Place and Locality vs. modernism:

Examples of emerging new paradigms in Architectural Design

International Conference and Student Workshop

16-23 July 2017
School of Architecture
Athens, Greece

PROCEEDINGS

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International Conference in NTUA, Athens, Greece,
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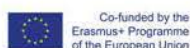
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FOREWORD

The volume **"Place and Locality versus Modernism"** is the last deliverable of the project ARCHI.MEDES: Shaping the Architect's Profile(s) for the Mediterranean and European South which took place within Erasmus+ Strategic Partnerships Action during the years 2014–2017.

Scientific responsible of the project was professor Constantinos Spyridonidis. Participation organizations were Aristotelio University of Thessaloniki, University of Cyprus, Universidade Lusíada de Lisboa, Education in an Interdependent World, National Technical University of Athens, Universidade da Beira Interior, Covilha - Portugal, Universitat Politecnica de Catalunya, Cyprus Architects Association, Association of Greek Architects and Universita Degli Studi di Roma la Sapienza.

The main objective of the project was to investigate how the architects' profile in MEDES countries can be built through educational structures and pedagogical strategies and processes. And also, how local particularities would be projected in the educational contents and methods so that the local and the international will collaborate constructively. More specifically the project wanted to bring together academics and professionals from the countries of the European South (Greece, Cyprus, Italy, Spain, Portugal) in order to critically analyze the identity of the professional architect in their regions and to collaborate on the development of proposals related to the forms and contents architectural education should assure in order to achieve a more employable and adaptable architect.

The volume includes the proceedings of an international conference held in Athens during the period 22-23 July 2017 and the results of an intensive workshop held in Lavrio from 16 to 20 July. The intensive workshop using as vehicle architectural design explored the basic question "how the characteristics of a Mediterranean place can inspire contemporary architectural creation in both architectural design level, and in design of public space." The results of the workshop have been presented during the conference, as many questions rose during the workshop exploring what is local / what is global. Are they autonomous and distinctive? Are the tools that we use for the analysis of the place coming upon the place itself and the locality? Is the inspiration of the project coming from the identity of the place? Can we make the same proposal for any other place?

The participants of the conference continued the above questioning. The presentations explored the Local and Global in Architectural and Urban Design and its approaches to teaching, presenting also some examples focusing on innovative and experimental approaches to local cultural heritage and social problems and inspecting how new technologies and environmental issues can serve creatively the above themes.

The whole project and especially the conference created an academic dialogue between the participants on the educational process which will be useful for the participating institutions.

Eleni Maistrou, Emeritus professor, NTUA
Constantinos Spyridonidis, Professor, Department of Architecture, AUTH

International Colloquium and Student Workshop
Workshop:16-20 July 2017,Technological Cultural Park Of Lavrion ,Greece
Conference:22-23 July 2017,School of Architecture, Athens, Greece

Hosted by the School of Architecture ,NTUA

Organizing and Scientific Committee
Vassilis Ganiatsas, Professor
Elena Konstantinidou, Associate Professor
Eleni Maistrou, Emeritus Professor
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More details and material is available in the workshop's website:

https://archimedes2017lavrion.wordpress.com/

P l a c e + L o c a l i t y vs *M o d e r n i s m*
Examples of emerging new paradigms in Architectural Design
2017

THE CONFERENCE

Modernity has imposed worldwide a global paradigm of architecture as an immediate consequence, but also as a facilitation tool of, an equally global economy. Through its many reframes and vestiges (Post-, Ultra-, New-) attempted to reluctantly address locality in terms of reference to local symbols, incorporation of historical styles, superficial imitation of facades, adoption of local typologies and use of local materials. Still in our days, modernity is paying lip service to such aspects of locality as sustainability, energy efficiency as well as climatic, environmental and ecological issues. Yet, no matter what those ad hoc considerations, modernity remains globally dictated and aimed and the dominant paradigm pervading the education and practice of architects.

During the last 30 years local adjustments of the global paradigm have reached a critical point of a radical shift. It seems that a viable alternative of a bottom up approach, from locality to architectural production is emerging and informs architectural design from start with the local conditions as integral ingredients, resources of ideas and architectural design.

Locality in all its kinds, modes and scales (climatic, spatial, social, economic and cultural) seems able to inform architecture from the stage of its original inception to its physical implementation. Instead of being imposed on, architectural works could be alternatively considered in a dialectical mode with locality as emerging from, conversing with and being justified and culturally significant on local grounds.

This conference will attempt to register, critically engage with and finally bring together emerging alternatives to Modernism in architectural education and professional practice.

Organizing and Scientific Committee (NTUA):., Ganiatsas V, Konstantinidou E, Maistrou E, Nikolaou D.

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Place and Locality: a dual point of view against Modernity

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Abstract

Modernity has imposed worldwide a global paradigm of architecture as an immediate consequence, but also as a facilitation tool of, an equally global economy. Through its many reframes and vestiges (Post-, Ultra-, New-) attempted to reluctantly address locality in terms of reference to local symbols, incorporation of historical styles, superficial imitation of facades, adoption of local typologies and use of local materials. Still in our days, Modernity is paying lip service to such aspects of locality as sustainability, energy efficiency as well as climatic, environmental and ecological issues. Yet, no matter what those ad hoc considerations, Modernity remains globally dictated and aimed and still the dominant paradigm pervading the education and practice of architects.

During the last 30 years local adjustments of the global paradigm have reached a critical point of a radical shift. It seems that a viable alternative of a bottom-up approach, from placeness and locality to architectural production is emerging and informs architectural design from start from locality, as it seems that in all its kinds, modes and scales (climatic, spatial, social, economic and cultural) is more appropriate to inform architectural creation. Architectural works, instead of being considered as imposed on localities, could alternatively be considered in a dialectical mode with them, as emerging from, conversing with and being justified and culturally significant on local grounds.

This paper explores this broad thematic issue by critically discussing the fundamental philosophical and epistemological presuppositions of Modernity, especially in its latest guise of Modernism and Globalism and by suggests instead an alternative paradigm centered upon place and locality as pragmatic cultural situations over against theoretical abstractions as global claims.

Place is herewith taken to mean an ontological entity which acts as a receptacle of cultural significance, while locality is taken as a comprehensive notion comprising of the sedimentation of cultural practices in spatial terms. Both place and locality are expressive of cultural practices in spatial terms, only from a different point of view.

Keywords: Place, Locality, Space, Modernity, Modernism

1. Place, Locality, Modernity, Modernism, and Globalism: A Conceptual Analysis

First, I would like to attempt a conceptual analysis of the keywords in the title of this talk and mainly the theme of this workshop which is 'Place and Locality vs. Modernism: Examples of emerging new paradigms in Architectural Design'. I'll try thus to explain why this title is evocative of a suggested methodological approach to the issue of local and global in architecture, which is the thematic core of the ARCHI_MEDES programme.

The 'local' will be treated from a dual point of a view, as the title suggests, i.e. as place and locality denoting both the primordial nature of the local emerging as place, as well as its inherent potential, qua a place, to appropriate, or not, whatever other is externally imposed to it and to express cultural significance. Let's say in short that place stands for the local proper, while locality stands for the localized as locally sedimented.

The 'global', as Modernity's latest guise in our times, will be traced in its constitutive content which has been always expressed as a style, such as the Modernism since early 20th century, the transnational Neoclassical style of 19th century and even back in history in the beginning of Modernity which can lead us back to European enlightenment of the 18th century (Koselleck 2002, pp. 154-169) or, even further back to the flourishing of sciences – according to Stephen Toulmin – in the 17th century or even back to the split of the Renaissance from its mediaeval grounds. (Toulmin, 1990)

Modernity in all its nuances, guises, vestments, expressions and styles, i.e. as Neoclassicism, Modernism, International Style or Globalism, has been showcasing an extreme resilience and flexibility in adapting to local conditions often by being camouflaged as national or even pretending to be local. Global in its attempt to adapt becomes 'glocal', while the local could also aspire and ascend to be ecumenical. The main point in these composite terms of internationalism, trans-nationalism, global, or ecumenism is a shifting and alternating point of view, which ultimately remains dictated either by the local or the global verifying thus at a superior level their ultimate, perhaps, dichotomy and opposition.

So I will discuss this dual point of view of the local, i.e. the local place proper and the localized in its own intrinsic, idiomatic and particular terms and also from a dual point of view, the place as an active form and locality as a cultural creation. In those terms, we can perceive and conceptualize the Mediterranean countries of the European South either in terms of their idiosyncrasy or as localized versions of a common European identity.

The 'Mediterranean' could thus be defined indirectly in terms of Europe or, in a direct and an immediate one, the Mediterranean as auto-defined directly in itself. It is herewith suggested that, for methodological purposes, we should rather start from the latter in order to define first the Mediterranean identity in its own terms and then trace its capacity to express a common European culture. But first, we have to examine place and locality as the key terms in this debate.

2. The Primordiality of Place and Locality

The notion of place has not been an issue for nearly the past three centuries due to the dominance of the scientific paradigm of knowledge and the pivotal role of the notion of abstract, infinite space of physics within this paradigm. Place, accordingly, rendered the debate of architecture, thanks to cultural geography and philosophy, especially of phenomenological approaches. (Relph, 1976 & Tuan, 1977 & Casey, 1998 & Malpas, 2006)

More specifically, according to the scientific paradigm, in the beginning, there was space, infinite and unbounded, neutral and all-embracing, outer and inner as an abstract entity. Immanuel Kant in his Critique of Pure Reason uses space and time in their ultimate abstraction as the primordial apriori concepts to ground experience as a basis for cognition. At the century of sciences, space has been already used as an abstract entity to provide a measure for all things in the optics, the geometry, the physics and the overall philosophy of Galileo and Descartes.

The notion of place does not fit this paradigm as some enriched form of space but instead constitutes in itself a counter spatial paradigm, a culturally formed ontological entity that emerges in cultural contexts out of cultural practices. It is this self-sustained ontological status, qua an autonomous entity, that allows a place to be emerging, responsive and conversant with the cultural environment it emerges and survives into. In these terms, the emergence of Place is quite contrary to the programmatic and normative impositions of Modernity, with space being a supreme one.

We owe this conception of place as fundamentally contrary to space, to Heidegger and later to Ed Casey and Jeff Malpas, who have long been expanding Heidegger's view of the place as primordially emerging as an ontological entity, as opposed to qualified space let alone quantifiable and measurable space (Malpas, 2006 & Ganiatsas, 2015).

This view runs contrary to the dominant view of science and technology and is particularly important to architecture considered as a creative modulator of place and not just an expressive system of the representation of Modernity. Place, as *locus solus* or*, locus* proper, in the light of Heidegger, can now be traced back as a basic opposite view to Modernity. The first exponent of the notion of place as a cultural concrete entity as opposed to space as an abstract scientific concept has to be attributed to the Neapolitan philosopher of the 17th century Giambattista Vico. (Bergin & Fisch, 1970 & Kunze, 1987)

Place for Vico is part of a broader philosophy which considers truth as culturally produced and differentiated rather than as a logical, universal concept of ubiquitous validity and objectivity.

Quite eloquently Vico was a professor of Rhetoric considered as a concrete and pragmatic basis for philosophy as doing, as opposed to thinking of abstractions. His view was based on the rhetoric of Aristotle, who quite like Vico uses topos/place, not only in terms of a particular spatial entity but in his Rhetoric as concrete ways of articulating arguments, not in terms of logic alone but in terms of rhetorical compounds employing logic but also pragmatic and concrete reality.

This is the core difference between place and locality on one hand and space of Modernity on the other. Modernity embraces space as its emblematic, and subsequently iconic, concept, as an abstract form of philosophy pervading and dictating science, technology and finally architecture by claiming to be implemented everywhere as the sole carrier of truth and validity. Place, instead, by being the characteristic of indigenous cultures and culture making emphasizes the concrete, particular and thus local presuppositions, conditions and makers of truth, as a cultural product.

Truth in Modernity is being assessed exclusively in two modes, true or not true (false), while truth in local cultures is emergent, multi-valued and changing emerging in as many modes as the cultural constructs.

As Joseph Rykwert coins it in the last chapter of his book 'The First Moderns': '*Modernity induced 'truth stripped naked'* (Rykwert, 1983 & Vesely, 2004).

Alternatively, Carlo Scarpa adopted truth as a cultural construct and has inscribed at the entrance of the school of architecture in Venice the fundamental dictum of Vico '*verum Ipsum factum'*, i.e. 'true is only what is made'.

3. From Modernity to Modernism to Globalism of space and time.

If Modernity could be described in only two terms, then it would be the concepts of space and time as abstract receptacles. Modernity has been succinctly described by Marschall Berman's 'All that is solid melts into air':

'*To be modern is to find ourselves in an environment that promises us adventure, power, joy, growth, transformation of ourselves and the world – and at the same time, that threatens to destroy everything we have, everything we know, everything we are. Modern environments and experiences cut across all boundaries of geography and ethnicity, of class and nationality, of religion*

and ideology: in this sense, modernity can be said to unite all mankind. But it is a paradoxical unity, a unity of disunity: it pours us all into a maelstrom of perpetual disintegration and renewal, of struggle and contradiction, of ambiguity and anguish (Berman, 1988, p.15).

Despite Berman's succinct pinpointing of the basic features of Modernity, I think it has been mainly Reinhart Koselleck who provided the fullest understanding of Modernity by placing it at the exact turning point of the historicity turn in the 18th century, our consciousness of being in history and the irrevocability of our placement in a linear mode of historical time (Koselleck, 2002 & Koselleck, 2004). Koselleck conceptualizes his critical examination of Modernity on the experience of time and adopts a twofold interdependent methodological scheme: 'experience' and 'expectation', which as historical categories resemble space and time respectively, i.e. 'space of experience' and 'horizon of expectation'.

Experience for Koselleck is conceptualized as a lived encounter (erlebnis). Historical research is a hermeneutical procedure that places understanding as a historical and experiential act in relation to entities which themselves possess historical force. Even concepts are historical creations of their times and express ontological features having an impact on their interpreters, positioning thus his approach in late phenomenological and existential philosophy. Experience is drenched in reality in the time of the present, a present past, events incorporated and remembered and is spatial since it assembles these events into a totality within which many layers of earlier times are simultaneously present (Koselleck, 2004, pp. 257, 259, 260).

Expectation, on the other hand, is more like a temporal horizon rather than a structure behind which lies a new space of experience.

This tension between experience and expectation creates historical time. Expectation cannot be deduced from experience and yet we cannot fail to base our expectation on experience. Both experience and expectation take place in our contemporaneity, centered on what is present by gathering the present past, or by making the future present. The present being a common denominator for both enables the dialectics of experience and expectation not as opposites, but rather a dialectics between points of view of the same entity at stake. As Kosellec phrases it: *"The conceptual couple of 'experience' and 'expectation' is redoubled upon itself; it presupposes no alternatives; the one is not to be had without the other. No expectation without experience, no experience without expectation"* (Koselleck, 2004, p. 257)*.

Modernity (Neuzeit) opens up a new kind of experience of historicity, marked by a historical consciousness and thus inferring a distance and a discontinuity between experience and expectation. This distance is called progress and it is the first genuinely historical concept which reduced the temporal distance between experience and expectation to a single concept. Progressus es *in infinitum perfectionis,* i.e. progress is a perfection postponed, deferred to the indefinite and ultimately unachievable future and combines experiences and expectations with a temporal coefficient of change. (Koselleck, 2004, p. 268).

The problem with Modernity, according to Koselleck, is that space of experience was not significantly bounded by the horizon of expectation. Limits of space of experience and of the horizon of expectation diverged inferring a loss of continuity between past and future through the present. If, according to Modernity, the whole history is unique, then so must the future be, i.e. distinct from the past. This historic-philosophical axiom, a result of the Enlightenment and an echo from the French revolution provided the foundation for ' History in general as well as for progress'.

In his work *'The Practices of Conceptual History'*, Koselleck pinpoints six structural criteria of Modernity that were discovered in the 18th century: (Koselleck 2002, pp. 84-99)

First and foremost is the concept of 'acceleration'. Time does not just remain the form in which all histories take place, but time itself gains a historical quality and is a force of history itself. Secondly 'open future', i.e. unrelated to the

past, with its accompanying concepts of 'progress' and 'development'. A third criterion is to be found in the linguistic use of the term '*saecula*' (century), as coherent units loaded with meaning. Century, as a concept, not only retrospectively structures history, but also structures one's own century. Then comes 'non-simultaneity' of diverse but in a chronological sense simultaneous histories, different between themselves, but coexisting cultural levels brought into view with the opening of the new world. Next is 'historical perspective'. After Chladenius, we have the introduction of multiple perspectives in place of as supposedly one true version of history. As Goethe has phrased it: History has to be rewritten from time to time. Finally, the experience of 'transition', which accepts the acceleration of one's own time and the otherness of the future. Transition does not belong anywhere but in between the present and the future.

There is, perhaps, no better image to express the core aspect and the subsequent key issues of Modernity than the picture of Angelus Novus by Paul Klee, as it has been interpreted by Walter Benjamin. Klee's *angelus novus* (new angel) is interpreted by Benjamin as the angel, i.e. pronouncer, of history. In Benjamin's words: *A storm is blowing from Paradise. It has got caught in his wings with such violence that the angel can no longer close the.* (Benjamin, pp. 257-258) According to Benjamin, a strong wind of progress and the ever-accelerating 'new' is thrusting a human figure into the future, while this figure is desperately and helplessly looking back. It is doubtful if Klee meant this picture to this interpretation, but the observations of Walter Benjamin projected on it, his favorite painting hanging at his office, are quite succinct and manifesting the core meaning of Modernity. A wind out of place and out of local time that transforms both place and time causing disruption, discontinuity, and acceleration of temporal pace.

