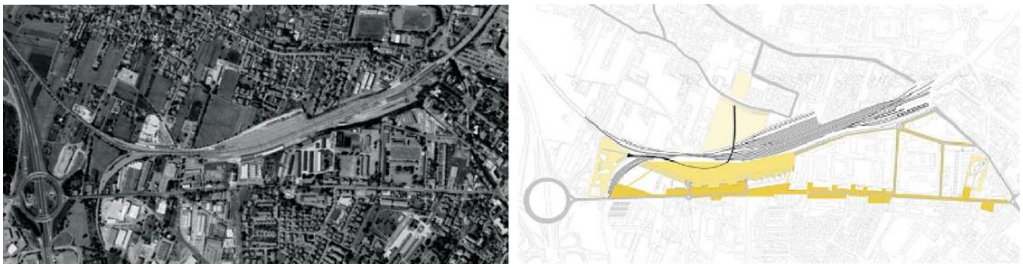

Figure 6. *Group 4, A New Boulevard, General Plan*
Source: Elaboration by D'Onofrio, L., Ridolfi, P., and Zei, G.

The project foresees a series of new architectonic interventions and, at the same time, a series of new open-air spaces and parks of different nature. Its objective is to overcome the limit of the railway tracks with pedestrian walkways and to redevelop these bands of unqualified terrain with the insertion of new buildings, characterized by a variety of uses, residential, commercial, and all the necessary facilities to serve both.

These spaces, bands, stripes, are in some cases very narrow and the project develops them as an opportunity to modulate their transversal section and create spaces of different qualities dedicated to traffic fluxes and pedestrians along with slow mobility, in order to transform them into linear parks.

Group 5, via Terza Armata

In correspondence of an empty area next to the state line, along with via Terza Armata, axis of commercial and industrial development in Gorizia, the project presents the hypothesis of the realization of a new commercial center integrated in the landscape (Figure 7).

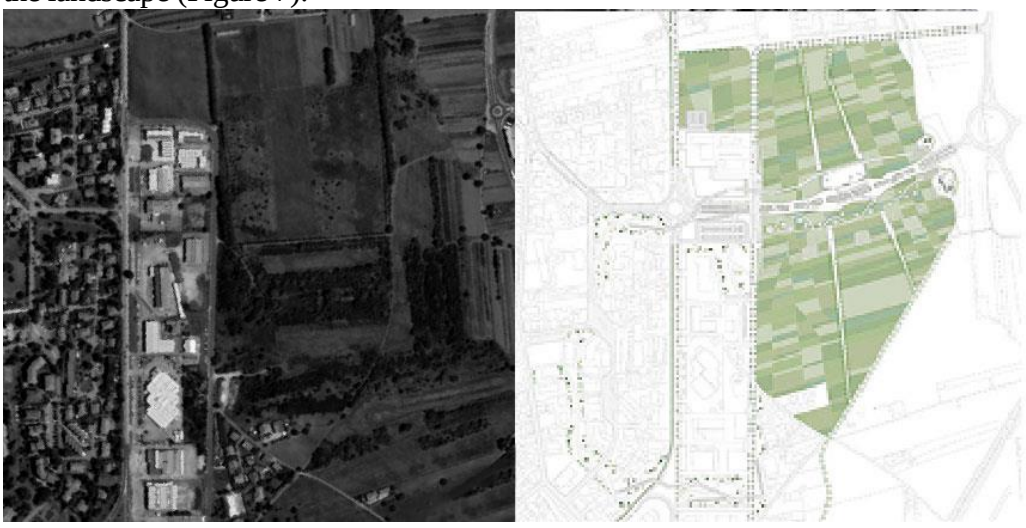

Figure 7. *Group 5, via Terza Armata, General Plan*
Source: Elaboration by Brun, L., Tomasin, G., and Zotti, F.

A large commercial building that in a way reinterprets and respects the characteristic void of the area. The building is mainly developed underground, under an artificial hill that is at some point dug up by the central distribution

devices of the building. It is almost invisible from the outside and it is only possible to see it once inside. The access to the building happens through a system of overhead pedestrian walkways that pass over the main roadways that arrive at the commercial center.

Group 6, Vision of Equilibrium

Vision of equilibrium is developed over Gorizia's ex Fiera and next to one of the main traces of the territory, the Isonzo river.

This location is particularly symbolic because the river crosses the border and joins the territories of Slovenia and Italy. In this case the strategy is to rethink and redesign this area by creating a connection between an existing sports center and the Isonzo, interpreted as a privileged area for free time and sports.

The project foresees the development of a park that, through a system of passageways, physically connects the existing sports facilities with the river along with a series of buildings in order to enhance the sportive vocation of the area (Figure 8). The buildings host different uses: a sports hall for volleyball, a sports medic center, a rock-climbing gym, and a series of commercial activities in support. The project is presented as a large park with a series of emerging architectonic objects with a strong sculptural connotation. In this case as well, part of the project has been developed on a schedule in order to answer to the demands of the city administration, along with a program for the management and maintenance of the park.

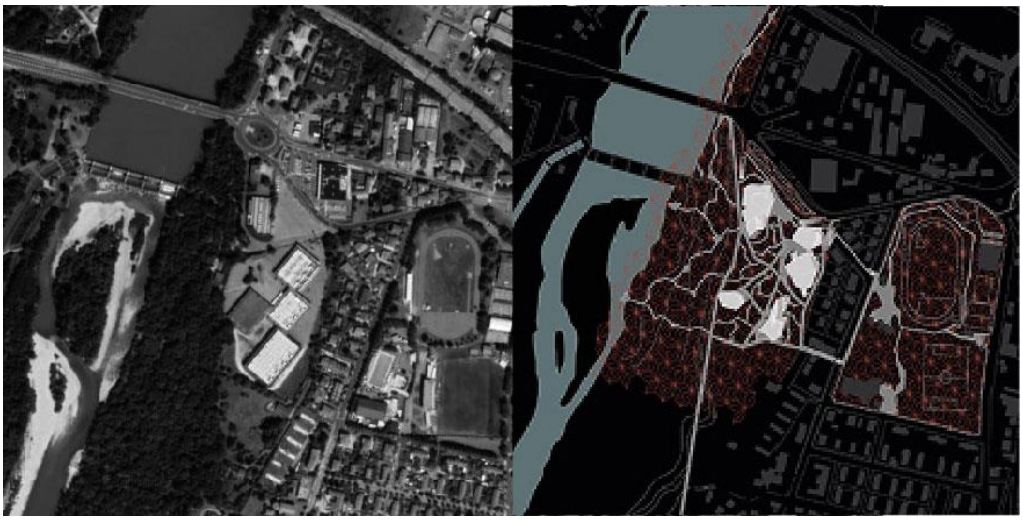

Figure 8. *Group 6, Vision of Equilibrium, General Plan*
Source: Elaboration by Buccino, D., Requena, L., and Romanzin, A.