In following Koselleck's critical view of Modernity, it is evident that place and locality, in both spatial and temporal terms, are against the 'out of place' and 'out of time' imposed forms of space and time, utopia and uchronia, of

Modernity. All in all, place and locality manifest the reality of place in its spatial and temporal sense, its own intrinsic spatiality and temporality as against the formalisms of Modernity in all its vestments and guises.

Lets clear out some relevant issues concerning guises and modes of Modernity as expressed in recent history.

Neoclassicism, for instance, contra to what Demetri Pophyrios has argued about Neoclassicism being a rather universal vernacular form of architecture and not a style, we could argue that Neoclassicism is a veritable version of Modernity, masterfully adapted to local and historical situations, but ultimately remaining a form of Modernity, a formal style as against local emerging indigenous architecture. (Porphyrios, 1983)

Even the Arts and crafts movement, inspired by Pugin, Ruskin, and William Morris, although conceived in opposition to industrialism, had from start international scope and aspirations and this is why it has been so smoothly succeeded by Modernism.

Modernity in our times, fully fledged in the context of the global economy, is in need of homogeneous entities to handle, easy to merge, divide and manage. Different localities, of different characters and different needs, increase the complexity of economic transactions and do not allow maximization of profit and ascend to scale-economies. Also, a vast diversity of local entities is next to impossible to handle, merge and divide at will as they present a kind of cultural inertia that objects any generalized management. To that task, Modernity has been diachronically masked under the rubric of sensitive 'glocalism' or responsive regionalism. Post Modernism in architecture has been such an attempt to relate locally in terms of history and Regionalism in architecture has been a relevant attempt to relate to local architectural and urban morphology. These approaches, indicative of a diversity of similar ones, are being deployed from Modernism's vantage point as the dominant paradigm for managing architectural and urban space. For Modernism, there are no places but only homogeneous, quantitative described and

measurable space, even when it is superficially differentiated.

4. Resistances and Divergencies from Modernity

Quite unlike this model of Modernity regarding space and time has been the case in pre-modern local cultures called traditional cultures. In these societies, time is cyclic, or rather spiral because it incorporates novelties but always projected upon a relatively stable, at each time, frame of reference.   For these societies, experiences and expectations are withheld within a continuum by following the cycles of nature, which were decisive in agro-pastoral communities. Modernity broke decisively with the closed and cyclical structure of the eschatological worldview in which predictions of the coming end of the world and the Final Judgment set the limit to human ambition and hope; instead society was now perceived as accelerating toward an unknown and unknowable future, but within which a hope for a utopian fulfillment was contained. Utopias and the hopes embodied in them, in turn, became potential guarantees of their own fulfillment.

The first reaction and programmatic opposition against the sweeping power of Modernity over local cultures emerged in Europe and from a group of intellectuals that were informally called 'Traditionalist School'. Key figures in this movement were prominent thinkers and philosophers such as, among others, René Guenon, Ananda Coomaraswamy, Frithjof Schuon, Titus Burckhardt, Martin Lings, Seyyed Hossein Nasr. (Guenon, 2004 &, Guenon, 2004b &, Sedgwick, 2004 & Schwindt, 2016)

Traditionalists, as they were called, urged towards the rehabilitation of tradition from the cosmological level down to everyday aspects of socio-cultural life. What 'traditionalists' share is the acknowledgment of the loss of a transcendent and an immanent dimension, namely the discernment of the Real or Absolute, c.q. that which is permanent; and the intentional "mystical concentration on the Real".

René   Guenon,   for   instance,   stressed vehemently the contrast between traditional worldviews and Modernity, "which he considered to be an anomaly in the history of mankind.". For Guénon, "the malaise of the modern world lies in its relentless denial of the metaphysical realm. According to the Traditionalists, this truth has been lost in the modern world through the rise of novel secular   philosophies   stemming   from   the Enlightenment.

The paradigm of time for traditionalists is cosmological, religious and cyclic or rather spiral since it attended development but without losing its reference to what is developed considered as a permanent cultural entity. Time was considered in terms of eternal return as Mircea Eliade would have it and not some abstract construct like the clock time of   Modernity. We don't have necessarily to resort to the traditionalists to find an alternative conception of time in opposition to Modernity. The annals school of Fernand Braudel, Lucien Febvre and Marc Bloch challenged not only linear history but the very positivist foundation of time in speaking of cycles of development converging in events and diverging in *histoire lourde* – as Francoise Choay would later coin the biggest cycles of change.

In our days, Hayden White challenges the existence of the event and focuses instead on its interpretations as more real than the event itself which is considered as an abstract conception ex-post facto. Traditionalists discern a transcendent and   an   imminent   dimension,   namely   the discernment of the Real or Absolute, c.q. that which is permanent; and the intentional "mystical concentration on the Real".

Having said that about Modernity at large and its styling in the early 20th century as Modernism in the art and architecture, in particular, we have to distinguish some notable examples of architects and their work that despite being considered as emblematic figures of modernism, did not seem to share modernism's presuppositions.

Mies van der Rohe, for instance, researched into the spiritual potential of space, as some form of universal place in both its spiritual content through its dematerialization with the aid of technology or Frank Lloyd Wright, who urges for the creation of space from inside out in an organic

ways and so it does not occupy space as Modernism would have it.

And since we make a note about the key figures of Modern Architecture, what about Le Corbusier who seemed to appreciate places of historic interest and traditional setting of vernacular values in his travels documented in his sketchbooks? He actually was wise enough to detect architectural values everywhere but at the same time keen enough to abstract from them in order to compose his abstract principles based conceptualization and management of space in the 5 points of his architecture and the zoning in his urban planning and design.

Apart from the most celebrated key figures of Modernity in the architectural debate, traditionalism and the loss of cultural values in the built environment found an echo that revised the axiom of Modernism in the manifestos and buildings of the 'team 10', formed officially at the Oterloo Congress in 1959.

In another direction, Bruno Taut attempted to raise locality and placeness to international scale from a bottom-up approach as a full-blown antidote to the top-down philosophy of Modernist. Taut, first in his Istanbul and later in Japan in the late 1930's attempted to provide a counter-paradigm of locality raised to international significance. Taut was acutely critical of both National and international styles in architecture as they both adhered to formalism. His basic dictum is eloquent: *'All nationalistic architecture is bad, but all good architecture is national'.* (Erdim, 2007)

The key concept for good architecture is proportion, by which he meant the responsiveness, the sustained interaction of architecture to site and culture specificity. Beauty in architecture, respectively, was the fulfillment of the quality of the relationship between the architectural object and its environment. This kind of locally defined beauty could then be termed eternal such as the case has been with the Gothic cathedrals, the Doric temple and the Ise shrine in Japan. Yet, he stressed that:
'The specific proportioning of the Ise shrine is directly connected to the humidity of the summers and the coldness of the winters in Japan and that

the same temple would have been ' dead like a fish out of water in the bright sun and transparent air of Greece

So for Taut: *Architecture is about a basic transnational tectonic that is conditioned locally by proportion and architectural process that could consistently be responsive to the continuous interaction between the local and the global forces.* As Erdim (2007) concludes in his study: *Taut viewed Modern architecture as the evolving product of a responsive process that would follow slightly different paths in each particular place while maintaining a trans-national character as a result of continued interactions and exchanges between cultures.* (Erdim, 2007, pp. 103-115)

5. Redeeming place: *locus Mediterraneus* as a counter paradigm to Modernity

So, contra to the Modernist point of view, we should re-evaluate place and locality since we have to operate from within, i.e. starting from the local and judging its carrying capacities and potentiality to accept change and globally inferred new tendencies. In dealing with placeness and locality, as two modes of the same thing differentiated only by the point of view, intrinsic and extrinsic respectively, it is important to test this theory in what seems to be a suitable territory, the most celebrated place and locality of the Mediterranean basin and more particularly the Greek landscape we examine in this workshop.

The Greek landscape, as a conflation of natural and cultural attributes, could arguably be considered as quite representative and evocative of the Mediterranean, by being multi-faceted, diverse and hence inhabited by small communities. The islands in the Greek archipelago as well as the mountain communities that constitute the vast majority of small settlements – today over 13000 communities of less than 2000 inhabitants – occupy a central cultural role in their being indigenous in a seamless continuity for millennia of cultural evolution.

The obvious answers could epicenter on the local climate (sun, blue sky, open horizons), the highly diversified land relief, the equally high

biodiversity, and the abundance of insular places. The particular climate and geomorphology can answer adequately for the small-scale settlements and island communities of small-scale but of considerable interconnectivity, while local architecture ends up by being characterized by an extreme diversity of forms while sharing similar building materials.

We can find each of the above features elsewhere on earth, but what the particular identity of the Mediterranean consists of is the amalgamation of the above in relation to the mode of binding them together, forged by longtime habitation and cultural exchanges that affected those local factors so that to be combined and conflated in a diversity of cultural significant modes, achieving thus a diversity of concretizations as cultural expressions. Additionally, this longtime cultural development through interaction has resulted in a diversity of cultural expressions, a continuity of cultural life for each community, but also for networks of communities and a final development of what is now called a **Local knowledge, which is the sum total of all the above natural features and** cultural practices in an embedded form of cultural communication and expression.

Let's have a brief outlook on the basic features of the Mediterranean landscape, the people and their land.

A recent genomic study carried out by the Max Planck Institute for the science of human history in Jena and the Human Biodiversity and Population Genomics at the univ. of Bologna, testifies a common genetic heritage in the eastern Mediterranean from Sicily to Crete, the Aegean islands to Cyprus and Anatolia, while the Aegean islands present more genetic similarities to populations in South Italy rather than to the mainland. As the scientists argue:

The Mediterranean Sea has represented one of the most important crossroads in human history, acting both as a barrier and a bridge between three continents and multiple human groups characterized by different genetic and cultural backgrounds. Despite this complex history and despite modern national borders, there is a shared

Mediterranean genetic continuity, extending from Sicily to Cyprus, where the populations of certain Greek-speaking islands appear genetically closer to Southern Italian populations than to populations from continental Greece…This shared Mediterranean ancestry possibly traces back to prehistoric times, as the result of multiple migration waves, with peaks during the Neolithic and the Bronze Age" (Sarno et al, 2017)

This study testifies that the most important feature of the Mediterranean communities is their culture of intra-migrations and millennia long cultural of embedding and merging differences in common cultures that can be traced down to the genetic material

Concerning the land, from the point of view of ancient and modern geopolitics, Prevelakis argues that *'The islands had always been the hubs of an extended network of communications, trading but also cultural, with all other islands and the lands at large. The archipelago of the Mediterranean'.* (Prevelakis, 2006)

The first basic point about the Mediterranean territory and its cultures is that they are not about the relation of the land to the islands, but vice-versa. It is the cradle, the crucible and the kernel of island cultures that occasionally and only secondarily related to the land as much as they relate between themselves. In these terms, Mediterranean geopolitics has been always more often than not been misinterpreted by ascribing to islands secondary roles.

It is time for locality to be conceived as a total anti-paradigm to Modernism and the Mediterranean basin, the richest part of the world in the production of cultures, could be the primary ground for the exercise and experimentation of such an anti-paradigm in architecture and Urban planning and Design, indicative in turn of a new paradigm of communal life attached to places.

The Mediterranean territories present an advantage due mainly to the extreme geomorphologic versatility which gave rise to organization schemes of small communities with the local economy, local traditions and local knowledge as opposed to global correlatives. For example, Greece, a small country, by global

standards of size, has been diachronically constituted by a most diversified cultural landscape of communities. (Leontidou, 2009 & Lejeune & Sabatino, 2010)

6. The Place and Locality of Lavrion in the Mediterranean as a Laboratory for Contesting Globalism

Lavrion has been for a long time a quite extreme case of a local ground, a place and a locality, on which an interplay between the local and the global, between place and locality vs. modernism.

The contemporary port town of Lavrion is a most suitable place where the local has been continuously opposing, merging, conflating and contesting with the trans-local Mediterranean, the European and the International imports from early antiquity and still do today. It constitutes a place where the global in the form of capital, industry, workforce, urban planning and architecture has been contested with the local in a most diversified sense.

A multifarious geological formation ending into a latticed coast, the Lavreotic peninsula has been inhabited since the 5th millennium B.C., flourished in Mycenaean times, reached its uttermost development in classical times and resurged as an industrial center in the 19th century. Trough this course of time, the local place of Lavrion has been witnessing the import, invasion, superimposition, and insertion of the global from Antiquity to our times.

Some prominent attributes and features of the identity of Lavrion in terms of locality include:

- A local fishermen village has been turned into a strategic Mediterranean port in Mycenaean times.
- A local municipality of the classical times turned into a supra-local place of the Athenian Aegean confederation, due to its local silver mines.
- A local settlement of farmers on a fertile piece of land turned into a no-place international industrialists 'el dorado' farming silver and lead from its sub-soil.

- A local population turned into a multi-ethnic community of slaves/workers in antiquity and in the late 19th century.

And conversely in terms of a place as receptacle:

- A global economy absorbed and expressed in local terms.
- A massive influx of global workforce turned into local inhabitants.
- International typologies of industrial complexes turned into a local architectural idiom
- Global housing typologies of company towns merged with the local vernacular
- Neoclassical style accommodated in local terms
- Modernism adapted to local needs and versions
- One of the first UNESCO refugee camps since 1947 and still today housing Kurdish and Iraqi refugees is a hub of the local place and society for the Mediterranean refugees

Some of the global/local contestation (merged, conflated or still in opposition) can be spotted in:

- The imported mining and metallurgical technology and local resources.
- The imported international experts and workers from all corners of the Mediterranean and the local inhabitants
- The global typologies of industrial complexes and the local building knowledge.
- The globality of Classicism and Modernism and the local vernacular
- The globality of Mediterranean refugees and the local society

In this multifaceted, multicultural and vibrant urban, social and architectural context of Lavrion, the aims and the respective content of the workshop aims to trace, perceive, conceptualize, interpret, understand and subsequently attempt to activate and express in architectural form the local/global interplay aspects, attributes and manifestations that characterize the contemporary town.

7. By way of a Conclusion: Local Design Knowledge as part of Place and Locality

Modernity and Modernism's model of architectural knowledge is formed in terms of a global dogmatics furnishing global technologies and economies, should now give its place, literally, to local knowledge, which contra to the universality and abstractedness of scientific knowledge adopted by Modernity is embedded in architectural praxis, cultural practices and the architectural works themselves as tokens of cultural practices and achievements. As such, architectural knowledge within this alternative cultural paradigm over against the positivist one, cannot be abstracted out of its concrete sedimentations.

Local architectural knowledge is local, practical and embedded and inseparable from the locality and particular constructions. In place of Modernism's positivist approach, that promotes a divided representation consisting of dichotomies such as small/big, simple/perplexed. Unit/repetition/horizontal/vertical, local knowledge endorses and promotes what is proper to the place it will fit in, interpreted and establishing with it a common cultural significance. (Vesely, 2004)

Finally, as to my answer to the basic question of ARCHIMEDES PROGRAMME of "how the characteristics of a Mediterranean place can inspire contemporary architectural creation in both architectural design level, and in design of public space", it revolves around getting out of abstractions, utopias, uchronias and mechanical analogies and embrace place and locality as the concrete reality that new architecture can engage with towards being culturally significant as part of an evolving cultural continuity.

In terms of placeness and locality in architectural design, its about grasping the reality of a place in its ontological fullness, in the full richness of its authenticity in its spatial and temporal/historical aspects , in fact - its very own spatial and historical attributes as parts of cultural processes as against, and in resistance to, the formalisms of Modernity in all its modes and guises. All in all, the opposition of place and locality to Modernity is about the opposition of the real, concrete and local ontologies over against the abstract conceptual formalities and formalisms.

I close with a quotation from Alvaro Siza, uttered in a lecture at the Canadian Centre of Architecture (CCA) in 2015: *Once there were cultural centers (Milano, Paris, London, New York) setting the pace of globalism in design. Even building regulations are set by the European Union for double glazing which is not necessary for the Mediterranean and standardized factory components. In Berlin, I had not the fantastic artisans that I had in Portugal. But, today there is a recognition that culture is everywhere!* (Siza, 2015)

I could only add, 'everywhere' and especially in the Mediterranean, which most certainly has been what Alvaro Siza also had in mind.

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1st Session: GENERAL ASPECTS

Moras A., Voyatzaki M., Utopia, Eutopia, Dyst(r)opia

Fatsea R., Under Greece's romantic spell:
Classicism revisited as a vestige of Modernity in the 19th century

Utopia_eutopia_dyst(r)opia; prosthetics

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Abstract

In this text we present the framework and the conditions within which Lab_42 started in the School of Architecture of the Aristotle University of Thessaloniki. Starting with the scheme Utopia_Eutopia_Dystopia we proceeded into a rethinking of the tropes of the design studio favoring dystropia as an alternative to disciplinary norms. The first studio was organized around the theme of prosthetics.

Keywords: anthrocene; anonymous materials; open-ended; individuation; crisis

"All right," said Deep Thought. "The Answer to the Great Question..."

"Yes..!"

"Of Life, the Universe and Everything..." said Deep Thought.

"Yes...!"

"Is..." said Deep Thought, and paused.

"Yes...!"

"Is..."

"Yes...!!!...?"

"Forty-two," said Deep Thought, with infinite majesty and calm."

Douglas Adams, The Hitchhiker's Guide to the Galaxy

1. Utopia_Eutopia_Dystopia. Temporalities vs Localities

In these days of humanitarian, cultural and ecological crisis, any answer is as vulnerable as the question that it is addressing. Lab_42 was founded in the framework of the Architectural School of the Aristotle University of Thessaloniki in order to speculate architectural questions in the epoch of the meta-anthropocene and maintain a critical stance against the modernist utopia / eutopia / dystopia scheme and the deceptive, delusive and misleading use of contemporary technologies in architectural practice and academia. Its design studio incarnation focused during the winter semester of 2016-2017 in the definition of the hypothesis of an "architecture to come" as well as the delineation of an individual student oriented design methodology with respect to the specified hypothesis. The intermediate question of the studio touched on the redefinition, rethinking and the radicalization of the incorporation of digital and analog media, techniques and technologies in the architectural field both as representation and as research tools that infiltrate and fertilize the architectural spectrum and its standards.

The studio proposed at the same time a realistic and experimental design methodology that tried to affect the emergence of alternative means of architectural production through the management of conflicts, differe(a)nces, antitheses, tensions,

diversions and crises as speculative design hypotheses. The studio researched issues of inter-scalarity in design and how these affected the spectrum of materiality from object behavior to its repercussions to mapping specific social structures related to them. The lab endorsed an understanding of design as an intereference that aims to expand the relations between the parts and the whole and the connections, communications between the different states / (t)r(opicalities) of the real. This one was a dyst(r)opian tactic that aimed in the abolition of the unreal / sci-fi notion of such efforts in favor of an experimentation with techniques that already exist that the students were encouraged to use in alternative ways. At the same moment students were provoked to incorporate the notion of the body in spatiality as a medium of experience and finally a representation. To emphasize this understanding the theme of Prosthetics was proposed for this semester. This theme was used in order to underline the importance of the alternate approach of spatiality through mediated and non-mediated experience that is implied by the incorporation of a prosthetic condition.

Figure 1. Utopian, Eutopian and Dystopian architectures. From left to right; Del Bene Bartolomeo - Civitas viri cive mortum (1553), Piranesi - plate VII, the imaginary prisons (1711), Le Corbusier - Plans Voisin (1953), Robert Crumb - Ecotopia (1988)

In this manner, place and locality was not diminished to its spatial attributes but it was

approached as a political, economic and technological norm that is founded within a specific international real-time context (in opposition to the "end of history" idea that is imminent in utopian imagination and modernist thinking) that has led (the latter two decades) all the tropes of the imaginary, the real and the virtual, architecture included, in the interminable exploitation of human, cultural and natural resources. Despite the mathematical and other simulation based models, the crisis was neither foreseen nor avoided. Now, more than ever, we realize the futility of utopian_eutopian scenarios that tend to smoothen all differences and confrontations in an oneiric delirious manner in the form of ecological destabilization and the impoverishment, physical and metaphorical, of humankind. This same notion exists in the understanding of utopia_dystopia as an end in itself that defines it as the apocalyptic prevalence of what is iconically "the other", the "evil" etc.

By inserting the scale of the body and body as a medium that infiltrates, experiences and reflects its ecology / context / environment … we imply that what we understand as spatial is an abstraction of the real. Defining the exteriority of the body and the human body in particular is a speculation that prescribes the connections and relations that a body is imbedded in. By incorporating spatiotemporality as an alternative to spatiality we imply that the architecture of relations in which a body participates is an open one and this preconfigures a different notion of the future, the time of history and time as a measuring device. There is no present without a future and a past and there is no architecture outside the continuity of Chronos. Instead there is a spacing, a gap (could be Derridean, could be Deleuzean, could be…) of ()t(r)opian possibilities of the future that is open to violence, confusion, entropy and speculation. Dystopias (just like utopias) bare futuristic connotations, an intense feeling that is common in contemporary crises of all sorts. Instead of understanding time as a transition from the past to the future we should re-evaluate the past and the future as dimensions,

tropicalities of what constitutes the present. We asked from the students to revisit the future as a depository of the lost possibilities of the present, a depository of the yet-unlived, those conditions that we neglected and did not experiment with.

Figure 2. Eutopian_Utopian bodies. From left to right; Hieronymus Bosch - The garden of earthly delights (detail) (1503-4), Leonardo Da Vinci - The Vitruvian man (1485), Thomas Eakins, Arcadia (1883), George Hackenschmidt - Wrestler and strongman (1870s)

Figure 3. Dystopia and the imaginary body. From left to right; Fritz Lang - Metropolis (1927), Neil Blomkamp - District 9 (2009), Chris Cunningham - All is full of love (1999), Andrey Tarkovsky - Nostalghia (1989)

2. dys-t(r)opia_pros-thetics

The prefix dys- implies something that is unacceptable, aesthetically, ethically, ontologically… something inappropriate in one era can though become or could be the norm in another one. A dyst(r)opia is a way, a tactic, a strategy that is by definition personal, individual and as a method could be deducted from both a theory and a practice. Dyst(r)opia also implies that it is not conspicuous and normal. As it can be derived or can be derivative of our agencies it is a product of experimentation, thinking on things, a hypothesis and a speculation in order to arc norms effected by common practice and established hierarchies that tend to diminish the possibilities of alternatives.

The prefix pros- implies direction, intention. An intention towards a thesis. A prosthesis is not only an addition, it can be a deduction or an abstraction. This is a matter of how we attribute a positive or a negative sign. At the same moment an addition can be better understood in the dipole of Stelarc and Pistorious. Stelarch is the artist / performer who has been working for decades on concepts related to prosthetics that enhance the perception of the human body through robotics (technology) and implants (biology). On the other hand (joke), Pistorious is the famous athlete that participated in the Olympics who has two artificial legs. In the first example prosthesis is an advancement, an enhancement that goes beyond what already exists, that hybridizes the body with an imaginative condition that ethically could easily be considered as a hubris. In the second example the prosthetic legs imitate, repeat the function of the human legs, these prosthetics are an image of an organ(ism), of an existing one that they are constantly compared to either by means of similarity or by mean of functional efficiency.

These nuances were core elements of the problematization in the studio and the scheme of Stelarc vs Pistorious was used to provoke discussions and even to ask students to rethink the ethics and politics immanent in technology and contemporary techniques of design.

3. the structure of the studio / an additive approach in teaching prosthetics

The studio was organized around four different exercises that were designed specifically to promote the ideas behind Lab_42.

Figure 4. Dazed & Confused no 46, fashinable, guest edited by Alexander McQueen cover with a model with prosthetic limbs, Time, March 2013, on the cover Oscar Pistorious after the murder of his girlfriend

Figure 5. Stelarc's works (clockwise from left) Stretched skin (2009), Third hand (1976-1981), Ear on arm (2006)

During the exercises there were interventions in the form of lectures by the Lab_42 team that aimed in expanding the students' understanding of specific issues that concerned the design process

and unsettling design stereotypes that students had due to their discipline in the architectural field. There were also two daily workshops planned that aimed to enhance student computer aided design, scrypting and manufacturing skills. The studio was attended by some 35 students in their fourth and fifth year of their studies that were asked to work in groups of minimum 2 and maximum 4 persons.

After the first introductory lecture by Maria Voyatzaki on the dichotomy and bipolarity of the conditions of Stelarc vs Pistorius related to prosthetics students were introduced to their first exercise. They had to provide the studio with their **reflexions, of the real**; understandings on utopia_eutopia_dyst/r/opia through prosthetics in a diagrammatic manner. They had to both research the related bibliography but also, they were encouraged to search for answers instinctively and in media that are not only academically accepted and not only specific to architecture though they knew that parallelisms would have to finally be drawn. As they were only given a week for this task students had to be fast (not thorough) and inventive with the way they should use their findings.

This first exercise was publicly presented by each group and it was followed by a second lecture on machines in time by Moras Antonios. Then the students were presented with their second exercise that they would have to work for a period of two weeks. This second exercise demanded the construction of a 3d physical model of an **arthrosis** (a joint of two entities) with dimensions 20cm by 20cm by 20cm. Elements of functionality, literal and metaphorical were introduced in the thinking of prosthetics and by having to produce specifically only physical models' students could be only hands-on and that was liberating for some of them since they could improvise with materiality, they could play and learn and project at the same moment. By asking for an object out of context students were not facing an existing problem (as most projects are presented in architectural education, a problem to be solved, a mathematical analogy) but they freely could refer to the interiority of their own creations with no limits but those posed by each project in itself since they

were providing with the framework for their concepts under the general banner of the arthrosis. During this exercise there was another intervening lecture by Dimitris Gourdoukis on prosthetics.

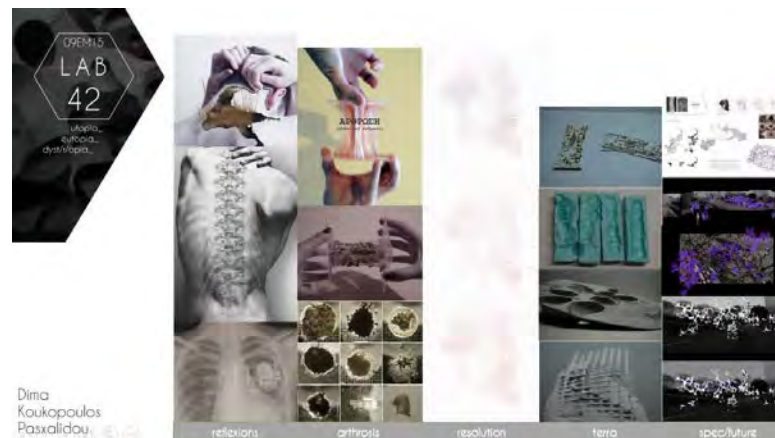**Figure 6.** Five exercises. Team Galani, Kokorou, Papadopoulos

Figure 7. Five exercises; Dima, Koukopoulos, Pasxalidou

The second exercise was also presented in public by the student teams. A forth lecture followed by Katerina Saraptzian on the issue of variation and its connections to the nature of materiality. This lecture comprised also an introduction to the two daily workshops that were tutored by Fotis Vasilakis and Katerina Saraptzian on Rhino & Grasshopper and Scripting respectively. The third exercise was founded on the workshops and asked for a **resolution** of the evolved diagrams of the first exercise that should be combined / hybridized with the results of the second exercise in a speculative arthrosis. This movement from the physical to the pictorial and back again introduced

Place + Locality vs Modernism
Examples of emerging new paradigms in Architectural Design

2017

students to the interscalarity of contemporary architectural issues and issues of representation and its relation to the notions of reality, vitality, materiality and the field in-between.

The fifth lecture during the course was provided by Ioanna Simeonidou and tackled the issue of additive manufacturing. The students were introduced to contemporary manufacturing techniques and technologies and they were also presented with the machines at the manufacturing lab of the school that they should use in the final exercises to follow. These last two exercises were site specific. For the first one *territorialization / stratification* the students were given a site that they had to parameterize and conceptualize, in accordance to their previous work and finally they had to design / program its *speculative futures*. In this final exercise that students had to work in as many mediums as they needed dyt(r)opia, arthrosis, resolution and stratification had to be understood as a continuum that adapts in a specific site, context, ecology, environment…

4. Conclusions

During the course we tried to rethink both the design process and how this design process is produced in the framework of an architectural education in a country in crisis. Instead of being critical we tried to respond by inclusiveness. By providing the students with a temporal framework in which they could structurally develop their own problematizations in conjuncture with disciplined actions. We tried to re-examine existing constructed myths as; the myth of ecology, of the digital and the analog, the biological, tradition, locality, identity in a global context, creativity, innovation, subjectivity vs objectivity vs hyperreality, bottom-up vs top-down, the internet of things, big data, the post-human and the non-human and many more by creating new ones and more importantly to underline the nature of myths and how they are heavy on meaning that is at first understood as irrelevant or even as antithetical as technology, techne, practice, education and so on. In the end we know that what we have is an intention, what can be narrowed down to the

prefix pros-, a desire for movement towards something that is redefined tempora(ri)ly.
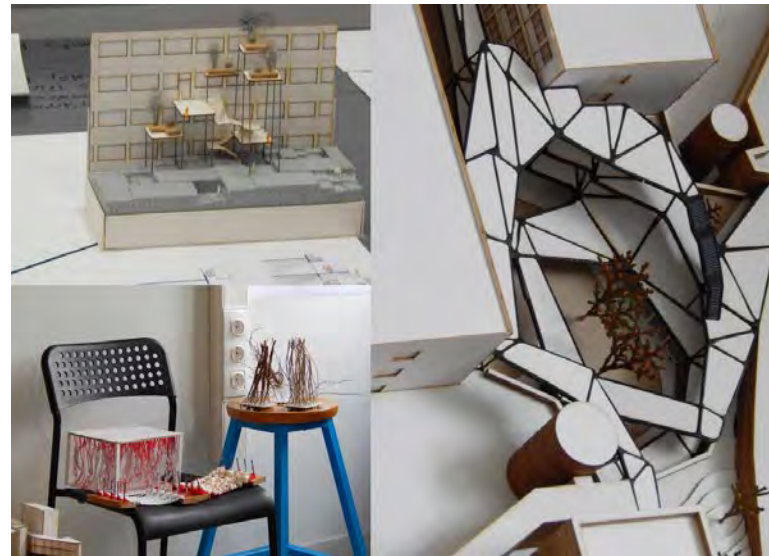

Figure 8. Final presentation

Figure 9. Final presentation

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Under Greece's Romantic Spell: Classicism revisited as a vestige of modernity in the nineteenth century

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Abstract

.... it would be difficult for a man of poetical enthusiasm, to judge impartially between a beautiful scene in some obscure district, and one in the classical regions of Greece 'where not a mountain rears its head unsung.' – Uvedale Price, *ESSAYS ON THE PICTURESQUE...* (1810)

The Greek antiquities have been subjects of pervasive interest, poetic exaltation, and imaginative curiosity for western scholars since at least the Renaissance. In the nineteenth century they came also under intensive scientific scrutiny; at the same time, they opened new ways to interpretation by being understood not only as testimonials of a forever gone glorious past but, most importantly, as integral components of their particular locale and their current, still evolving, historical time. They came to represent history not as an inert repository of memorable accounts but history in its becoming which has always engaged humans as its active agents. Prompted by the conference's programmatic announcement for a *bottom up* approach to architectural design as a radical critique to the globally dominant paradigm of modernity, this paper aims to reinstate modernity's identity as a complex historical phenomenon built upon numerous oppositions, contrasts, and contradictions, which every time reached resolution through integration into new wholes, one of them being the antithetical pair of the local and the global. The paper turns its lens to the composite phenomenon of **romantic classicism** as a characteristic case in point in which two parallel and – generally perceived as antithetical – aesthetic movements, that is, *Classicism* and *Romanticism*, met into a constructive synthesis. Conducive to this phenomenon was on the one hand the opening of Greece in the nineteenth century and, on the other, the seminal role of the monuments in the creation of a new aesthetic paradigm for architecture and its interpretation, as previously mentioned. Both the researchers' hands-on experience of the monuments – as opposed to the formerly detached and idealized conception of them – and the particularities of the location enabled this new understanding of antiquity as a dynamic force for the future of architecture. Methodologically, the paper proceeds in three stages by critically illuminating the key issues involved in each one, always in reference to the Greek monuments. That is: 1) the aesthetics of the picturesque and the sublime and their implication in new research; 2) the theory of associationism as an undercurrent of modern aesthetics and its shortcomings in the given context; and 3) the principal archaeological discoveries and their decisive role in the construction of a new theory for architecture.

Keywords: Greece; modernity; antiquities; romantic classicism; sublime

I

Figure 1. Martinus Rørbye, Discussion between three men in the Parthenon (1844)

Figure 2. Louis-Philippe-François Boitte, Temple of Athena Nike. Main front (c.1864)

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Locality in Assessing the Characterisation of a Place

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Abstract

The creation of successful places requires a good understanding of existing assets and local distinctiveness including heritage appraisals. Local elements of a place and their relations such as urban form and topography, landscape and local climate are essential to define the character and can contribute positively to the planning and design process.

In the last decades the distinctiveness of locality has been a central theme in planning policy guidance towards a better practice. To promote character in place making and architectural design, distinctive local patterns of development should be identified.

But the most global issue of the current times at the local scale is climate change. It must be clear that climate change is essential to address the design process. This responsibility extends especially to both education structures and local authorities that still lack of a cohesive approach to the problem of sustainability. Nowadays, it is evident that sustainability represents not only an applied philosophy but can help as a generator concept for design process at both local and international level. But if sustainable architecture is an international issue must be more specific to the constraints of every context. It is, therefore, time for a new conceptual approach to this issue; A new paradigm for urban and architectural design.

This paper attempts to examine how critical local and global thinking of planning and design can be properly used for place shaping. Particularly is discussed on how locality of a place can be suitably used in order to fully understand character and identity of a place. Further, some questions should be put: How can architectural educational sustain complexity of fundamental theoretical concepts in order to make them more applicable? How can education system for sustainable development promote responsible design for urban and environmental improvement at local and global level?

Keywords: locality, sense of place, characterisation of a place, architectural education, global-local planning and design*.*

1. Locality and characterisation of a place to promote good planning and design

A good understanding of ´locality´ is important to promote individuality in planning and design in order to create locally distinctive patterns of regeneration and development.

According to the Oxford Dictionary the definition of locality is as follows: "The position or site of something". But the meaning of locality in terms of planning and design can be defined as the ability to create locally the identity and character of a place.

Although this approach can result valuable in designing the most important is to create a place with identifiable ´character´ and in terms of recognition of an urban pattern that can make a place unique.

Kropf (1996) argues that there is a need to consider the physical characteristics of a context together with other significant aspects such as activities and attitudes that help to better understand the ´character of a place´.

CABE (2000) has set out character as the first of the seven objectives of urban design to form a ´sense of place´ in terms of recognition of quality of a place, where people - individuals and society - can integrate its features to create attractiveness of a place that gives a sense of wellbeing.