Group 7, Archipelago Park

Archipelago Park is the title of the project placed in the area of the former, now abandoned, civil hospital, situated close to the border. It is characterized by a series of buildings, distributed over a large green area as if they were islands that

make an archipelago. The project foresees the substantial demolition of these buildings with the exception of the sanatorium, the building with the most history and architectonic value and prestige. The area's scope is completely dedicated to mental and physical wellness.

The park is re-qualified, and a series of new buildings are added in order to repurpose the area. The sanatorium becomes a hotel, in place of the ex-hospital, a wellness and spa center is designed, and the area closest to the state line becomes an exposition center (Figure 9). The project deals with three different interventions, all alternative to one another. On one side, a scientific restoration of the existing building and on the other the insertion of new architectures with a contemporary aesthetic. The spa and wellness center are based on a system of aggregating buildings guided by a growth matrix that can be modulated based on the functional program and realization phases. Additionally, the element of water gets re-introduced as was historically significant, the area had humid characteristics, documented by the dried fluvial traces. This distinguishing feature gets re-interpreted to connote the entire area, starting from the creation of an artificial lake in the center of the park.

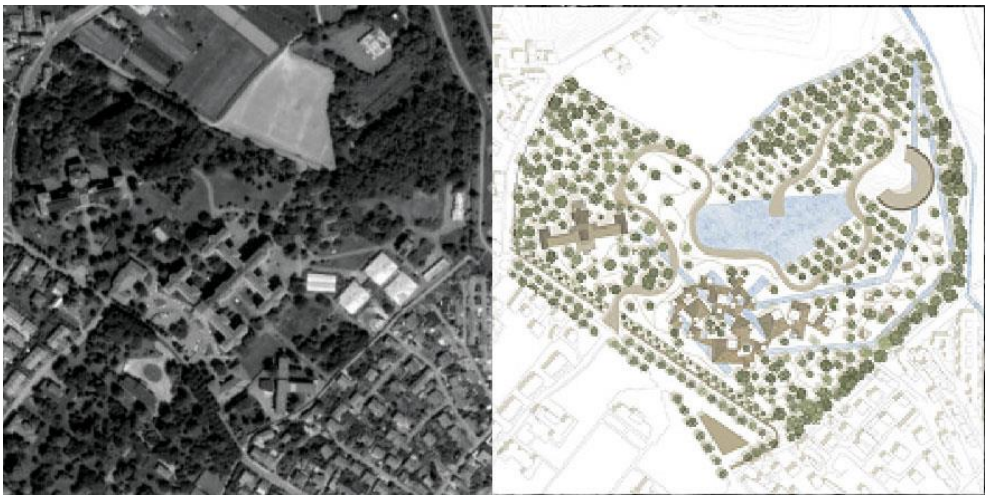

Figure 9. *Group 7, Archipelago Park, General Plan*
Source: Elaboration by Bearzotti, G, Cepach, D., and Ferletti, A.

Conclusions

There are more than seventy state line walls in the world, from the Hungarian barrier against migrants, to the barbed wire line between India and Bangladesh, to the border line between North and South Korea, to the separation between the United States and Mexico, or between Israel and West Bank. In the last thirty years their number has quadrupled.

Similarly, the boarder that divided Gorizia that was believed to be definitively removed, has been quickly re-established during the pandemic. A new fence made from metallic grids and cement prefabricated elements has once again divided for many months the two cities for sanitary reasons.

The results of this laboratory have been appreciated by the Municipality of Gorizia that has decided to finance a new laboratory in order to enlarge the acquired outcomes.

The final presentation of the projects underwent an evaluation by an enlarged group composed of the laboratory teachers, guest teachers from the University of Ljubljana, councilors, executive and civil servants from the Municipality of Gorizia.

The aesthetic of the void and residue as a design material to be used in projects, its way of reading the study areas, and its declination through the technique of composite collage, of the remix, mash-up and the found footage, have been stimuli that have allowed the groups of students to release their creativity, obtaining projects different from one another, with great biodiversity of forms and content.

Voids and residues are typical materials of the city and of the contemporary landscape. The original relation between the parts, that historically used to make up the territory, has progressively been put into crisis by the industrial revolutions. The objects, clues of these relationships over time have shrunk, have grown apart, have moved, and have also disappeared in some cases. In their place it is possible to find gaps and fractures, only ruins and residues remain. This phenomenon is even more significant in communication with the "ecological border" mentioned in the literature review. In correspondence with the borders, the accumulation of objects, spaces and heterogeneous functions, confused and discarded, is even more evident. This condition on one hand clarifies the necessity for a project, and on the other, offers fertile soil for its development, with less limitations and greater potential, and so with a more significant impact on the architectonic quality.

The discussion has allowed, on the basis of the themes and principles illustrated in the literature review, to categorize the seven projects into two groups: Fragments and Traces.

The fragments are those projects that are developed over a clearly marked area that have internal constructive rules, like a sort of DNA, allowing possible expansions and growth. The projects of groups 1,2,5,6 and 7 are part of this category.

The fragment is a contemporary figure of the composition that contains a form of dynamism. The fragment can be part of an originally whole system, that has fractured and can aspire to re-compose itself in the future in the lost unity or accept its current condition as a residue. The fragment can also be the origin of something new, that can potentially grow and complete itself. In any case the fragment, exactly because it is incomplete, contains a tension, a strong design charge, towards other possible spatial configurations, which the static nature of the unitary and integral form cannot have.

The traces on the other hand, are linearly developed projects; they are born in correspondence to physical limits of the city, made up of the state line, but also of the limits of the existing infrastructure. The projects of groups 3 and 4 are part of this family.