The concept of sense of place has been investigated in architectural and urban design and in sociological and psychological researches as well, especially where the change of a typical space to place can create special behavior for certain people. That means recognising a place for everyday activities on both individual and social values. (Relph, 1976).

So, locality of a place can be defined as a combination of local elements such as built form, topography, hydrology, street patterns, landscape and local materials within an individual living place.

To achieve locality of design that should respond to the character of a place, it is clearly of fundamental importance to understand the context and its idiosyncrasies that have been modelled through historic processes and local values.

Indeed, it can be argued that a systematic analysis of locality and character of a place must be considered at the background to any planning and design activity. Locality, in fact, can work as a key driver to both designers and local authorities for shaping good places to live.

Therefore, a deeper understanding of a context it is vital to give an emphasis on context ´characterisation´ in order to identify, classify and describe areas of distinctive character and/or better identify areas that present similar character.

The characterisation of a place or better say the way of exploring and reading suitably the urban context can be defined as a process that helps to create a recognisable pattern of local elements.

Figure 1. Florence - Santa Croce Quarter: The place is presented with its own character and identity. It is clear and well-recognisable the typology of buildings and the quality of the context. (Photo by D. Babalis)

Consequently, particular combinations of such elements can give a sense of place that should help and influence local design. Some guiding principles for characterisation of a place in planning and design include:

- Strong emphasis on understanding local context and its natural features as a driven design process
- Development of indicative local characteristics and tendencies to improve architectural education outcomes

- Definition for long-term and steady support linked to proper commitments shown by international rules in planning and design
- Good co-ordination of architectural education based on both local and global approach.

Further, responsibilities for making a place in terms of designing a qualified place with a sense of place should be given to both educational structures - highlighting methods and processes - and to local authorities.

Education system has to address the future and to put long-term planning and goals for effectively understanding all design concepts to create successful local urban context.

Figure 2. Florence - The former FIAT mixed use quarter: The site's Masterplan has been designed to create sense of place and quality of buildings according to a distinctive old pattern of elements by using local materials and colors. (Photo by D. Babalis)

In other words, anticipation and selection of future conditions of a place to be faced and determination of relevant actions to be taken into consideration implies education for a critical thinking and planning. The role of architectural education is also an important contributor to define locality of design through the development of a sustainable architecture including urban quality, social inclusion and economic prosperity that should represent the today's city's transformation process.

There is a considerable evidence to suggest that adequate educational performance can heavily determine local architecture and can shape locality. Further, education and training is highly correlated to re-enforce existing local qualities and resources as well as various local tendencies and attitudes.

At the same time, local authorities have to be aware of the context, challenges and constrains that arise along the planning process with operational activities to assume control over future events and planned actions. They need to better evaluate possible policy responses and their respective implications to the local community and local context.

Therefore, one of the main tasks of education system is to possibly assist decision-makers with the choice of adequate goals and strategies.

Precisely, to give an overview of the principal planning and design issues taking into account within locality is important to assess trends that can characterise international/global planning and design.

2. Architectural education for sustainable thinking

What kind of changes might be made to the architectural education to bring a new sustainable thinking? Global methods of education can bring global methods of design in order to exchange ideas, to improve design methodologies to respond to the locality development? And would this global thinking bring the desired effect at establishing design education at the local level considering combinations of the context such as topography, existing buildings, climate, use of local materials? Can this complexity of design education bring about the appropriately way of thinking sustainable enough?

In this respect complexity can bring positively a balance between the claims of the two contrasting elements of global and local. Specifically, the discussion can be driven directly to bring closer the global design education to local design approaches.

This means that to overcome complexity of global-local design it is essential to build a:

- *Future thinking*: having a clear vision for the future

- *Systematic thinking*: adopting approaches that go beyond problem-solving and/or cause-effect
- *Participation learning*; including different exchange knowledge systems and perspectives.

UNESCO (2017) states that "Education can, and must, contribute to a new vision of sustainable global development" to achieve the Suggested Sustainable Goals (SDGs). Education for Sustainable Development (ESD) can develop specific learning objectives for the SDGs such as: "to take urgent actions to combat climate change and its Impacts" .

At this point it is important to underline the role that the local climate and environmental conditions can play with architectural design process. So the global climate change and environmental risks should be seriously taken into consideration with education. The conception of the local architectural design but also the global one should be adjusted to the local climate. In doing so the creation of global climate-responsive architecture should be carefully adapted into the local environment and climate.

On the other hand traditional local architecture is being characterised by ´sustainable knowledge´ modelled through the time by locality such as: best orientation, use of typical local elements to face climate zone environmental conditions, (hot climate in the Southern countries and cold climate to the Northern ones).

So the consideration of historic processes at the local scale can be relevant to suitably adopt the International/global architectural design into the local environment. (Bondar, Treija, 2011)

3. Establishing key points for a good education system in the Mediterranean Countries

In the Mediterranean Countries, the educational system can contribute positively to their local communities and to the larger global community through effective educational structures and pedagogical strategies a processes.

This approach can be stressed under the following points:
- *Education system* has to possibly assist decision-makers with the choice of adequate goals and strategies
- *Architectural education* is an important contributor to define locality *through the* development of a sustainable architecture including urban growth, variety of micro climate and social inclusion
- *Educational performance* can heavily determine local architecture and can shape locality.
- *Education and training* is highly correlated to re-enforce existing local qualities and local tendencies.

Figure 3. Florence - The New Palace of Justice. The complex is characterised by both local and global design conception and is of a huge appearance impact on the site but with no suitable adaptation to the local environmental and micro climate. (Photo by D. Babalis)

The following key points should serve as the foundation for a good educational system:
- *Sustainable:* including a good understanding of local context and climate change, taking into consideration local particularities with educational contents and methods
- *Flexible:* should be flexible and continuously adapt to innovative planning and design processes. The learning experience should have the elements of duration and continuity
- *Comprehensive*: should encouraging a global understanding of both architectural local and international trends

- *Responsive:* should be responsive to local decision-making and local rules and needs
- *Connected***:** education should have common goals that are clear and aligned with professional standards, research and good practice.
- *Comparative:* should be specific but internationally enough to educational exchange on an ongoing basis and facing international issues in education.

Obviously, the above presented key characteristics for a good educational system have to be considered as a starting point for debate and investigation that must be placed in a new cultural context and that can only be achieved through further assessment and discussion.

Figure 4. Florence - Santa Maria Novella Station. The Station is located in a dominant position within the City Centre and creates particularity of a place, driven by the Modernism conception. (Photo by D. Babalis)

4. Conclusions

Many of the contextual characteristics of a place should be widely recognised in modern design process. Empirical evidence shows that there are large benefits for planning and design locally in accordance with a wider international tendency.

As a reflection of the later point, designing for modernism is one trend that has been observed internationally. The main reason for this is the recognition that architectural education can play an important role in learning.

There is also a trend for local authorities and public sector to assess the quality of an action and its effectiveness in local community of what is actually being achieved from international styles.

In an increasingly globalised world, architectural education not only should respond to local factors but also should take into account commitments made at international level and goals established collectively by architectural design.

Furthermore for Mediterranean countries in which development depends of different climate conditions the planning and design process itself should be shaped by both modalities of local and international types but with tools and procedures defining by local authorities.

Historic phases and specific frameworks that have shaped the development of local contexts they have to influence on local policies and decision-making and on typologies of architecture. The state of ´being local´ or ´having allocation´ should create ´particularity of a place´ in order to describe ´distinctive characteristics´ or essential features.

In the past it was easier to define the context of design as local identity that it was vital to create a good environment. The locality it was defined as part of people's culture and feelings. Contrary, the globalisation of architecture introduces a new conception of place identity, especially driven by major influences of modernisation, technology, ecology and smartness. (Babalis 2016)

Recently, the global thinking in planning and design influences more and more local one. But the future making by local design has to be based more on knowledge of a place and its character and identity to meet easily local needs.

Finally, in the UNESCO/UIA Charter (2011) is clearly stated that architectural education must be focusing on giving Knowledge of critical thinking and understanding sustainability with a multi-method approach that is focusing mainly to context information including locality of a place.

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The coupling of Local and Global in the Mediterranean.
The case of Santorini

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Abstract

The question of integrating contemporary architecture into special places, loaded with a long history and thus with rich architectural heritage, such as the Mediterranean region, is very important and topical. It could be said that recently this issue is of concern to architects and public opinion. We have begun to consider the use of the architectural heritage of a place, as an invaluable basis for the interpretative approach of a new architecture, relating to the environment into which it will be integrated. A whole spectrum of architectural traditions and building systems has evolved at different locations and time points. These have been influenced by a conjunction of geomorphological and climatic conditions with the locations' unique cultural and historical evolution.

If we try to trace the underlying structural architectural forms and materials that have become transformed over time; harmoniously melding in to a particular place, and giving character and identity to the anthropogenic environment, it would probably have been possible to reach solutions, leading to a different vision for the future.

Our contribution to this conference, recommend in the export of conclusions drawn from the brief evolution of the architecture in one of the most famous islands in the Mediterranean, the island of Santorini. Finally, we will attempt a brief critical assessment of the trends in construction currently taking place, in the protected listed villages of the island. Our aim is to demonstrate that the relationship between local and global, or local and modernity, is not necessarily contradictory, on the contrary, that their coupling can be the answer to contemporary architectural creation.

Keywords: architecture; heritage; Santorini; local; modern

1. Introduction

Following the culturally devastating tendencies towards globalization that characterized 20th Century Architecture, in the 21st century there seems to be a growing awareness of the need to protect the built identity of exceptional places. So, we have begun to consider the use of the architectural heritage of a place, as an invaluable basis for the interpretative approach of a new architecture, relating to the environment into which it will be integrated. A whole spectrum of architectural traditions and building systems has evolved at different locations and time points. These have been influenced by a conjunction of geomorphological and climatic conditions with the locations' unique cultural and historical evolution.

Figure 1. Contemporary photography of the island from above.

One of the most outstanding examples of this, in the world, is the configuration of the settlements and their architectural development on the island of Santorini, or Thira, as it was originally called. At this interesting and significant congress, we have chosen to present architectural forms and building systems that evolved in Santorini over a period of 3,500 years, whose influence permeated the Mediterranean area and beyond. Due to the limited time available, we will restrict ourselves to commenting on five characteristic expressions of the cultural and architectural achievements, of this amazing Aegean civilization. (Fig. 1)

Finally, we will attempt a brief critical assessment of the trends in construction currently taking place, in the protected listed villages of the island. This itinerary will encompass the hallmark architectural edifices of each era, their influence on the Mediterranean area as a whole and their resonances in the wider European region.

2. The evolution of architecture in Santorini until the 20th century

2.1. Prehistoric civilization

In the middle of the 2nd millennium B.C. as we all know, there occurred one of the most cataclysmic volcanic eruptions ever to disrupt and divert the course of ancient civilizations. One of the devastated cultural communities was located on Santorini. Thousands of years later, the archaeological excavation of Marinatos in 1967, revealed a very well-preserved settlement, abruptly destroyed at the zenith of its power and wealth. The distinctive feature of the prehistoric architecture in Akrotiri was the multi-storey houses (Fig. 2). Numerous windows, were distributed over all floors, while the interior surfaces of the rooms were decorated with paintings.

Figure 2. Frescoes from the archaeological excavations in Akrotiri.

Figure 3. The building system of prehistoric dwellings.

The building technology used in both the humble and more prestigious dwellings was similar and based on a combination of three basic materials: stone, wood and clay. Today, we believe this was a sophisticated and effective anti-seismic building technique. Generally, the use of wood in the structural art of Akrotiri was impressive. Experience in shipbuilding could also have had an impact on their building technology (Fig. 3). But, with the volcanic catastrophe, the curtain fell sharply and lethally on this scene in the island's history, to rise again many centuries after.

But what were the influences spawned by this impressive architectural and constructional art? We encounter the well-known structural system of timber-framed and stone built structures in various forms, from Roman times to our own traditional building forms, from the Middle Ages to the present era across the Mediterranean, as well as in Northern Europe. Later, the inspiration of the elegant, yet simple forms of the Thira architecture was acknowledged in the basic principles of the modern movement. Was this the result of continuity or due to successive rediscoveries?

2.2.   The so-called traditional period

After the massive devastation, centuries passed before the island was resettled. However, the earthquakes continued. The new inhabitants began using the natural caves that had formed along the ravines.

Figure 4. Photo by architect Aris Konstantinidis, "The God-made". Santorini _Vothonas

The caves formed the internal rooms, covered externally by facades of stone walling (Fig. 4). The man-made intervention in the cave and its architectural extension into the outside world, was a gradual development that began with small interventions in the cave and culminated in a completely independent construction. Depending on its location, the house may be a cave-house or a built structure. When built, the simple houses retain the cave like shape of the domes externally, while the most sophisticated urban houses aspire to the standards of an island-style neoclassicism. To form the dome, they used timber formwork on which they "built" the stones vertically, with pozzolane mortar, a product of the island of Thira, or, alternatively, they laid successive layers of this special pozzolanic concrete to form a monolithic dome. The lighting and ventilation in the cave houses were achieved via special sculptured ducts projecting above the roof. The aesthetic value of the ensemble building blocks of folk architecture stems from the image of their organic entirety and development (Fig. 5).

Figure 5. Photo by architect Cristos Kouloukouris, 1965

The plasticity of these architectural forms on Santorini, have influenced and inspired many artists, painters, photographers, architects, and become a reference point for the morphoplastic forms of some of the renowned creative masters

of modern movement architecture. We can trace this influence in seminal works by Le Corbusier, Alvaar Aalto, Luis Kahn, and others who found inspiration in this organic morphoplastic vocabulary of the popular architecture of Santorini.

2.3. The neoclassical period

The international trend in the 19th century for the adoption of neoclassical patterns in Santorini was expressed in a peculiar way. In densely built Oia, with its ship owners' houses, the so-called captain's houses, where the neoclassical elements were mainly confined to the design of the facades. However, affluent merchants and landowners adopted a different type of house. This style of mansion with neoclassical effects was then adopted in Fira, Messaria, Pyrgos, Exo Gonia and elsewhere. The preserved neoclassical mansions are conspicuous as free standing building units in the area. In these buildings we see a tendency to differentiate the ground floor from the floor above (Fig. 5, 6). The ground floor, often in the form of an arched loggia, forms a plinth on which the decorated floor is raised. The tops of these loggias form the floor of the balcony for the upper storey.

Figure 5. Photo of a Mansion in Massaria.

The houses exhibit distinctive symmetry in the organization of the main spaces, as well as in the central position of the entrance, choices emanating from the precepts of neoclassicism. Some basic typological features of the neoclassical buildings show significant influences from their vernacular neighbors. Their basic differentiation lies in their morphological characteristics. Almost all interior surfaces, as well as the facades, are decorated with painting simulating marble block work. However, the structural system sustaining these neoclassical buildings, follows the long tradition of the folk architecture of the island; a construction consisting of masonry, flattened domes, groin vaults and barrel vaults.

Figure 6. The embedded of the Mansions into the steeply sloping terrain.

3. Re-destruction and rebuilding in the 20th century

On July 9, 1956, natural disaster "revisited" the island in the form of one of the strongest earthquakes of the 20th century. With an intensity of 7.4 on the Richter scale, it caused massive damage across the island. In addition to dozens of deaths, and hundreds of injured, 500 houses were completely destroyed and 1500 seriously damaged. Recovery and reconstruction were undertaken by the state. Restoration of older buildings has been minimal, while thousands of new houses have been built. What layouts were chosen for the new settlements and what forms of buildings were adopted in an era of modern movement architecture?

The design team of Dekavalas, Kontaratos, Bogakos and Sapountzis drew up plans for, and built, hundreds of new houses and public buildings, adopting forms and construction methods influenced by the island's traditional architecture (Fig.7). We quote from texts of the study group of that time:
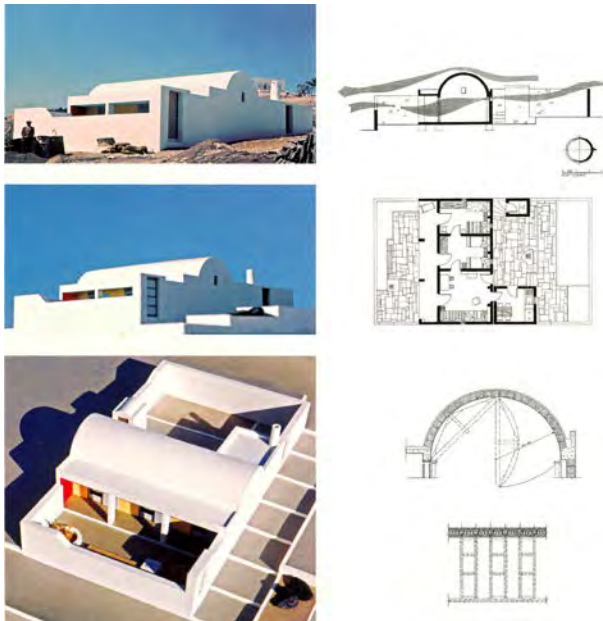

Figure 7. Post- earthquake housing, chief planner and architect C. Decavalla (Design-construction: 1956-60)

"... There was a need to rebuild hundreds of new, extremely low-cost houses in a short time with unskilled labor. As a solution, the standardization of the construction methods, and consequently of the architectural form, was chosen. We designed both the types of houses and their layout in assembled groups with modern criteria, without intruding on the natural setting. …We do not claim that we were completely unaffected by the existing anonymous architecture of the island. Some of its elements, such as the narrow pedestrian streets, the enclosed courtyards, the small openings, the whitewashed plaster on the walls, have been imposed upon us as tricky but economical solutions, perfectly adapted to today's conditions, such as overlapping the houses with domes….The vault was adopted because of its many and significant advantages. The traditional solution kept its construction value

intact. This fact, along with the curved forms it contributed, gave us an opportunity to enrich our necessarily simplified architectural vocabulary." (Decavalla, C., 2008)

The rebuilding of Santorini during the 1960s and 1970s is a project that has not only become widely known but is generally considered a praiseworthy achievement. However, the criticisms of both the basic choice of large scale reconstruction, as opposed to restoration, and accusations of a "misinterpretation of the ethos of folk architecture" have been voiced. Today only a few of these buildings retained their original form and use; many have been refurbished according to modern tastes (Fig.8).