The traces, born as borders strongly rooted to the earth, are natural or anthropic signs. They are also margins with depth, bands more or less wide. In correspondence with the traces, communities are formed. They are barriers until, trying to cross

them, thresholds, portals, crossings and paths are introduced that allow a recognition of the value of the differences.

Traces are at the same time elements of distinction of the different spaces and places of contact.

Fragments and traces that have been individuated, have then been re-composed into a unitary drawing, that has allowed to reconstruct the identity of a complex urban system (Figure 10).

On the basis of these first encouraging results, the University of Ljubljana has also decided to embark on a twin study on the other side of the state line, in order to share and compare the obtained results with a cross-border collaboration.

Gorizia and Nova Gorica, even if they belong to two different states, continue to imagine themselves as a single city. The scenario speculated by group 5 is an example, and since December 2020, the allocation of the title of European Capital of Culture 2025 has been shared by the two cities.

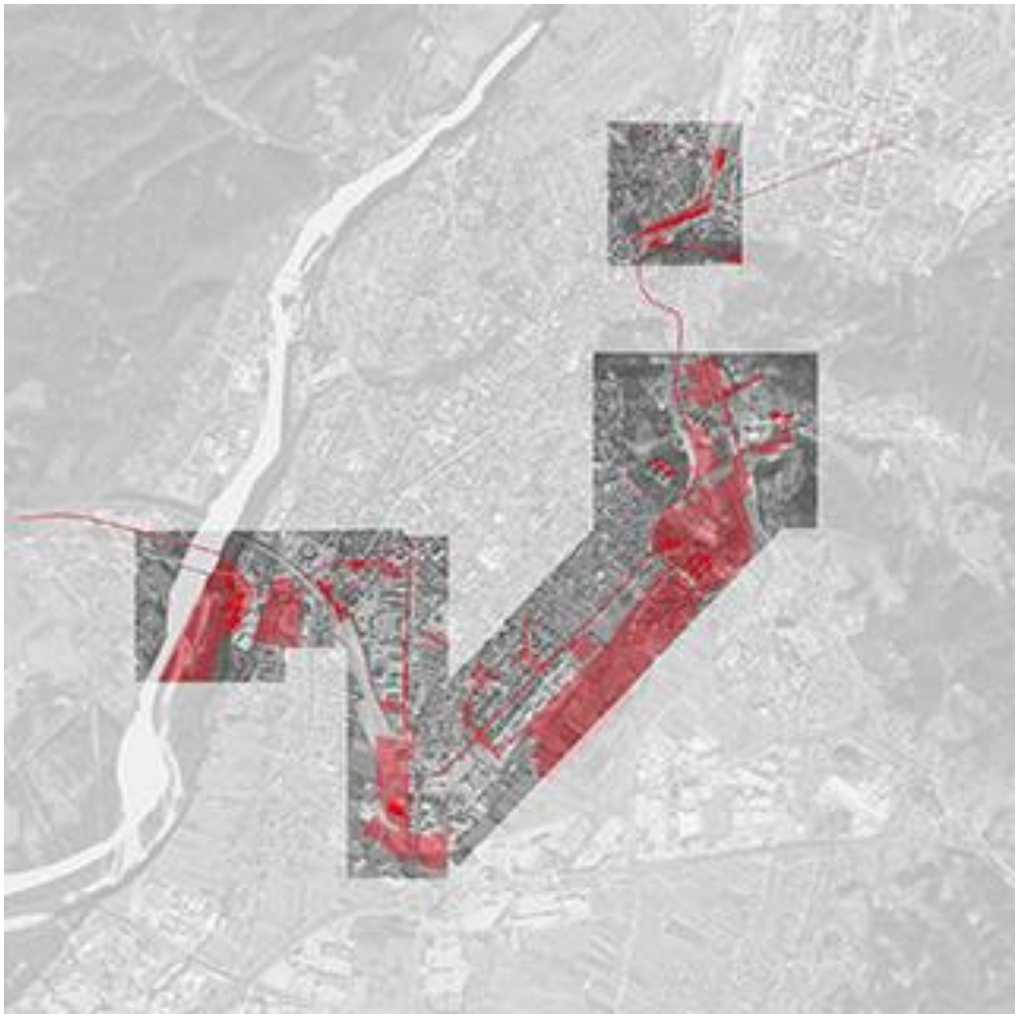

Figure 10. *General Map of the Seven Projects Joined*
Source: Elaboration by RRR lab.

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Kitsch Landscapes: Strategies to Inhabit Artificial Natures

By Elisa Monaci[*]

The article deals with the theme of artificial natures studying, above all, the scale of the domestic, as it relates to the role of nature in contemporary design. The narrative theme is at the heart of this essay as the nodal centre and theoretical starting point from which we rethink and redesign contemporary spaces. In particular, the term and concept of "kitsch" is studied, in its current guise and meaning, in order to deploy it as a tool and as a design method for new categories of project narration. Thereafter, using some artistic experiences and two architecture and landscape projects, the so-called "kitsch landscapes" act as a design counterpoint to the theoretical examination and open up the configuration of the design narrative for the domestic space, combining architecture and landscape together.

Introduction

In contemporary architecture, there is an increase of insertion of nature and vegetation into normal everyday places. The underlying cause of this increase is people's desire for landscape inside their houses, for a greater degree of adventure in their private lives, so that they may incorporate a larger portion of the world into their homes. Recently, nature has been rediscovered once again as an object of people's desire and once again used as a symbol of the contemporary, of a trajectory that aims to enter into greater symbiosis with our environment and to establish a relationship of reciprocity and no longer one of dominance. Starting from the assumption, recently affirmed by some philosophers such as Emanuele Coccia,[1] that there is nothing intrinsically natural, but that the world is made up of a set of elements that have been created and conceived by multiple designers on multiple scales (from insects to bacteria to plants and animals), the research considers nature as a tool of contemporary design, not unlike many others, to glimpse unprecedented trajectories of space design and of compromise between the artificial and the natural within the domestic sphere.

In particular, what has become necessary, is the need to establish new design narratives. Although architectural experiments have reconfigured many of the spatial dynamics of the domestic, the narrative of space in most building constructions remains unchanged over the last fifty years and linked to primary functions: sleeping, eating, body care. The project narratives see nature as part of the project and as a tool and a way to design again our spaces and seems to be able

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1. See Emanuele Coccia's series of conferences held at Iuav Univeristy of Venice from December 2020 to February 2021 titled *La città del futuro. Il museo della natura contemporanea* (eds.) M. L. Frisa, S. Marini, and A. Mengoni.

to redesign current spaces according to desires and dreams, bringing together the real and the imaginary.

The contribution will focus on highlighting some recent projects that rethink the theme of nature within the domestic sphere. The relationship between architecture and nature is analysed not so much towards a return to the primitive as in the possibility for this *camouflage*[2] and mixture to define new perspectives for space design and to trace the components and characteristics of contemporary domestic space.

Literature Review

Concerning the literature review, the contribution takes into consideration the main bibliographical references on kitsch in order to detect the terms and definitions that are most relevant in the contemporary on the subject of artificial nature and design narrative.

Various authors (such as Clement Greenberg,[3] Walter Benjamin,[4] Umberto Eco,[5] Gillo Dorfles[6]) have been confronted with the arduous task of defining the term kitsch, which has no single rigid definition or etymological origin. To summarise the definitions and meanings, I propose using a quote from Matei Calinescu that partly encompasses the many meanings of the word:

> Some authors believe that the German word derives from the English 'sketch', mispronounced by artists in Munich and applied derogatorily to those cheap images bought as souvenirs by tourists, especially the Anglo-Americans (cf. *Gero von Wilpert, Sachwörterbuch der Literatur*, Stuttgart, 1969). According to others its possible origin should be looked for in the German verb *verkitschen*, meaning in the Mecklenburg dialect 'to make cheap' (cf. *Trübners Deutsches Wörterbuch*, vol. 4, Berlin, 1943). Ludwig Giesz in his *Phänomenologie des Kitsches* also mentions the hypothesis that links kitsch to the German verb kitschen, in the sense of 'collecting rubbish from the street' (*den Strassenschlamm zusammenscharren*); kitschen has indeed this specific meaning in the southwestern part of Germany; it can also mean 'to make new furniture from old'. These three main etymological hypotheses, even if erroneous, seem to me equally suggestive of certain basic characteristics of kitsch. First, there is often something sketchy about kitsch. Second, in order to be affordable, kitsch must be relatively cheap. Last, aesthetically speaking, kitsch may be considered rubbish or junk.[7]

2. See especially Neil Leach, *Camouflage* (Cambridge MA: The MIT Press, 2006).

3. Clement Greenberg, "Avant-garde and Kitsch," *Partisan Review*, no. 6 (1939).

4. Walter Benjamin, "Traumkitsch," in *Walter Benjamin. Gesammelte Schriften* (eds.) R. Tiedemann, and Schweppenhäuser (Frankfurt A.M.: Suhrkamp Verlag, 1991), v. II, 620-622.

5. Umberto Eco, "Struttura del cattivo gusto," in Idem, *Apocalittici e integrati* (Milano: Bompiani, 1964), 65-131.

6. Gillo Dorfles, *Il Kitsch. Antologia del cattivo gusto* (Milano: Mazzotta, 1968).

7. Matei Calinescu, *Five Faces of Modernity: Modernism, Avant-Garde, Decadence, Kitsch, Postmodernism* (Durham: Duke University Press, 1987), 234-235.

The article also considers the literature of the discipline of architecture and landscape design from the modern to the contemporary, taking up some fundamental authors (such as Colin Rowe, Robert Venturi and Charles Jencks) and introducing some contemporary bibliographical references from the field of art and philosophy (such as Nicolas Bourriaud, Robert Voit and Emanuele Coccia). At the same time as the theoretical examination, the contribution deploys some experiences from contemporary art that use nature as a palimpsest to define the role of the project in relation to the landscape and that map a series of contemporary behaviours and design actions. The study of architectural and landscape projects realised in the recent period allows the research to build a transition from theory to project on the theme of the kitsch narrative between artificial and natural. The article will focus on two case studies that will be analysed in depth in order to deduce theoretical and general considerations.

Methodology: The Kitsch Parameter

What are then the actions and questions that designers must ask themselves in the face of these contemporary conditions? Can new narratives be the tool with which to rethink our spaces? Can we trace in the users' actions of redesigning their space a need to establish new stories? In order to approach the theme of project narration, I use the concept of "kitsch" as a parameter whose oscillatory nature allows me to highlight certain new narratives that are emerging in the contemporary world and enables us to bring together the high and the low, the popular and the cultural, architecture and society.

Kitsch was originally born as a way to escape from the conventions and from what was considered the high culture and art. However, some characteristics of kitsch from the last century endure in the contemporary world. Today, kitsch is used as an adjective to describe something or someplace when there is a gap between the initial intention and its material reality, no matter if we are talking about objects, space, culture, or politics (social networks have spread the mechanism of kitsch in the staging and fiction that distorts reality and serves to give a certain virtual image of oneself and, conversely, the different ways and looks with which this is received by others). It follows that kitsch has an effect that depends on several factors: it depends on viewpoint; it differs according to the historical period; and geographical and cultural context. Moreover, kitsch does not have an absolute effect but rather results from the differentiation between reality and expectations that is registered by those who look at it. This may be partly by design, but most of the time this difference is unintentional, and it is precisely this characteristic that produces the condition of kitsch.

Currently, my research starts with an analysis of the major contributions written about kitsch, mainly in the artistic and literary fields. I have done this in order to extrapolate the terms and the questions that could compose the narratives that kitsch establishes in contemporary architecture and landscape. In this essay, I highlight some preliminary results and focus on two kitsch narratives that are

guiding design today that allow me to identify theoretical and project trajectories for spaces and architecture.