Figure 8. The actual state of the Post- earthquake housing, around sixty years after their construction.

The impact of this experience on new architecture on the island has been decisive. The new legislation covering special building, in combination with the special architectural supervision committees that operated in the 1980s and 1990s made domes almost mandatory. These, together with the stipulation of white walls and the small openings, led to imitations; sometimes simply bad and sometimes merely a gesture to the authentic vernacular tradition, without, of course, forgetting the occasional outrageous violations.

4. The pursuit of tourism

The tourist development of the last 30 years, coupled with the demand for second residences and holiday homes, has been the main driving force for the economic survival and prosperity of

the island. The architecture of the new tourist complexes required a difficult balance between the growing demands for increased building volume, imposed by modern standards, and the micro-scale of the island's original architectural features. In practice, the restoration and conversion of existing traditional buildings into small hotel units proved an interesting challenge. The Greek Tourism Organization undertook an important program of "Development and Implementation of Traditional Settlements" from 1975-1992 with the architects Boisgeneki and Agriantoni. Under this program, 80 houses with a capacity of 200 people were restored (Greek National Tourism Organisation, 2009). This work was recognized internationally and the example was largely followed by individuals involved in private restoration projects.

Figure 9. Contemporary photo of Oia from above

Figure 10. View of tourist accommodation in Imerovigli

Today, tourism in Santorini has become the unchallenged dominant factor in the economy, with a direct impact on all aspects of the economic and social life of the island. There are more than 30,000 tourist beds, and in peak season the visitors

outnumber residents three to one, with over 3,000 visitors gathering in Oia at sunset most evenings. However, the potential for the re-use of old buildings and ruins has been exhausted and increased demand is creating overwhelming pressures for new construction (Fig. 9, 10).

5. Conclusions - A critical assessment of the current situation

From what we have presented so far, some conclusions emerge that can be summarized as follows: The character of the anthropogenic environment of Santorini was determined by its volcanic nature. The economy in the use of available resources, the existence of natural caves, the particular characteristics of the materials available at the site, all combined to lead to a synthesis of cohabitation between the human inhabitants and nature, and the development of a specific ecological model that was both efficient and aesthetically attractive. The architecture was shaped according to the plasticity of the physical space and evolved into a multidimensional spatial lattice (Fig. 11, 12).

Figure 11. The volcanic nature and the anthropogenic environment of Santorini

Figure 12. View of the traditional settlement of Oia

Figure 15. Post- earthquake housing, chief planner and architect C. Decavalla (Design-construction: 1956-60

Figure 13, 14. Views of the densely built Oia, with the so-called captain's houses, where the neoclassical elements were mainly confined to the design of the facades.

The Venetians (1207 – 1580) established a feudal system on Santorini and built fortified castle settlements at Skaros, the capital in those times, and in Oia, Pyrgos, Emporio, and Akrotiri, using the same building technologies and materials. (Fig. 18). Subsequently, the new cosmopolitan patterns introduced to the island in the 19th century by particular socio-economic groups, in the wake of economic and social development, influenced the way of life and with it, the architecture of the island. These new international standards have embraced deep-rooted types, forms and building systems, and in becoming transformed, created new and interesting interfaces between global and local variants (Fig.13, 14).

The architecture of the modern movement that has been applied to the island since the 1956 disaster bended with modesty in the architectural tradition of the island and left us interesting examples of coupling the local with the modern. (Fig. 15).

The uncontrolled and explosive construction of the last thirty years has added a new and crucial field of exploration, on how tradition has been translated from modern mass-building into a new-traditional idiom. Here, institutionalized elements of superficial imitation and the unnecessary and insensitive repetition of typical motifs prevail. With modern manufacturing methods, massive "traditional" constructions are produced, aimed at duping a misinformed audience. Thus, the dome and arch have invaded the island as new symbols of social inclusion, with the unprotesting approval of the control committees. What, however, can an architectural morphology born under other economic, social, climatic and historical conditions and shaped by different building materials and techniques, offer to complex modern housing problems? (Fig. 16).

Figure 16. Photos of newly built hotel units

On Santorini, the closely intertwined relationships between construction and materials, functional needs and form, has created an architectural ensemble with almost unique qualities and a rare aesthetic balance (Fig.17).

Figure 17. Photo of Oia

Figure 18. The Tower of Nimborio (Emporio): 15th century, also known as 'Goulas'

So, if we try to trace the underlying structural architectural forms and materials that have become transformed over time; harmoniously melding in to a particular place, and giving character and identity to the anthropogenic environment, it would probably have been possible to reach solutions, leading to a different vision for the future.

So far, such a search for maintain the original architectural harmony of the island, has been the concern of a minority, among people involved with construction on the island, and has been expressed through a few new design interventions such as the one we are presenting to you. It is the "house of the winds" by architect Agnes Couvelas, whose design was based on the analysis of the historical, topological and climatic data, especially the winds, of the island using a modern architectural vocabulary (Fig. 19, 20).

Figure 19, 20. The "house of the winds" by the architect Agnes Couvelas, build in 1994, in Akrotiri.

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We believe that internationally there is an emerging recognition of the concept of place in architecture, and a striving to create works friendly and compatible with it. Perhaps this is the point, if you will allow us, to remind you of a timelessly relevant quote from the architect Aris Konstantinidis: "…My job is to build an architecture that will be contemporary because it will have truth. An architecture is modern and true when it is based on a tradition, that is to say, on some local roots and truths".

6. Acknowledgements

Figure 1. Newspaper Kathimerini, August 2010. **Figure 2.** Palyvou 2006. **Figure 3.** Diploma thesis: Architectural study of Xeste 3 in the Theotron of Thira with the help of three-dimensional imaging programs, Athanasios Konstantinou, Department of Architecture, Aristotle University of Thessaloniki, supervised by Claire Palyvou. **Figure 4.** Κωνσταντινίδης Α., 2008, pp.235. **Figure 5.** Photo by the authors. **Figure 6.** Restoration study of Saliverou Mansion, Exo Gonia, Santorini, architects: M. Nomikos, M. Dousi. **Figure 7.** Decavalla, C., 2008, pp. 60. **Figure 8.** Photo by the authors. **Figure 9.** Newspaper Kathimerini, August 2010. **Figures 10, 11, 12.** Photos by the authors. **Figures 13, 14.** Φιλιππίδης, Δ., 1983. **Figure 15.** Decavalla, C., 2008, pp. 59. **Figure 16.** Image from the internet. **Figures 17, 18.** Photos by the authors. **Figures 19, 20.** Couvelas, A., 2016.

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Local as Available: Redefining Tradition

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Abstract

Today, the meaning of local in architecture cannot be conceived without considering the effects of a global world. Available materials are not produced locally, as they used to be, and tradition — as a collective knowledge based both on locally obtained materials and on socio-cultural demands — is no longer a useful learning tool in metropolitan areas as Barcelona, where new architecture is designed and built without considering such historical link. The scale of knowledge has dramatically changed and became more generalist, but the requirement of real sustainability calls this scenario into question. In this respect, Vallès School of Architecture, ETSAV, Universitat Politècnica de Catalunya, is now reassessing its five-year undergraduate curriculum towards a gradual integrated learning approach around the work and reflection of studentsin the design studios, and the topic of this Conference is an opportunity to examine this reassessing process in the light of the interaction of local and global issues in architectural education. This paper exposes some recent academic experiences which could be used as a lever for the ETSAVredirection and explores the scope and potential of redefining tradition to regain the consideration and logics of a basic working tool, according to what local availability may involve in diverse areas of knowledge.

Keywords: availability; local availability; tradition; ETSAV; academic reassessment

1. Introduction

Vallès School of Architecture, ETSAV, Universitat Politècnica de Catalunya, is reassessing its five-year undergraduate curriculum — on the basis of different recent experiences — towards a gradual integrated learning approach around the work and reflection of students, i.e. around their academic experience in the design studios as the backbone of every semester.

The topic of 'place and locality versus modernism' is an opportunity to examine this process in the light of the interaction of local and global issues in architectural education. In this context, this paper exposes some of the experiences mentioned and explores the scope and potential of redefining tradition as a basic working tool, according to what local availability may involve in diverse areas of knowledge.

2. Available material

The meaning of local in architecture cannot be conceived without considering the effects of a global world. Defining tradition — from a technological point of view — as the most efficient way to use available material, what is local today should deal with the paradox that available items can now be global.

Some examples of academic experience can help illustrating how to cope with this paradox. One of ETSAV studios has a particular academic format. Faculties and students of fifth-year PUd Studio work in place with low-income communities in order to provide some of the facilities or commodities needed. They do not simply identify the issues and design plausible solutions; the Studio eventually builds those in a responsible hands-on approach.

Two years ago, the Studio detected the opportunity to recover and systemize an abandoned informal stairway as a means to improve pedestrian connectivity within a previously selected area. The academic project — named 'Ruta Ringo Rango' — was initially developed during the 2015 Spring semester in the neighborhood of Les Planes in Sant Cugat del Vallès, with support of the local community, the municipality and ETSAV staff. Some online platforms as HIC Arquitecturadisseminated the exceptional academic experience.

Students themselves acted as a qualified workforce, but material had to have no cost in order to succeed. After some initial considerations, they reached a solution: using discarded concrete test samples of a nearby laboratory already regarded as waste material; a large number of cylindrical adaptable and resistant pieces of an adequate dimension to become steps (Fig. 1). A sub product of concrete produced somewhere else for a different purpose, became a local resource as it was available at the right site, in the right quantity.

Figure 1. 'Ruta Ringo Rango' academic project, built by students of PUd Studio with support from local community and the municipality of Sant Cugat del Vallès, Barcelona, 2015.

Similar instances can arise from the Rural Studio—an undergraduate program of the School of Architecture, Planning and Landscape Architecture at Auburn University that has been working in the deprived area of Hale County since 1993—which has been a reference forETSAV for many years. Second-hand steel barrels first produced to transport mint essence, now stacked as waste, became the building material of a new playground erected by the Studio team with professional help (Fig. 2). In both cases — PUd and Rural Studio — the leftovers of industrial processes were given a 'local' second life thanks to their availability (Freear, et al., 2014).

Technology has always developed local strategies considering availability. The difference now is that obtainable materials are not

necessarily produced locally or traditionally anymore. The challenge is to understand these dynamics and deal with academic responses without disregarding the growing demand of Km0 production and delivery of building materials.
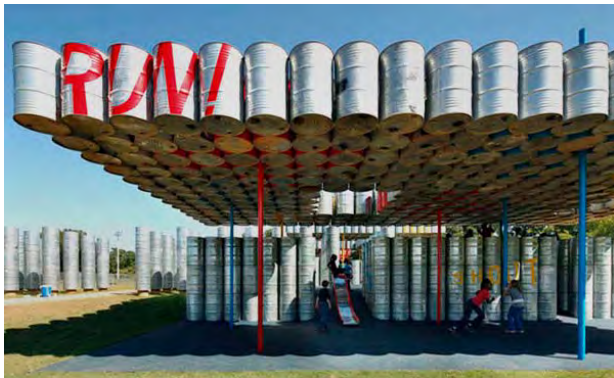

Figure 2. 'Lions Park Playscape' designed and built by the fifth-year Rural Studio team. Greensboro, Alabama, 2010.

3. Available reality

ETSAV is de facto reorienting some learning strategies towards the potential of local case studies in order to strengthen the involvement of students, work with real constraints and deepen in the decision-making and design processes. In the last years, studios have shifted from more abstract and global approaches to a more tangible relationship with local people, issues and resources. Not only materials but also architecture itself can be seen as one of these available resources.

PTEe Studio, among others, focuses on local scenarios where existing architecture — both abandoned or misused — is an available resource to meet the requirements and needs of nowadays inhabitants by reusing buildings and public spaces in an adaptive and sustainable way (Fig. 3). PTEe Studio is a fourth and fifth-year studio run between 2009 and 2015 under the motto 'Transient Conditions' by a team of four faculties at the departments of design and technology, including the authors of this paper.

Project-based learning gathers all disciplines around the students' work, so that both design and technology point towards the same direction (Fuertes, et al., 2012). Compared to this integrated

methodology, technology subjects tend to cover all the universe of possibilities in progressive levels of complexity. Those seem to be oriented in the opposite direction to a global knowledge.
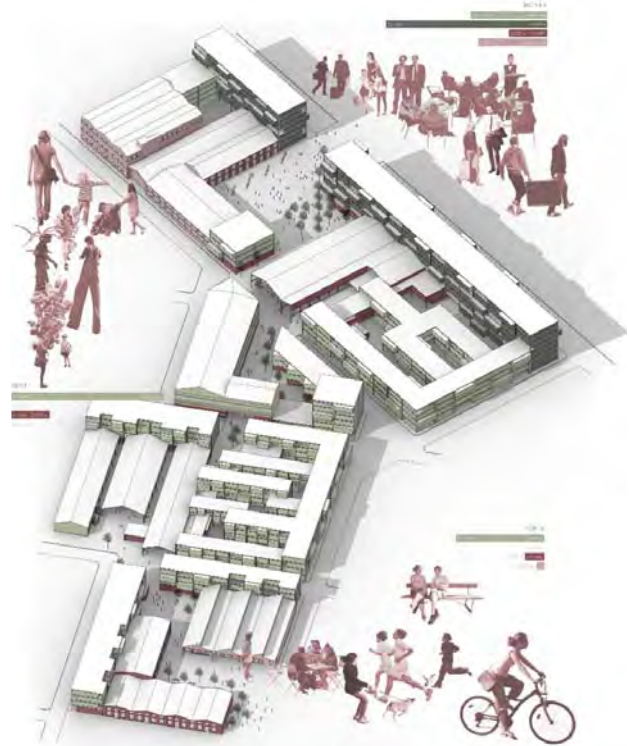

Figure 3. Reactivation of a former industrial area with potential to become central in the city. Clara Sánchez, Marc Serra, Susana Rubio. PTEe Studio, 2014.

In this respect, design and technology areas in ETSAV seem to have exchanged positions, according to the 'local and global' question, without finding a middle ground. Today, technology subjects have a more global scope while studios focus on local opportunities — a situation that needs further reflection, as they are part of the same curriculum. The experience of certain studios like PUd or PTEe, where design and technology cooperate in the same direction — towards local availability — should be taken into consideration.

The new syllabus of the Master's Degree — initiated in 2015 with a curriculum of 60 ECTS credits in two semesters—aims to solve the inconsistency detected in the undergraduate studies, so the Bachelor itself can benefit as well. Technology and design, along with theory and

urbanism, congregate around a single studio — that is to say, around the very project developed by students — and deal with specific issues, considering that students are mature enough and have an adequate generic background to operate simultaneously with all these conditionings. Reality is more consistent as more specific scenarios are considered and academic experience is less fragmented.

"A quality often attributed to architects [as to architecture students] is the ability to visualize a problem globally and to contextualize it, and we are expected to offer responses based on this principle. On the other hand, we have to be able to create very complex systems that take into account many very real conditioning factors at the same time. This is a difficult ability to teach because we often try to separate knowledge into convenient compartments that become too limiting. The success of the overall results — the design; the learning process or the curriculum — depends on how effectively the project integrates its responses to these conditioning factors, on how global its solutions are" (Farré, 2016). This consideration compels us to reassess the adequacy of the undergraduate studies methodology.

4. Redefining Tradition

The concept of local, as defined in this paper, has changed. On the one hand, available materials are not produced locally as they used to be — which opens a different and essential discussion. On the other hand, tradition, as a distillation of 'conventional' local materials, has come to a dead end in metropolitan areas like Barcelona, where traditional techniques do not fit into contemporary architecture requirements. In rural Majorca, on the contrary, ingredients and techniques are much obvious because tradition and locally produced materials are still alive, as we can observe in recent quality architecture (Fig. 4).

ETSAV faculties and students, as it happens in many other schools, are learning how to produce the architecture of today out of the existing structures and buildings — not limited to heritage but including all constructions in a good condition to undertake a conversion (Fuertes, 2014). As a

consequence, other instruments and methodologies are needed to forge a new paradigm. The expected results should completely differ from those that apply to new constructions. Reusing the built environment should not derivate in poor copies of new buildings and preconceived typologies but in a challenge to reformulate them, taking what already exists as a starting point.

Figure 4. TEd'A Architects, 'Can Jordi i n'Àfrica', Montuïri, Majorca, 2015. Jaume Mayol and Irene Pérez, principals of Ted'A, are ETSAV Alumni.

The American Professor Richard Sennett describes in The Craftsman (2008) a sort of repairing that he refers to as dynamic. He claims that such repaired objects improve their original use and condition since they gain from our knowledge and ability. Sennett attaches to repairing the qualities of a design process so, in this regard, we can observe 'dynamically' repaired architecture as a chance to redefine the process itself (Fuertes, 2014). We should not only expect different solutions, but a diverse approach to the design process as well.