From this point of view, within the architectural discipline there is a dual movement and a reversal of forces between natural and artificial actions that influence each other. Man's construction attempts to evolve towards natural dynamics conforming itself to the landscape in which it fits, concentrating on reducing its "impact" on the surrounding context and defining with the environment a "vegetable" behaviour: draw from nature to take resources and sustenance and at the same time keeping the balance and the *status quo* unchanged in the reality.[8] Together, the landscape towards which architecture attempts to conform is artefact and tampered with by man. Over the years, the multiple *artificialisations* of natural elements have hybridized and genetically varied much of the existing vegetation. Therefore, there is no uncontaminated real space or place, just as there is no nature with these characteristics, it is always reproduced or reproducible. In these terms, kitsch is analysed as a methodology and as a strategy of reproduction or emulation of reality in the field of artificial natures.[9]

In this artificial, reproduced and reproducible reality, kitsch design project is going towards a method of action that constantly oscillates between the ambiguous and the overtly false, going deep inside efficient reproduction that surpasses the original, assuming nature as the new contemporary symbol, being such only through its infinite reproduction and is essentially an artificial product. On this theme, mention should be made of the work of the artist Ilkka Halso, who designs impossible, uninhabitable and unconventional scenarios using landscape and nature as his working material. Trees become buildings to be restored by means of scaffolding in forests that suspend them from their context and elevate them to a work of art and at the same time to a fragile element in the process of crumbling. The rocks and waterfalls become the stage and the scene of an imaginary theatre artificially created on paper to hypothesise new scenes and new representations with the context. Large warehouses of containers and disposable shelving store stones, molluscs and trees, taking the place of Ikea furniture or Amazon products and defining a fine line between nature as a commodity to be bought and mass-produced, and nature as a resource put into storage for preservation. In the meantime, the photographs of some sets of pleasant and balanced places reveal the artificiality of the staging: we are those who produce the narration and thus define its degree of verisimilitude and the range of the project's reach.[10]

8. It is worth mentioning the European Landscape Convention which works to define the boundaries of interaction and work between different types of landscape and their corresponding definition and regulation, based on the assumption that there is no landscape that has not been remodelled by the artificial and by man.

9. On this topic, particular reference is made to Jean Baudrillard and his theory on the simulacrum and simulation (Jean Baudrillard, *Simulacres et simulation* (Paris: Édition Galilée, 1981)), especially the distinction between simulation and dissimulation in the process of copying. Reference is also made to Jean-Luc Nancy on the theme of the opponent and the overcoming between copy and original (Jean-Luc Nancy, *Tre saggi sull'immagine* (Napoli: Cronopio, 2007)), as well as to the topic of the mask and disguise in Walter Benjamin, *Aura e choc. Saggi sulla teoria dei media* (Torino: Einaudi, 2012).

10. See the sections *Tree Works*, *Museum of Nature* and *Naturale* inside his personal website: www.ilkka.halso.net. [Accessed 2 May 2021.]

The contemporary project field is marked by the transition from the dichotomy of pairs of opposites (natural-artificial, landscape-architecture) to an ambiguous context, made of mixtures and hybridizations.[11]

Domestic Natures

Projects of synthetic nature are increasing inside dwellings and in urban contexts, where artificial performs and acts as an intermediary between ecology and technique, determining a reconfiguration of nature as a new status symbol (serving the same function as a souvenir).

Kitsch methodology works on the symbol that nature covers today, both as an element of redemption and salvation to strive for and copy, and as an element to defend and oppose. The reproduction and dissemination of nature as a contemporary symbol is achieved by distorting it, falsifying it and transferring it to the scale of the domestic and the everyday in such a way as to betray and perpetuate it at the same time. Reference is made here to Lucius Burckhardt's theory that when the copy ceases to symbolise the authentic but transcends it and becomes independent then the *fake* becomes *authentic*, in these terms that symbol is both perpetuated and betrayed.[12] Reference is also made to Nicolas Bourriaud who, in relation to the reproduction of the work of art, examines the necessity of the copy as an operation that allows the survival of the original while entailing its death. Starting from the continuous translation and betrayal, no path backwards can lead to the original.[13]

Simulation and the concept of nature as a symbol are the subject of many projects and works of contemporary art, in particular Robert Voit's photographic work *New Trees*, which depicts a series of trees that are alien to their context in terms of species, shape and above all size (Figures 1-3). The trees are actually electrical antennas disguised in the guise of a fake vegetal element which allows them to adhere more closely to their context, at least until the artifice is revealed on closer look. The short-circuit of meaning that these elements create in the urban or peri-urban spaces in which they are placed raises a series of questions about their status on the borderline between landscape, technical element and architecture. The need to *camouflage* one's appearance through "natural forms" in order to depart from a purely technical and technological meaning is one of the facets that the theme of the artifice of nature has taken on in the contemporary world. Disguise, mimesis and simulation are the design actions through which the artificial

11. See Emanuele Coccia, *La vie des plantes. Une métaphysique du mélange* (Paris: Bibliothèque Rivage, 2016). The author turns to the plant world as a paradigm to look to in order to review the assumptions through which we inhabit and populate the earth. The plant is the element that most relates to the geological world below us, to the interpenetration of the atmosphere and climate that pervades us and to the impulse to inhabit the sky, focusing on the position assumed in space and time only by standing and not always moving and acting.

12. Lucius Burckhardt, "Das Falsche ist das Echte," in *Schmuck- Zeichen am Körper*, (ed.) Linzer Institut für Gestaltung, 55-60, exhibition catalogue (Linz 1987).

13. Nicolas Bourriaud, *Radicant: Pour une esthétique de la globalization* (Paris: Denoël, 2009).

establishes a new relationship of contrast and emulation of the landscape context in which it is inserted, placing the end and means of the project in opposition[14] (Figures 4-5).

Figure 1. *Superimpositions. Robert Voit, New Trees, Mobile Home Park, Las Vegas, 2006*

Figure 2. *Superimpositions. Robert Voit, New Trees, Scottsdale, Arizona, 2006*

14. See Robert Voit, "Fukushima Archive. New Trees," in *Spectre, Vegetal Trauma*, no. 2 (2019): 174-181; and photographer's website: www.robertvoit.com. [Accessed 25 March 2021.]

Figure 3. *Superimpositions. Robert Voit, New Trees, Halfway House, Midrand, Gauteng, 2006*

Figure 4. *Superimpositions. Robert Voit, New Trees, Galleria at Sunset, Las Vegas, 2009*

Figure 5. *Superimpositions. Robert Voit, New Trees, City Creek Road, Mentone, 2006*

It must be acknowledged that the theoretical fortune of the multiplication of vegetation in private urban spaces lies largely in Edouard François's project Tower Flowers[15] which forms the matrix of nowadays insertions of vegetation in terraces and balconies. The project in that case uses nature as an ornament or as a mask of architecture, as Charles Jencks actually stated: "In this way, he creates a postmodern play on 'artificial nature' by taking advantage of the fact that a considerable part of the population, while choosing to live in crowded cities, wishes to return to nature. The contradiction translates into balconies crowded with flower essences that devour the entire house".[16] In the contemporary world, the *postmodern game*, of which Jencks speaks, is widely used, not only by architects or landscape architects, but also by the actions of individual inhabitants who redesign their balconies, their living rooms or their courtyards through plastic natures or miniatures of forests and botanical gardens. Individual actions of this kind, together with large-scale design proposals, are redesigning the image of the city and contributing to the mixing of landscape and architecture, converging towards ambiguous features that define the image and imagination of our time.