One of the most remarkable case studies developed in the PTEe Studio was the conversion of a former telecommunications building, placed in a central urban environment of Barcelona, into apartments and work space. The dimensions and characteristics of the construction were not suitable for conventional housing — with a plan measuring 30 x 30 meters and a clearance height of 4.20 meters each floor. The most interesting proposals were those considering alternative typologies according to the building features instead of forcing standard housing through severe alterations of the structure (Fig. 5). Ingredients are different, but the knowledge of the basic rules of domestics in our culture is the same.

Figure 5. Re-inhabiting a former telecommunications building(above) with residential units and associated work space in Barcelona. Alex Ruízdesign (below), PTEe Studio, 2013.

A comparison with another discipline may stimulate discussion. Restaurant Somodó in Barcelona is run by Japanese chef Shōjirō Ochi who follows strictly the precepts and techniques of his traditional native cuisine but with quality ingredients that are always locally available. As emphasized on the restaurant's website "in Boqueria market, Shōjirō is well known, buying there for Somodó restaurant five days a week […] The fundamental concept is that raw material must be chosen personally"(Fig. 6).

We should ask ourselves to what extent can this scenario be described as Japanese cuisine? Does this redefined tradition underlie in ingredients and flavors or in the basic knowledge itself, also referred above to reuse architecture? In other words, given an unexpected context — different from the one that originated a particular tradition — how does knowledge adapt to new circumstances? We might consider if a Japanese person would recognize the cuisine of restaurant Somodó as familiar but probably the question lies in the very definition of tradition.

Figure 6. Two images from the website of restaurant Somodó, Barcelona [www.somodo.es].

The Merriam-Webster online dictionary defines tradition as "an inherited, established, or customary pattern of thought, action, or behavior". According to the previous remarks, tradition in architecture should not be observed as a materialization of specific techniques or as the use of some architectural elements and typologies. Tradition, at both material and spatial levels, lays in the knowledge of the relationships stablished between those and a particular environment.

Materials, techniques, elements and spaces could be considered as generic but the interaction we stablish is strictly local — that is to say, we act *locally*. In this connection, architecture can be described, from a taxonomic viewpoint, as a set of basic elements — walls, floors and roofs — and their elementary spatial combinations — patios, porches, halls and tridimensional structures

(Devesa, 1971). The former may be generic, but their mutual relations differ both historically, culturally and locally.

Therefore, tradition is the depuration of these relationships and the substance of the curriculum in a school of architecture, aiming to be rooted in a specific region. In this context, local and global — as operational patterns — should not reduce to be the motto of a particular design studio, but a structural topic in the curriculum.

Acknowledgements

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Architecture, Geography, Locality

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Abstract

Accordingly to Bernard Cache, locality can be interpreted as a combination of concrete gravitational vectors and an abstract vectorial space: one is related to the physical gravity - i.e. the physical setting - and the other to historical, social, and economic stances. As both are detected as images, there is not a real difference between them, as they are vector images. These vectors can have a diverse orientation: vertical vectors of weight belong to punctual extrinsic physical singularities, for instance, the peak of a mountain or the ravine of a valley, while inflected vectors live in sloping surfaces and in slightly curved horizons. Every specific places have extrinsic properties that belong to its very locality, and they are detected by a structure of vectors. Following these premises, locality is not a matter of language, that may betray by imposing a notion of identity as something that is given, but a question of singularities. The program of Modernity, as Pier Vittori Aureli pointed out, was based on the ultimate liberation from the traditional coincidence between geographical place and urban design. Following the divergence between singularity and homogeneity, this paper aims to expand the idea of locality as a system of vectors at the geographical scale.

Keywords: Geography; Scale; Spatial Fix; Thirdspace; Vectorial Space.

1. Introduction

The disaggregation of urban forms and the transformation of territories caused by global forces have provoked the weakening of the meaning of locality. Global forces belong to the world market and to the project to install profits in the form of physical objects all along the planet (Smith, 2010). These forces are often disproportionate compared to the forces that act into a specific context and they result unfamiliar to any given locality. The annihilation of locality caused by global economic processes has become an urgent question in many fields of urban studies. The radical geographer David Harvey defines space as the unique conjunction of built environment, cultures, people and this specific condition distinguishes one locality from another. But because in the capitalistic world economy different places are linked within a common economic framework and the production of commodities is indifferent to the qualitative specificities of a place, places cannot be considered singular and unique and their locality is thus compromised (Harvey, 1973).

Although Harvey sentences the end of locality, his objective is to reconstruct a theory that could link the materialistic interpretation of the space-place with the subjective side. Basically he aims to link the concrete spatial analysis that takes into consideration every physical transformation that occurred in time to how it may affect society. From this point of view, locality is rethought by overcoming its roots in history towards the study of the uncertain and blurred dimension of today built environments. In this way, Harvey tries to bridge structuralism and phenomenology.

In this paper I would like to investigate how locality can be rethought in contemporary cities where the idea of locality is continually under siege or where it has been completely erased. Principles from geography are used to update the study of the built environment to link the local to the global and to offer a broader overview of global urban processes. Following Harvey, the scope is to reframe the idea of locality by understanding that it is possible to build many new localities also in those places where it has been altered and compromised.

2. Architecture's Geographical Turn

Architecture has links with geography at least since the 16th Century with the rediscovery of Vitruvian texts (Gissen, 2008) and with national powers interested in discovering new portions of the worlds applying new cartographic techniques to survey and to control lands (Wilford, 1981). The interpretation of the context by geographers can be considered as an innovative feature in architecture that may help to "expand the meaning of context to imply a scale bigger than the simple locality" and to link local contexts to the larger globalized word (Sarkis, 2008).
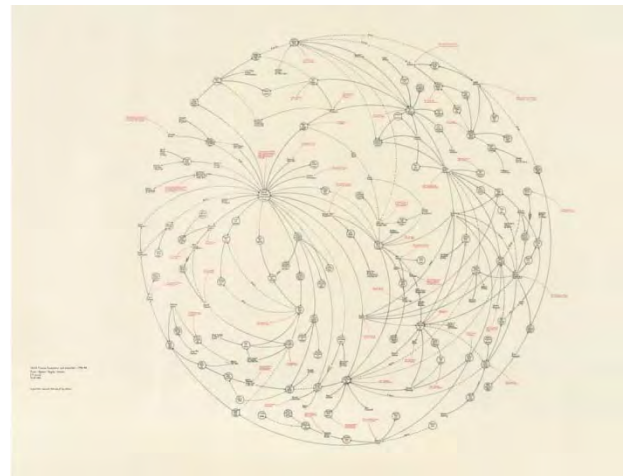

Figure 1. Mark Lombard, *World Finance Corporatoin and Associates*

The importance of the disciplinary confrontation between geography and architecture is highlighted by Vittorio Gregotti in its seminal book 'Il Territorio dell'Architettura.' Gregotti points out that the object of geographical studies is not to define proposals, but that geography is a science limited to the spatial present, it investigates relationships and it may suggests how things are constituted (Gregotti, 1968). Moreover Gregotti adds that geography is not limited to the simple depiction of the physical territory, but it analyzes territorial and spatial dynamics and evolutions at the large scale to

represent and interpret places. Geography has thus a crucial importance because it merges any architecture intervention into the specificity of a territory.

Accordingly to David Gissen, linking architecture to geography helps to describe the concrete structure of a place and to detect, comprehend and visualize the material transformations that effectively occur in time (Gissen, 2008). The importance that Gissen gives to the map, a tool used by geographers but that recently has known a period of success among artists, architects, and researchers from various disciplines (Abrams & Hall, 2005) instead of the use of traditional plans, represents a meaningful switch from the scale of the architectural object towards a broader glance over the territory. This change is possible because the use of maps aims to bring design objects into cartographic narratives (Gissen, 2008), that simply means that the architectural object is seen in strict relation with the surrounding, where many territorial dynamics are embedded.

Both Gregotti and Gissen stress the importance of understanding the system of relations that exist between objects that are part of large territorial dynamics. Many geographers during the 60s faces the same issue as a necessary turn from traditional geography. Edward Soja, a geographer and urban theorist, notices that throughout the evolution of geography nothing innovative happened since the 30s despite the significant transformations cause by the global urbanization. Traditional geography is grounded on a positive thinking that was based on a fix an analytic depiction of the world we live in. This view of the world was inadequate at that time because it was showing how things were arranged in a specific moment in time without analyzing causes, processes and evolutions (Soja, 2000). The critic moved by Soja to traditional geography is addressed towards both the object of studies, the simple depiction of the physical world, and the methodology applied, a survey crystallized in time.

Soja, together with Harvey and Neil Smith among others, aims to shift the focus of geography from the physical description of a place to a study of its spatiality. The interest on spatiality is grounded on Henry Lefebvre's assertion of the existence of a spatial problematic in the history of capitalism (Soja, 2000). The analysis of spatial structures was thus linked to the analysis of social structure with the aim to show how spatialization shapes human relations thanks to a better relation between history, geography and modernity. Accordingly to this view, spatiality is not seen as pure space but as how the living environment is shaped in the relations among things. This represents a significant turn from the fixed or immobile space conceived by traditional geography towards a space in constant transformation and evolution. Capitalism is considered the main force that causes the transformation of spatiality and that produces new spatialities that replace localities traditionally constituted.

The inclusion of social analysis in geography is important to link social phenomena to its spatial components, but the transfer of these theories to the representation of the concrete space is largely unsatisfactory. This is a crucial issue for architecture because it requires a concrete visualization and classification to study space and how it is shaped. Notwithstanding, radical geography can be considered a solid theoretical ground to start the study of the built environment to understand its evolving dynamics, and to offer to architecture innovative tolls for critic and design.

3. The construction of locality through radical geography

Going through the work of Harvey, Smith and Soja, three concepts look to be well suitable to reshape the concept of locality in relation to today's global dynamics. Spatial fix, scale and thirdspace can be considered key-words to re-interpret the constitutive parts of a place, to understand clearly how global economic forces shape the territory, and to discover the existence of new and unprecedented spatialities.

Harvey uses the concept of spatial fix to identify some concrete expressions of spatial transformations of the build environment that were depending by the global financial

architecture of the 1970s and how it was moving easily capital around the world during the 1970s. Two types of fix can be distinguished: one in the literal sense of durable fixation of capital in physical form; and one more metaphorical in the sense of temporary solution based on spatial reorganization to specific crisis-tendencies in capitalism. The spatial fix is a fresh accumulation of capital in new spaces and territories, hard to be replaced once made, and able to restructure both urban dynamics and landscape perception. The spatial fix isn't related to specific typologies, forms or programs, but it is the pure outcome of the power of independent and global economic forces.

If Harvey's spatial fix has a disruptive impact at the urban scale, economic forces and investment may belong to a complete different scale, often at the national or global scale. The role of the scale in today's global transformations is investigated by Neil Smith, the one who has elaborated the theory of the uneven development, or how capitalism shapes the earth's surface creating differences and unevenness as a constant dialogue between differentiation and equalization. Accordingly to Smith, the capital inherits a world that is already differentiated into complex spatial patterns, but it is reordered and reorganized into new spatial scales by the capital itself. For Smith scales are not fixed but they are constructed by the society, and more precisely they are utterly transformed by the hands of the capital. But because these scales derive out of the capitalistic development, and how capital reshapes the relations between relative pace and absolute space, they cannot be considered fix. This condition requires reconsidering scales out the habitual scales that are given to embrace both mobility and fixity of capitalistic forces.

Smith distinguishes between three primary scales: urban space, the nation-state and global space that are not given in nature but contingent and historically variable depending on various social processes. The global scale is the more abstract space and has the extension of the world market, thus initially incomplete and that tends towards the complete equalization of the world. The nation-scale derives from the dictates of

competition between different capital in the world market, acquiring a rigid spatial form in the construction of capitalistic nation-states. Finally the urban scale is where the capital finds a more accomplished geographical expression in the centralization of capital in the form of spatial fix.

Figure 2. Future Cities Lab, *Aurora Project: Drift*.

Soja's thirdspace is a hybrid concept that includes everything that is new and unrecognizable, that foreseen a continuity expansion of spatial knowledge and where every change is possible. But it is also the space where social practices take place and combines Lefebvre's physical space to the imagined space (Soja, 1996). The thirdspace in architecture is very close to the definition of the in-between, and it is the only space that should be investigated to find new identities because it is the only space that create things anew the in-between fixed states (Campbell, 2007).

4. The representation of continuously-varying spatial data

One of the problems of architecture is how to translate knowledge from other disciplines to design principles. Harvey poses the problem about where the phenomenology lies in a world of invisible and instable fluxes. This is a huge limitation evident in many works by radical geographers, like in the description of the spatiality of Los Angeles by Soja that is restricted to analytic diagrams that describe economic processes, missing the chance for a more exhaustive visualization of the spatiality. Soja's unsuccessful effort brings to the fore the difficulties to

represent concepts not related to forms but to forces.

Considering that the prior question concerns not the forms but the relations between them, Harvey calls for a relational view where individuals are not constituted by boxes, but by points defined by vectors of processes that are free flowing (Barruffalo, McCannor, Staddon, 1997). Vectors can be considered tools to translate graphically natural, economic and artificial forces joint together for a better understanding of a place. A system represented with vectors thus includes continuously-varying spatial data well represents how these forces act and their intensity.
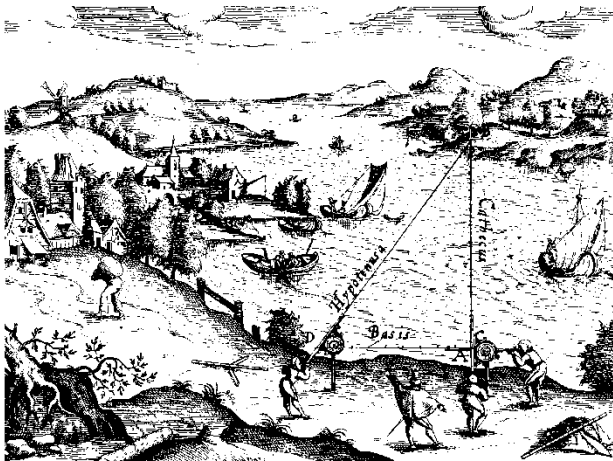

Figure 3. Triangulation, 16th Century.

An initial attempt to visualize a system of vectors can be traced looking at land survey tradition, an old technique introduced in the 1500s that has been constantly updated accordingly to new technologies and that is mainly linked to the exercise of power in the willing of controlling the territory or exploiting new territories. Land survey employs triangulations (a measurement on a horizontal plane) to detect distant objects. Two directions are interweaved and they can be schematizes into two distinct vectors: the horizontal is related with the line of the horizon and the human perception, and measures the distance between points using intersecting rays (the surveyor and the object to be surveyed); the vertical concerns fix positions, like the elevated spot used to start the survey (for example the peak of a mountain), or the elements to be surveyed,

like mountains or buildings. A more recent technique of land survey is the survey cloud, a technique that links more the human presence to the earth's surface. Through horizontal and oblique movements, the surveyor moves to detect point using a machine that reconstruct digitally the specific geography of a land (Maloof, 2011). In both cases, survey techniques build a schematization that links mathematical space to human perception.

A similar schematization is used by Le Corbusier to describe the link between human with the natural realm. In the 1930 within the text 'Precision,' Le Corbusier detected the presence of these two forces in the landscape of Britannia. He describes the balance between the sandy beach that embraces the latent and uncreated order of natural forces that extends horizontally over the earth surface and the stately granite rock that stands as a vertical axe belonging to the domain of human creativity (Leatherbarrow, 2000). In this scenario, vertical forces represent exceptions (human and natural) and horizontal forces are distributed over the earth's surface and establish relationships.

Figure 4. Le Corbusier, The landscape of Britannia (from: Precision)

Constantinos Doxiadis in his studies about the space in Ancient Greece offers a quantification of this system linking human perception to mathematic using a simple abstraction that includes vertical elements and horizontal rays. Vertical elements are associated both with the human presence and the punctual elements

present on earth (trees, mountains, architecture, etc.), while horizontal rays links the object in space which relations are mathematically measurable by distances and spacing through angles' degrees (Doxiadis, 1977).

A scheme with vertical and horizontal vectors can be adopt to study the geographical settings and the influence of non-natural forces. Bernard Cache in his book 'Earth Moves' attributes punctual physical singularities, for instance the peak of a mountain or the ravine of a valley, gravitational vertical vectors of weight (Cache, 1995). These vectors symbolize the connotation of forces of the topographic setting as they are perceived, and thus they have a clear phenomenological meaning. Together with vertical vectors, Cache indentifies the presence of inflected vectors that live in sloping surfaces and in slightly curved horizons that cover a vast part of the earth surface. They do not have any hierarchy because they are weightless and without any principal direction. The presence of these blended forces alone the earth's surface declares their dependency from the vertical ones and their submission, but they are in strict and undeniable relation. In another diagram Cache shows how architecture takes advantage of the topography, linking architectural forms to this right system of vectors.
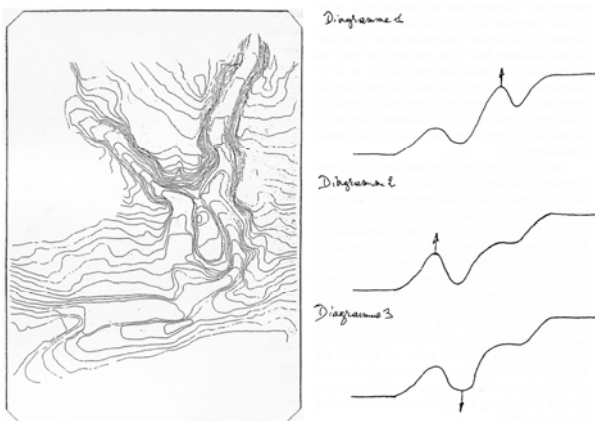
influence the built environment. In Ancient Rome during Imperial Age a peculiar relation between urban fabric and natural topography is shown. The city is organized accordingly to two typologies: the *domus* (private houses for wealthy families) are mostly located uphill, the safest zones, while the *insulae* (collective multi storey dwellings for medium and low classes) are spread on the valleys among the hills, an area full of danger because of the risk of flooding. In this case, the opposition between classes acquires the topographical significance of power and domination.