This is the starting point to investigate the spatial dynamics that concept this type of desire and to investigate the compromise between the artificial and the natural with this kitsch angle that sees them indissolubly unresolved and mixed.

15. See www.edouardfrancois.com/projects/tower-flower. [Accessed 6 May 2021.]

16. Charles Jencks, *The Story of Postmodernism. Five Decades of the Ironic, Iconic and Critical in Architecture* (Hoboken: John Wiley & Sons 2011), 160.

Nature thus becomes the subject of the project from a kitsch point of view, at its most extreme, most accentuated component. Architecture strengthens its narrations through falsehood and ambiguity of language and form. The project reinforces the false, the story tale and the artifice to define a theory within the theme of architecture and nature, within the use and the ornament of spaces, which deals with desire and pleasure of nature inside architectural perimeter. The oscillation between the project of a space for a necessity and a space for a whim becomes more and more blurred and confusing within the design of space and its relationship to nature. Questions of pleasure, of small-scale agriculture on one's own balcony and of personal involvement in ecology are on the same level and intertwined.

The garden becomes the paradigm of contemporary identity to such an extent that, where it is not feasible, it climbs vertically onto urban buildings, overturning its coordinates to invade the small balconies or terraces of the city. It invades indoor spaces: domestic forests and the piling up of plants in the apartment is partly to supply certain culinary needs, those that can be met with the little land available, but mainly to get lost in the home. The adventure no longer lies in conquering unknown places but in redesigning one's own dwelling and then being able to cross it in a new way, with different behaviour, reviewing the relationship between the body and the space.

Having articulated what kitsch is and does, I next investigate the theme of "kitsch landscapes" in which narration is a tool to solve or enhance the architectural project. The following two paragraphs will investigate the theme of domestic landscapes in which nature is a tool for architectural project. The first paragraph will analyse an experience in the field of architectural project inside an urban condition that allows me to connect the theme of nature to the theme of spatial project to be solved by a mixture and *camouflage* with artificial elements with the aim of augmenting the imaginary field of that space. While the second paragraph will analyse an interior-exterior project which outline the narrative aspect of the operation, which makes it possible to increase the spatiality of a confined space such as a courtyard in an urban space by tracing a rediscovery of a false archaeology and enhancing the narrative of the artificial and natural elements present in the garden.

Kitsch Landscape: House A12 by Lucas y Hernández-Gil

Among the domestic space projects nominated for the 2021 Mies van der Rohe award,[17] there is a large percentage of projects introducing gardens that protrude from the floor of the home, incorporating a portion of the surrounding landscape and copying and translating it into the private space, or reinterpreting the patio as an intrusive element penetrating the uses of the home. This trend is even more intense now, in line with ecological movements, in which personal identity is combined with the desire to contribute in some small way to the good of

17. See https://www.miesarch.com. [Accessed 6 May 2021.]

the planet, materialising through the domestic forest an ambition of community and participation.[18]

Among these project, detailed analysis should be made of the A12 home project in Madrid by Lucas y Hernández-Gil architects, who propose an approach to the theme of the relationship with nature in the dwelling as a solution capable of rethinking certain spatial problems in the urban environment and as an element enhancing the domestic imagination. The project involves conversion of a commercial space into a residential and office space on two floors covering 380 square metres. The main aims are to increase the amount of light in the spaces, given the building's very dark character, and to increase the number of interior patios, in keeping with the architects' idea of introverted Mediterranean living composed of a succession of rooms with the sky (Figure 6).

Figure 6. *Superimpositions. House A12 on New Trees*

The two floors are complementary and opposing, especially in the choice of colours, reminiscent of Rothko as the architects stated, and are interconnected by a series of double volumes and skylights and windows which increase the passage of light and the spatial relationship. The courtyard-garden, which "functions as an urban oasis",[19] is located in the basement and takes light from the atrium of the house through metal gratings (Figure 7). The garden is configured as an artificial landscape in which the plants are immersed in an orange pavement reminiscent of a desert or of a beach whose overly bright colour immediately reveals its

18. See in particular Gianfranco Marrone, *Addio alla natura* (Torino: Einaudi 2011).
19. See project's description in https://eumiesaward.com/work/4674. [Accessed 6 May 2021.]

artificiality and declares itself in the desire to alter space and context. The plants stretch out towards the grille and the light and contrast with the metal and the artificial lighting (Figures 8-9). The oasis, as the architects define it, is the metaphysical, surreal space to which the whole house turns, especially the basement, and from which connections are made with the sleeping space, defining the comings and goings between the foreign, exotic place of the courtyard garden and the aseptic space of the bedroom, conceived as separate artificial landscapes which look at each other and contaminate each other in their uses and colours (Figure 10). This is also evident from their words published in the project description for the Mies Award nomination: "A landscaped interior English courtyard that receives light from the street filtered by a latticework creating a kind of oasis, a tropical garden of surreal character is connected to the lower level of the house".[20]

Figure 7. *Superimpositions. Lucas y Hernández-Gil, House A12. Tropical Garden*

20. Ibid.

Figure 8. *Superimpositions. Lucas y Hernández-Gil, House A12. View of the Garden-Courtyard from the Bedroom*