The famous wall-painting 'Gli Effetti del Buon Governo' (1338–1339) by the Italian painter Ambrogio Lorenzetti shows the historical link between natural and human vectors. The fortified city arises from the top of a hill with its clearly distinct shape: it is an enclosed space and it stands as a figure above the ground. It incarnates vertical forces of domination and power of the *Signore* and extends towards the sky the paramount individuality of the place, a hill, chosen for its foundation. On the contrary, the valley is inhabited by a network of human activities merged into a completely worked land. The network, a system of horizontal forces, is a dynamic system that links economy and production to a specific area, but under the surveillance, command and dependence of the *Signore*.

Figure 5. Bernard Cache, Topographical vertical forces.

Figure 6. Ambrogio Lorenzetti, Gli effetti del buon governo (1338-1339).

Such schematization that includes vertical and inflected vectors can be used as a tool to study how cities are shaped, powers act, and economy

The relation between power and domination is explicit in the representation of the solemn figures of Federigo da Montefeltro and his wife Battista Sforza portrayed in the 1465 by Piero della Francesca. The upright busts of the couple stand in

front the wonderful landscape that extends at the background in order to emphasize the majesty of the court of Urbino. Although the duke was a leader of mercenaries that turned Urbino into one of the most important cultural center at that time in Italy, the contrast between the two vertical figures and the horizon that broaden out of the frame shapes a clear opposition between the verticality of power and the horizontality of its extended domination.

Modernity, industrialization and new methods of production have broken the balance between natural and artificial forces, and thus the relationship between natural and artificial forces. Costantinos Doxiadis describes this disruption with the alteration of the dimension of a preindustrial community. While rural communities were strictly related to the natural resources of a place, industrialization reclaimed more resources that had to be imported from outside the natural geographical limits (Doxiadis, 1968). As a consequence of the growing gap between collective needs and available natural resources, methods of exploitation changed causing the disengagement of urban transformation from existing topographical setting (Aureli, 2011).
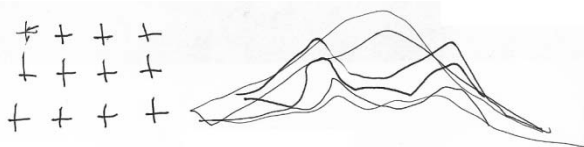

Figure 7. Space of modernity and local topography.

The Generic City is the reduction of the city to its minimum, as Rem Koolhaas claimed. The Generic City represents the rapid process of urbanization of the world, "processed that cannot be crystallized into definitive form". The abstraction of the generic city reduced it to an infinite surface with no more history, and the idea of location is definitely annihilated in the non importance of the how and of the where, in favor of the "somehow" and "somewhere," as a fractal unit that can be repeated endlessly. Finally, in the Generic city proximity hasn't any importance, and promotes the pure verticality of the skyscraper that can stand everywhere, isolate, regardless of the

geography (Koolhaas, 1994). The Generic City highlight the preeminence of vertical vectors over a flat grid, where position is not important but only its intensity that can be schematized in the length of the vector plays a role. Accordingly to Koolhaas the length of the vector is the strategy to introduce alteration, interference and innovation in a place, regardless of its specific conditions, and it works exactly like Harvey's spatial fix.
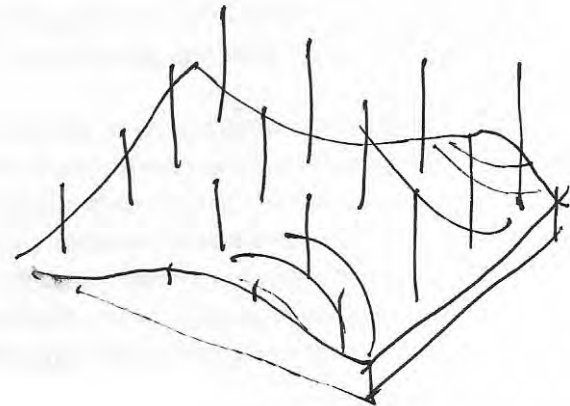

Figure 8. Tridimensional visualization of a vectorial system.

Koolhass misses that, although global investments are apparently free from any constraints, his skyscrapers are condemned to be placed somewhere, and thus they reconstruct (or deconstruct) the space that was existing previously. A new hybrid system of vectors is born and it will include both the abstract space of the commodity exchange and the relative space of the land survey. In other words such system of vectors is the result of the mixing of two abstractions: the abstract mathematical space with a physical and concrete space. This put in evidence the contraposition that exist between the generic city, that can be simply defined as an infinite grid, and the local distinctiveness, that is composed by infinite singularities. The merge of these two spaces generate a spatial matrix that uses vectors to visualized all the forces that interact in a place.

5. Conclusions

If locality is definitely corrupted with the advent of industrialization and recently even more with the advent of the neo-liberism, a complete

negation of identifying a place is a retreat from the challenges that today are in front of the architects. If space is continually transformed, understanding the new constitutive elements, the new scales, and the new relations is a prerequisite for the construction of new localities that bridge the lost *genius loci* to the construction of new urban landscape.

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Architecture in the Middle of [Now] here: how locus overwrites style

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Abstract

This article claims that place as such can be irrelevant to locality. As architecture is an alchemy turning trivial elements of construction into poetic entities of inhabitation the place caught in-between ought not be pragmatic. Rather, it is the idea of place as redefined by three contemporary architects – Abraham, Kuma and Couvelas- which elicits the poetic potential of architecture.

Keywords: place; locality; R.Abraham; K.Kuma; A.Couvelas

1. Introduction

overwrite: *to replace information with new information — overwrite in a sentence*

Landing architecture with the particulars of locality seems powerful and pragmatic, especially when this promises that the missing link to place will be restored. Back to roots architecture has been employed in order to move past the modernist non-place of international style. In other words, derivatives of modernism (Post-, Ultra-, New-) have professed a new status based on real-place values and characteristics.

Yet, the return to what is truthful or traditional and therefore integral part of our identity is not always a return backwards. As Le Corbusier said, talking to architecture students, "tradition is like an arrow pointing to the future, never to the past" (Le Corbusier 1999:31)

This article claims that place as such can be irrelevant to locality. As architecture is an alchemy turning trivial elements of construction into poetic entities of inhabitation (Zumthor 2014: 10) the place caught in-between ought not be pragmatic. Rather, it is the idea of place as redefined by three contemporary architects – Abraham, Kuma and Couvelas- which elicits the poetic potential of architecture.

This paper discusses three distinct paradigms: imaginary places, 'vanishing buildings' and intertwined cultural/natural continuums as normative perceptions for the idea of place.

1. Raimund Abraham pencil drawing

2. now[here] as imaginary place_Raimund Abraham

Back in the early nineties, in New York City, architect and then Cooper Union Professor Raimund Abraham presented work using the playful title 'In the Middle of [Now] here'*.

Delving into the depths of architecture's poetic pursuit, Abraham described locus as nowhere – an after play of now and here – overwriting the established perception of locus as a set of coordinates or a domain of a concrete cultural and natural continuum.

Now[here] as the locality which allows for architecture to overwrite its premises.

In his work he brought forth the notion that architecture is the intersection of ideal geometric volumes and place – while leaving place largely open to imagination, poetic investigation and desire.

2. R. Abraham, Austrian Cultural Forum

In his late work, the tower of the Austrian Cultural Forum which was erected in central Manhattan, Abraham defies the very idea of a skyscraper pushing upwards. What would Manhattan as locus speak for? Scraping the sky or colliding within the narrow –multi storey prism of the Austrian Cultural Forum? The elegant Austrian Cultural Forum 'falls' by a succession of vertical colliding planes. By surrendering to a force all other structures resist –gravity- skyline architecture is overwritten by the release of the locality's new possibilities.

3. now[here] as "vanishing buildings"_Kengo Kuma

From the 90ies on, the Japanese architect Kengo Kuma states that his goal is to 'erase architecture' (Kuma 2015: 5), He advocates for an approach to design he calls 'anti-object ' (Kuma 2015:14), a sustained attempt to counter architectural monumentality and autonomy, passing through an intermediate period of 'buried' buildings such as the Kirosan Observatory.

3. Kengo Kuma, Kirosan Observatory

Here, the existing topography gets utilized, just like the ancient Greek theatre, allowing the performance area to open into the natural environment. (Kuma 2015b:56-57), Thereafter, the elegant Kuma designs where architecture and locus to merge through continuity and texture become his signature style. Texture stems from landscape.

4.Kengo Kuma**,** Sunny Hill. Tokyo, Japan

Kuma strongly criticizes modern architects who think that sharp juxtapositions add a definitive 'edge' to their architecture

He particularly refers to Le Corbusier's pilotis which, like in Ville Savoye, creates a white object completely separate from its surroundings (Kuma 2015b:22-23). Kuma is a pioneer in questioning the early 20th century modernists' desire to 'sever all ties with the past and create an aesthetic of clean cut edges'.

Interestingly, Le Corbusier understands locus as the focus of his architectural frames. He speaks of his love for nature and the landscape by reversing the center of the architectural object: it is the interiors, the room with a view, which unleashes the magic of integration (Le Corbusier 1999:42).

4. now[here] as cultural/ natural continuums _Agnes Couvelas

Modernism and Cycladic traditional architecture will cross roads very often after modernists from all over Europe discover a kind of 'archaic modernism' in the Aegean islands - particularly on the isle of Santorini. During the 4th CIAM in Athens, architecture professors in the Athens Polytechnic proclaim Greeks to have been already modern, because of the Aegean building culture.

Le Corbusier and modernists first describe their understanding of this architecture as an interplay between earth, building mass and the sunlight (Le Corbusier 1987).

In 1933 already, Pietro Maria Bardi speaks in his account of the 4th CIAM visit in Greece "Viaggio di architetti in Grecia" (Bardi P.M. 2017: 86-87) about the future impact of rationalism in the Mediterranean, and particularly in Greece. He notes: …we today witness the transformations that the local spirit in Greece brings to rationalism…in twenty years Greece will have an environmental architecture, powerful, with couleur locale…As architecture critic Andreas Giacoumacatos, who translated and edited Bardi's detailed account in Greek, states 'this prophetic phrase by Bardi is later confirmed by a strong trend in postwar Greek

architecture, mainly represented by Aris Konstantinidis.

On the archaically modern island of Santorini locus overwrites style by different means of chthonic inhabitation. Therean traditional architecture unfolds as part of the volcanic rock, hanging over the sea, as caves under the fields as well as fortress houses build into the mass of the wall.

After the deadly 1956 earthquake, the rebuilding of Santorini was entrusted to a group of Greek modernist architects, such as Konstantinos Dekavallas, Savvas Kontaratos and others. They had to come up with a quick, cheap and build-able design and they end up developing the traditional vaulted form as shells – stripped of their meaning as a cavities within mass.

It is the 'sharp edge' modernist interpretation of the Santorinian vault, which was later criticized – not only by architects, but mainly by the local inhabitants.

Architect Agnes Couvelas made the decisive shift by adopting both value systems, cultural and natural into her architectural design with the House of Winds in Santorini. Locus is informed as much by architectural evolution on the isle, as by raw natural forces, like the wind and the patterns of erosion.

With her design informed by the cultural continuum – the buildings underground and the fortress architecture, Couvelas (re)turns to nature: The cliffs of Vlychada, a natural heritage site at the southern part of the island, extents a feeling of 'suspension' to her architecture. Style is overwritten by pillars hovering above ground and tilting volumes.

5. Vlychada shore, Santorini

6. House and fortress, sketch by Riva Lava

The eastern façade of the House of Winds is a windbreaker design to deflect strong winds by the manipulation of wind, actually by creating a wind barrier or wall

7. 8. The House of Winds. Natural elements revisited. Agnes Couvelas' Plan

5. Conclusions

Given the unchartered waters of at least two major developments of our times, mass migration and climate change, inhabitation and living conditions take on a new meaning and urgency. Architects are called to reposition their knowledge and skills beyond the established norms of their profession, in both practice and education. Within this discourse, a sensitive treatment of place may be the only way to sustain our livelihood.

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8. Images

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Image 2 SOURCE:
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Image 3 SOURCE:
https://www.google.gr/search?q=kuma+kiro+san+observatory&hl=el&source=lnms&tbm=isch&sa=X&ved=0ahUKEwijtKnfl9_WAhUoG5oKHaZMCWsQ_AUICigB&biw=912&bih=605#imgrc=7yjwWAyp10rFkM accessed Oct 7,2017

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Images 5,6 SOURCE: Riva Lava archive

Images 7,8 SOURCE:
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3rd Session: THE TOOLS

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Tomás A. L., TO SEE AND OPERATE BY DRAWING: The drawing of observation as a tool of thought

Tilemachou F., Fokas M., Technology-driven Design as Regulator of the Local. The Case of Inhabitation of Mars

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The emerging role of Urban Morphology in practicing and teaching architectural and urban design

Alessandro Camiz

«E d'otto chase n'ò fatte una, chè tre rispondevano
in Via della Vigna e cinque drieto»

«And out of eight houses I made one, as three were
in Via della Vigna and five behind»

(Rucellai, 1457)

Abstract

The *querelle* between modern and traditional urban design has alimented in the past decades diverging phenomena such as the new urbanism, the so-called vernacular architecture and the landscape urbanism on one hand, and the extreme radical neo or ultra-modernist approaches on the other side, each establishing clearly a different and diverging position within the international debate. The urban morphology approach, as developed in time by the Italian school of Saverio Muratori and Gianfranco Caniggia and their followers, has developed a methodology for architectural and urban design, which is neither the radical reproposal of the ultra-modernist style, nor the nostalgic reference to vernacular forms. The Italian school of Urban Morphology proposes a methodology for urban and architectural design based on the reconstruction of the formation process of the built organism, the types, the aggregates, and the territorial cycles. Upon the full understanding of these multi scalar processes, it is then possible to develop the project as the last phase of an ongoing process. A last phase, conceived as contemporary on one hand, but not opposing itself to history on the other, deriving its vitality from the understanding of the formation process of building types and urban tissues so to be the continuation of the past into the future. The paper illustrates briefly the formation process of palaces and public squares through some well-known examples, and proposes a project that applied the same methodology in the design.

Keywords: urban-morphology; public space; urban tissues; urban design

1. The formation process of the urban block

According to the Italian school of Urban Morphology, every building type is the result of a diachronic process that starts with basic buildings; also every part of the city is the result of the transformation of urban tissues comprising basic buildings. So are churches, palaces, and also public squares. As an example of this process, the flat apartment building, or in-line house, the type mostly used today for housing, is the result of the merging of two row-houses. This transformation starts in the late XVIII century when the urban accumulation processes lead private landlords to own more than one adjacent row house, with the need to rent the space to different families. We can see many examples in the drawings filed in the title 54 of the Municipal Archive in Rome, where every architect had to file the survey of the existing building and the proposed transformation so to have the permission for the construction. In the example in Figure 1 the architect in 1870 designed for two row-houses in Vicolo dello Struzzo 12-14 in Rome, the replacement of the gable roof with one more storey and a flat roof, the demolition of the two existing staircases, the construction of a new staircase to distribute vertically the building, and a new facade.
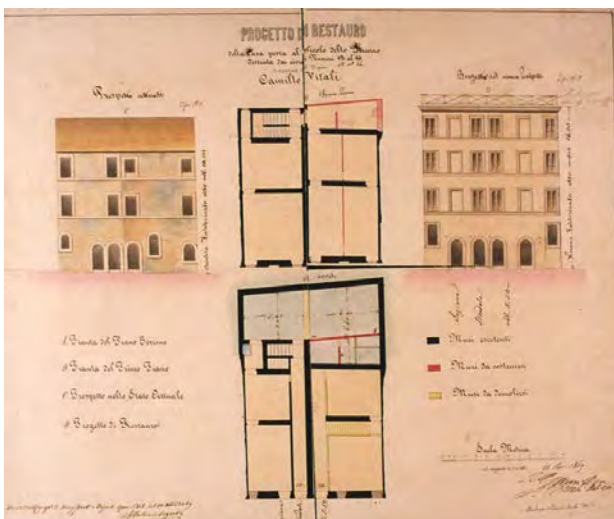
The new facade in a neo classical style used fake windows to obtain the rhythmical design *à la mode*, and inserted a fake doorway to achieve the symmetry of the composition.