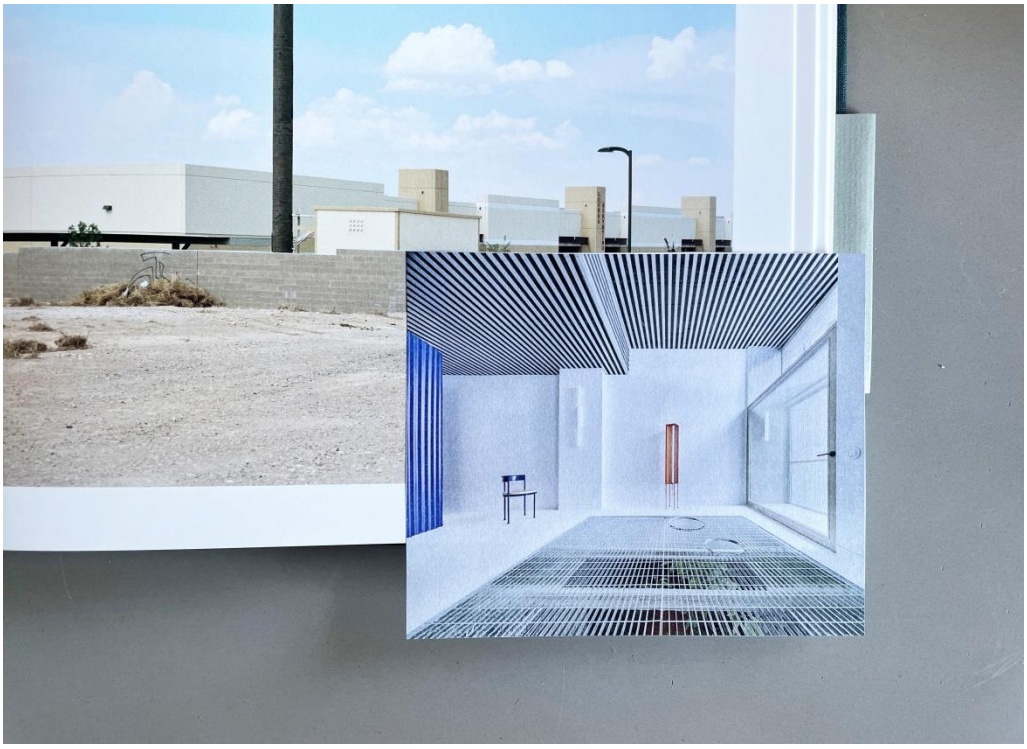

Figure 9. *Superimpositions. Lucas y Hernández-Gil, House A12. View of the Garden-Courtyard from the Atrium in the Upper Level*

Figure 10. *Superimpositions. Lucas y Hernández-Gil, House A12. Bedroom and Garden-Courtyard*

Nature in this project is conceived as a design tool capable of enhancing unused or unimportant spaces, such as the courtyard below the atrium facing the entrance on the street, almost a gully, which become places in which to discuss the imagery of the home and increase resonance, thus enhancing spatiality instead of mortifying it. Nature in the project is also a mix of the artificial and the natural, contaminating plants and vegetation from different places as contrasting materials to define a new interior landscape that can rethink the space of the domestic. The oasis of orange carpet, plants and metal directly overlooks the room, making it possible to sleep in an artificial desert, and contaminating a technical space, solving problems of humidity and lighting, with a classic domestic space in which the two looks at each other and define a new interior landscape: a controlled but at the same time imaginative domestic nature.

A12 House allows us to catch a glimpse of a new contemporary trajectory of interpretation of nature as a design tool and as a material, even in urban or highly artificial contexts. A return to nature does not necessarily imply a regression of technique and the loos of application of the artificial in architecture; nature can become a material that enhances space precisely because of its interaction with artificial materials and because of its ability to configure a place differently. Moreover, the house, through the vegetation growing inside it, is constantly changing. Like a landscape, it also changes with the seasons and time, continually redesigning the artificial space.

Particularly in waste spaces, connection spaces or technical rooms, the reinterpretation of these places gives rise to new landscapes. Through the addition of artificial materials, which thus propose images that are distorted, new, non-canonical, different and unprecedented, a new idea of nature is proposed, no longer just an ornament or a symbol of our involvement in the ecological issues of the planet, but an opportunity to rethink the design of spaces and an occasion to start again from the imagination of the project as the first element of characterisation of the space.

Kitsch Landscape: Sunken Garden by Bureau Bas Smets

The project taken into analyse in this paragraph is called Sunken Garden, located in London and designed by the Belgian landscape and architecture studio Bas Smets.[21] It is an intervention inside a courtyard of a private building carried out between 2010 and 2011. The courtyard is 4 by 8 metres inside a typical 18th-century building and bordered by tall facades. The client's request was to have a garden inside the courtyard, despite the fact that it was located at a lower altitude than zero and was almost completely in the shade throughout the day. The position at a lower height of the courtyard was revealed to be perfect for an increase in the temperature and therefore for the humidity of the space. The place thus functions in the same way as a tropical forest: the large trees through their shade encourage a certain type of planting below in the undergrowth, in this case the effect is given by the tall buildings instead of the trees, similarly allowing an increase of about five degrees in the altitude of the courtyard. The shadow has therefore become from an initial obstacle to the installation of the garden to a design suggestion around which the whole project has developed (Figure 11).

The technical considerations about the temperature of the project space become triggers for a certain narrative about it: the story that is designed is to assume that these few square metres are the only ones left untouched in the whole of London, as if buildings had grown up around them, leaving an intact pre-historic archaeological frame at their centre (Figure 12). A sort of reunion of Jurassic archaeology is thus staged, which becomes the narrative motive of the tropical garden. The ground is covered with two tons of York stones that were transported and installed in the courtyard by crane. The humidification system allows a mist effect at certain times of the day, the space is enlarged by mirrors placed on panels in one side of the courtyard. The garden is inhabited by a yellow sculpture by the artist Franz West, reminiscent of a mythological creature, not clearly identifiable, imaginative and foreign[22] (Figure 13).

21. See http://www.bassmets.be/projects-selection/. [Accessed 10 May 2021.]

22. The project is documented and explained by Bas Smets himself in particular in the lecture called *Atmosphere 2019. Adaptation* he gave at Faculty of Architecture, University of Manitoba, 4 July 2019. Available at https://www.youtube.com/watch?v=QTwvpHnAxHg. [Accessed 10 May 2021.]

Figure 11. *Superimpositions. Sunken Garden on New Trees*

Figure 12. *Superimpositions. Bureau Bas Smets, Sunken Garden. Sculpture by Franz West in the Garden*

Figure 13. *Superimpositions. Bureau Bas Smets, Sunken Garden. View of the Garden from the Buildings*

The use of narrative in this intervention defines the possibility of expanding the space beyond its limited dimensional boundaries that would otherwise have defined its claustrophobic and unliveable character. Instead, the definition of the story of the survey of a prehistoric garden within the urban fabric of London allows for the welding together of the best technical and meteorological conditions for the growth of a natural system in the courtyard and for the exploitation of the density of humidity present. At the same time, it allows the space to be enriched by conforming it to a discovery site within an ordinary residential courtyard. The project of the sunken garden makes it very clear how the narration of space is a design tool capable of combining the natural and the artificial and introducing a landscape, perhaps hidden or rediscovered, into the domestic and everyday spaces.

The intervention also introduces the estrangement factor that is activated by the user especially through some of the project elements, such as the Jurassic statue, the 18th century stones and the effect of condensation through the windows (Figure 14). The estrangement and decontextualization brought about by the storytelling of the project make it possible to experience and perceive a canonical space as unprecedented and rediscovered. The project meets a general tendency in everyday life to have adventures inside one's own home, to discover landscapes inside architecture, and to be able to cross and experience one's own space in a different way, otherwise known and familiar. Conceiving of nature as a design tool in the contemporary world means being able to trigger these forms of rethinking of domestic space and introduce new narratives even in apparently obvious places, especially urban ones. This type of operation introduces a design dynamic that

constructs a landscape situation within very precise limits that aim to alienate the place from the rest of the context. Within which a spatial dynamic is installed that has completely different characteristics, detached from its environment in terms of the vegetable elements chosen, the natural relationship with the context and the mixing of natural and artificial elements. The separation of the intervention area, which is often inserted in the courtyards of edifices or dwellings, and therefore in an enclosed situation with precise margins, makes it possible to eliminate all visual, sensorial and conceptual links with the actual context. The intervention is therefore conceived as a model, allowing any scalar relationship with the rest and dictating above all the possibility of being able to stage a new narrative completely distant from the pre-existing one. The precise delimitation, which often also implies the impossibility of being able to cross that limit: the place of intervention is often a space that cannot be crossed but only observed from a different height or through a separating element. The new narrative is often linked to very distant periods of time, and thus aims to recreate an impossible landscape. In this way, the landscape of elsewhere defines an effect of amazement and *divertissement* within a canonical and common place. These design operations take the experiences of theme parks to extremes, bringing a piece of Jurassic Park or an amusement park into urban dynamics and everyday life (Figure 15).

Figure 14. *Superimpositions. Bureau Bas Smets, Sunken Garden. The Tropical Vegetation Fills the Few Square Metres of the Courtyard*

Figure 15. *Superimpositions. Bureau Bas Smets, Sunken Garden. Humidification, Mirrors, and the Yellow Inhabitant of the Garden*

In the contemporary, it is no longer a question of going to a special place, which, by requiring the crossing of a border and the payment of a ticket, implies a predisposition and an intentionality to go from the ordinary of real contexts to a place that is openly other. This intervention differs from his famous predecessors in that he relies on the operation of transferring a piece of otherness into an everyday place, which is then discovered with surprise and generating a collision of spaces and uses. The *collage*[23] operation implemented is capable of contaminating different languages and narratives in order to transform a mostly modest place into a space of the imagination.

Conclusions

The narrations of nature and the space-relationship with the vegetal elements are therefore an opportunity to rethink the spaces within which we live, the domestic sphere, and within which we are led to spend an ever-increasing amount of time, at least in view of recent contemporary conditions. The theme of domestic natures and how architecture can design it go through the definition of storytelling that can get closer the ambitions, desires, dreams of everyday life with the spaces we inhabit.

23. See Colin Rowe, and Fred Koetter, *Collage City* (Cambridge MA: The MIT Press, 1979).

Project narration is the tool that allows impossible places to be built, to trigger stories out of context. The message becomes more important than the form, the story goes beyond the real datum of the space. Storytelling allows the landscape to rise above reality and build itself on the basis of an imaginary that becomes a constructed place.

Narrative is a tool that landscape design has always drawn on as a device for seeking an *elsewhere*.[24] Often the narrative is constructed *a priori* to overcome certain facts of reality that would not allow the project to be realised; the narrative, on the other hand, determines the necessary detachment so that the dynamics of space open up to configurations that would otherwise be impossible in that place. But narration also allows the stories of everyday life to be told, so that nature takes part in the lives of the inhabitants.

In particular, kitsch is the pretext for the triggering of narratives which, on the one hand, can recover a lost memory of that territory, go towards forgotten events or distant historical periods (as in the case of A12 House), or, on the other hand, determine the intrusion of a completely extraneous narration which serves to highlight dynamics of that space which have remained latent or unexploited (as we have seen in Sunken Garden). The narration in kitsch thus becomes the most important instrument through which the project can overcome external circumstances and to imprint its own reasoning and its own imagery.

Mainly, the narration inside kitsch becomes a device able to define an immediate identification with that space, which is the element that creates a feeling of belonging to the place and defines an affective, personal and collective value.

The rediscover of nature as an object of people's desire and used as a symbol of the contemporary is a condition that the architectural project must take into account during the design process. The need to include the landscape in one's domestic space and the individual actions of people who introduce nature into their homes are elements of contemporary society which lead – as we have studied based on the two cases analysed – the project to review some of its assumptions and rethink the dynamics of the domestic between architecture and nature. This new trajectory enables the rethinking of the spatiality of domestic and then lead to new design dynamics in the everyday life. The projects studied during the research, together with the experiences of contemporary art, clearly show how narrative is a design tool that, if put into play in an unprecedented way, can lead to the revision of some of the most ordinary and everyday spaces in which we live and can introduce nature and its artificialisation into private or common spaces in a contemporary way. Above all, it makes it possible to redesign and rethink certain ordinary spaces such as service rooms, distribution spaces, those places that are often left unresolved or hidden but which are at the same time essential and need to be questioned again. The cases of Sunken Garden and of A12 House reveals how the narration of nature as a contemporary tool and symbol can bring ordinary spaces into a new imaginary and allow people to experience them differently.

24. See above all: Annalisa Metta, *Paesaggi d'autore. Il Novecento in 120 progetti* (Firenze: Alinea, 2008) 276-280.

Kitsch design, especially in the approach to artificial nature, can conceive new stories that incorporate the natural element, the mixing of artificial and natural, the interior landscape, the differences and the ambiguities of spaces and life.

There are new *landscapes* that can be discovered inside our *domestic* realm, and they are places where we are building nature and artificial together for new ways of conceiving architectures and landscape together.

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