The formation process of urban tissues according to the Italian school of Urban Morphology (Muratori, 1959), (Caniggia, Maffei, 2001) follows the repetition of a building type along a system of urban routes. These routes are hierarchized diachronically in matrix, planned construction and connection or restructuring routes. The repetition of the same type along the routes follows certain rules from which it is possible to recognise the different phases of the growth. In the first phase row houses are built along both sides of the matrix route; once the space therein is filled, planned construction routes stem on the sides of the matrix route and a new row of houses is built. This process happens in time, and not necessarily is planned. At the intersection of the matrix route and the planned construction route, the construction in the backyards of the corner houses determines a synchronic variant by position of the type. After the tissue along the planned route is completed, a connecting route can follow in two different ways: as a planned one, leaving the empty space for the urban tissue, or spontaneously, with buildings growing inside the backyards of the row-houses, determining the typical stepped pattern.
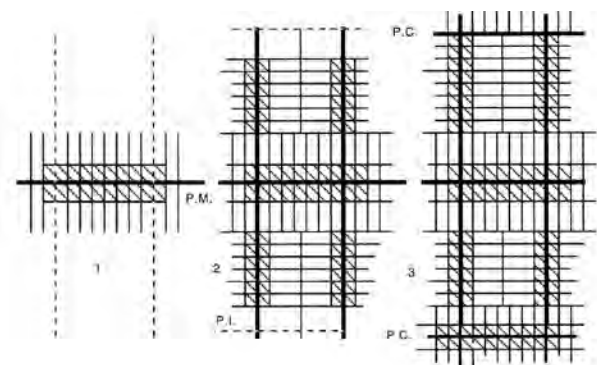

Figure 1. Project to merge two row-houses into one in-line house, Archivio Capitolino di Roma, titolo 54, fasc. 28/40, prot. a. 7670, 1870.

Figure 2. Aggregation of row houses on matrix route (1), planned construction route (2), spontaneous connection route (3 above), planned connection route (3 below), (Strappa, 1995).

The formation of the urban block is the premise for its transformation, by demolition, into a public square.

2. The formation process of the square

The formation process of public spaces within the modern city has ancient roots: although referenced to the model of the great public spaces of Republican and Imperial Rome, the "common" urban space of Italian cities has a different juridical nature from that of the "public" space of the imperial Roman. The latter was fenced and equipped with gates, it was a personal property of the imperial family, its access was governed in time and it was dedicated to the worship of the imperial family and its tutelary deities. This space was therefore not "public" in the sense we understand today. The "common" space of the Italian cities came into being in the middle Ages hence the deliberate action of the free "Communes" who decided to build by subtraction such a space for the public assembly of citizens. In time it became a space for free civic aggregation, for the election of the council and the podestà.

Figure 3. Reconstruction of the *Curia Communis*, at the time of the *terminatio* of 1294, in red the blocks that were demolished (Guidoni & Zolla 2000).

Although there are earlier examples of squares built by subtraction next to the cathedrals, where meetings were necessary for the election of the archbishop, (Camiz, 2007), we can say, that the "common" space acquires its complete form and its civic role only since the thirteenth century with the more mature phase of the municipal experience. In these squares, bishopric, municipal (and later ducal and lordly), very often we can recognize the presence of a market place: the "common space" here takes on the double meaning of place for business and place for civic meetings. This manner of designing public spaces consolidated in the following centuries and can be seen in many examples even in mannerist age and beyond. The birth of the modern theatre stood initially in these spaces through wooden stalls mounted temporarily at the edges, before *knotting* in the form of a closed theatre (Strappa, 1995). The design of the common spaces within the city, therefore, used specific design skills, which involved the shaping of urban voids in a "theatrical" manner. One of the most meaningful examples is the urban project for Zagarolo as related to the comic scene of Serlio's Treaty. In parallel with the rise of the bourgeois mansion and the recast and aggregation of basic building types, often adjacent to the same building, an empty space arises almost assuming the character of a "building without roof". This happens in the site of the nodal simultaneous concentration of capital (building) and goods (market).

Figure 4. Aerial view of Piazza Maggiore, Bologna (Google earth, 2012).

Piazza Maggiore in Bologna, even though located in the same position of the Forum of *Bononia* at the intersection of the *Kardo Maximus* of the *Via Aemilia* with the *Decumanus Maximus*, has no relation with the Roman Forum, which sits several meters below the ground level of the city. The area where the square is today was entirely built in the middle-ages, until the Commune of Bologna decided to demolish some blocks to determine a public space for meetings. In 1294 the commune of Bologna bought a large number of buildings, to create the space for the public market. A termination was designed, including many residential buildings contained in the blocks of the area surrounding the communal palace, and all the buildings therein were demolished (Guidoni & Zolla 2002) determining by subtraction the square as we can experience it today. Therefore that public square is not the continuation of the Roman Forum, but the result of a communal design, the planned transformation of a part of the residential tissue of Bologna so to determine the most important part of its political programme, the space for the assembly of citizens.

Figure 3 shows the termination perimeter and the demolished blocks. Piazza della Signoria in Florence is another eloquent example of the same process, the formation of public squares by the demolition of blocks of residential buildings for the deliberate action of the medieval Commune. In Florence the struggle for power of the two competing factions, Guelfs and Ghibellines, fighting for the full control of the Commune, ended with a strong prevalence of the Guelfs. The loosing Ghibelline faction, whose members lived prevalently in the area surrounding the Palazzo della Signoria, was exiled from the city, and the houses were demolished so to leave space for a new square in front of the communal palace. A space for the display of power, and for the triumph of the winning faction, the Guelfs. Piazza della Signoria is therefore the result of such a demolition, which happened in different phases, starting with the *Platea Ubertorum* that existed since 1299 next to the Palazzo della Signoria, and continued expanding that space in 1307, 1319 and 1343, by demolishing one block at the time (Guidoni 2002). Further demolitions were accomplished in 1362, 1374 when the Loggia dei Lanzi was built and others later in 1386 on the western side of the square. (Fig. 5 and 6). It is possible to recognize this process clearly in Piazza della Signoria as all the sides of the urban void follow the direction of a street, and the shape of the square is that of the missing residential blocks.

Figure 5. The different phases of the definition of Piazza della Signoria in Florence by demolishing urban blocks, (Guidoni, 2002).

Figure 6. Aerial view of Piazza della Signoria today (Google earth, 2012).

The Florentine palace, square and Loggia, determined a model for the design of public spaces that we will see employed one century later by Leon Battista Alberti for the project of Palazzo Rucellai, the loggia Rucellai and the square.

Piazza Farnese in Rome is another example of the same type of urban transformation, the design of a public square by demolishing blocks of residential tissue. Here the construction of the palace begun in 1514 under the direction of Antonio da Sangallo the younger commissioned by Alessandro Farnese and continued until 1536. Following the election of Alessandro as Pope Paul the III in 1534, the palace assumed a different meaning and Michelangelo became the director of the project. It is in this phase that the necessity to demolish the two blocks in front of the building arose. The last storey of the palace introduced by Michelangelo, and the new papal rank of the owner required a space from where it was possible to see the facade of the palace. Starting from 1546 one block is demolished, and it is shown as missing in Leonardo Bufalini's Pianta di Roma depicted in 1551, and in the following years the second block was removed leaving space for the square with the two symmetrical fountains. This square though is not a public space for the market and assembly of citizens, as it was not commissioned by the commune, rather it is a space for the display of

power as commissioned by the pope, the lord or Rome. A space from which it is possible to gaze entirely at the facade of the huge palazzo, and recognise the importance of its owner, the pope Paul III. In this same public space we can notice the birth of the modern theatre, as the space was used for games and spectacles mounting wooden provisional stalls around it. The façade of the Renaissance palace became the *frons scenae* of the modern theatre, a place from where gaze at the spectacle, but also a space to seen from the spectacle. The modern theatre is not the transformation of the Greek theatre, but rather the transformation of an urban void, which in time was covered and became the modern theatre. It is possible to notice in many of the XVIII century examples the presence of windows and doors in the interior facades, as those of buildings facing an urban square. (Strappa, 1995).

3. The formation process of palaces

The transformation of the block into a palace, by recasting the different row houses into a unitary organism, is another example of how the special building types originate from the basic types. Starting from the Renaissance, the bourgeois capitalistic accumulation, lead some families to be rich enough to be able to buy an entire block of row houses.

Figure 7. The two blocks demolished for Piazza Farnese outlined in red over a detail of G.B. Nolli, *Pianta grande di Roma*, 1748.
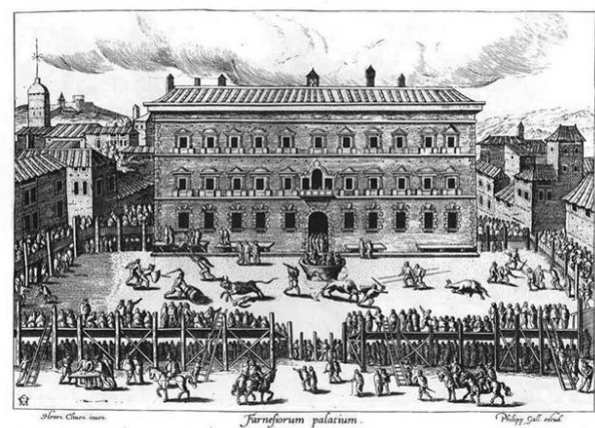
Figure 8. Philip Galle, *Farnesiorum Palatium*, view of the space for spectacles in front of Palazzo Farnese in Rome, 1599.

Once the houses were bought it was necessary to transform them for the new needs of a larger and richer family including the necessity to display the social status of the owner. For this purpose a new role emerged, that of the architect. In the middle-ages very rarely the author of the project was known since the building was a collective work, but starting from the Renaissance the individual role of the designer exploited. The case of Palazzo Rucellai represents emblematically this new design process. The owner of the Palace, Giovanni di Paolo Rucellai, was a rich Florentine wool merchant that became rich with his business. As an educated man he kept a diary, the Zibaldone quadragesimale, a hand written book including personal notes as well as the translation of Greek and Latin classical texts. In this book he noted that the Palace was the transformation of eight houses into one building, showing clearly the specialisation of the palace as derived from the knotting of a part of urban tissue comprising row houses. We must now understand the process, showing the transformations and the role of the architects, Leon Battista Alberti and his executor Bernardo Rossellino. To redistribute horizontally and vertically the eight row houses, each one having originally one independent entrance and one staircase, it was necessary to reverse inside the built organism the two external routes:

the matrix route on the front, and the planned construction route on the left side. The row houses were originally accessible directly from these streets, but following the transformation into a palace, they had to be distributed from the inside. The two routes outside the building were replicated into the two porticoes determining the asymmetric courtyard. At the node determined by the intersection of these two porticoes the new staircase was built, substituting the individual staircases of each row house. The new organism is based on the same structures of the older one, the walls, with very few changes. A new façade was designed covering with a stone cladding, composed with the classical orders, the former walls. This façade followed the principles of rhythm and symmetry, redefining the position and the measure of the window openings and the main door. The solution to this problem provided by Alberti, is similar to that one we considered in

Figure 9. Matrix route (red), planned construction route (green), restructuring route (blue).

Figure 10. Alberti froze the transformation of row houses into a palace by leaving one of the houses uncovered by the new facade.

Figure 1, a double entrance door, with the axis of symmetry in the middle of the two doors, where the door on the left leaded into the courtyard and the door on the right not being a real entrance to the palace, was a fake entrance door. This axis of symmetry determined the composition of the entire façade, with its rhythmical openings and superimposed classical orders. It must be noted that the last row house on the right, even though included in the transformation, as distributed by the portico on the second floor and not having its own staircase, is not covered by the new façade on the main street. Some may suggest that the unfinished composition of this building front derived from an interruption of the construction, but we believe firmly that is was intentional. Alberti froze the transformation of row houses into a palace by leaving one of the houses uncovered by the new façade, as a mark of the ongoing process. A mark that could be read only by a specialist, an architect, like he was.

As in the other examples shown, where the existence of the square is strictly connected with the palazzo facing it, even here, some years later, the owner decided he wanted a square in front of his palace. The palace was completed in 1451, and in 1546 Ugolino di Francesco Rucellai donated to Giovanni other houses within the block in front of the façade of the Palazzo. To establish a public square, in the form of triangle, delimited on the eastern side by a Loggia, once again Leon Battista Alberti was in charge of the project with the help of Antonio del Migliorino Guidotti. Demolishing the four houses, the project was completed, in the site of the last one a Loggia was built to delimit with a portico the public square. The overall model for the project is the same of that used for Piazza della Signoria, with the Palazzo and the Loggia, at a smaller scale, so to express the power of the family Rucellai, and to have a space from where it was possible to see clearly the new architecture of the building. Without this last operation the palace would have faced a narrow street and its composition could not have been perceived properly.

Figure 11. Palazzo Rucellai, Florence, ground plan of the palace, the square and the Loggia, outlined in red the property limits of the former eight row houses.
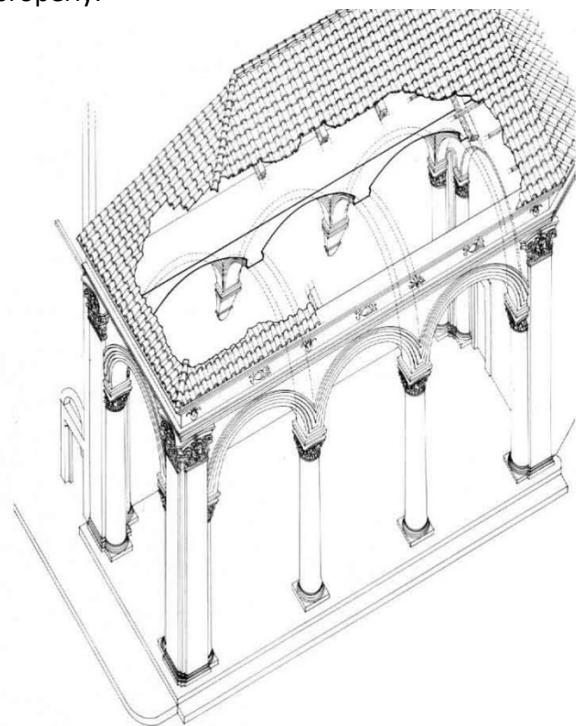
Figure 12. Leon Battista Alberti and Antonio del Migliorino Guidotti, Loggia Rucellai, Florence, 1456, axonometric view.

4. Application of the theory to design

The project here shown was presented for a public design contest organized in 2012 by the municipality of Carezzano Maggiore, a small town of 429 inhabitants in the Province of Alessandria, in the Piemonte region of Italy. The purpose of the competition was to select design ideas for the redesign of an area to be transformed into municipal facilities. A design team was established in Rome, under the direction of Prof. Giuseppe Strappa; the team comprised Paolo Carlotti, Giancarlo Galassi, Martina Longo, Marco Maretto, Pina Ciotoli and myself. We decided to join this competition to experiment our theoretical approach to architectural design and see if it was effective. As a matter of fact it prooved to be quite effective as we won the first prize of the design competition. The group proposed a redevelopment of the area believing that the contemporary design should continue the ongoing historical process of urban transformation The project involved the re-use and partial transformation of the buildings indicated by the competition announcement along the road axis of via Cinque Martiri. The buildings to be transformed overlooking Via Cinque Martiri had features that clearly indicated their origin as three rural courtyard houses, according to a building type diffused in many other areas of northern Italy (Strappa, 1995) . Two of these original houses were merged in time into a larger organism, with the addition of a stable in the back.

Figure 13. G. Strappa, A. Camiz, P. Carlotti, G. Galassi, M. Longo, M. Maretto, P. Ciotoli, *Riqualificazione di un'area del centro storico di Carezzano Maggiore*, international design competion, 2012, first prize.

The project therefore, as shown in Figure 14, built the processual sequence of this transformation and determined the new idea by continuing that process (Strappa, 2013).The different phases were hypothesized through the following succession. A first phase was characterized by the presence of a tissue of rural courtyard houses with the access from the main road. In the second stage part of these courtyards was infilled with the construction of smaller rural volumes such as stables, rustic buildings etc. In the third phase some of the courtyards, originally belonging to a single owner, were merged determining a larger organism. The fourth phase is the project, with the internal reversal of the matrix route, just like in palazzo Rucellai, and the knotting of the internal paths to form the new complex according to the palace building type. The fourth and final formation phase corresponds to the contemporary project, as a result of a process in progress. The new building is representative of a palace as derived from the evolution of the existing building fabric, highlighted by the interior courtyard, where the pavement design expresses the hierarchy of routes connecting the inside with the existing square in front of the church. The project was based on refurbishing, without demolishing, the existing buildings, determining a new horizontal distribution given by the portico and a new vertical connection given by the staircase.
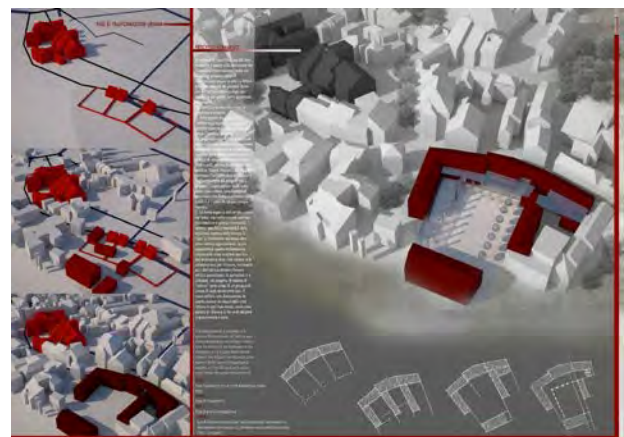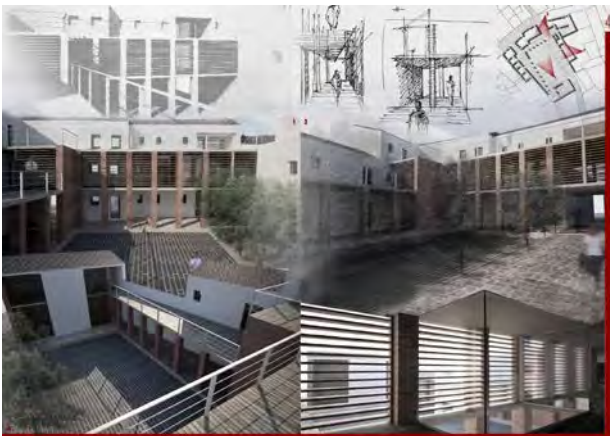

Figure 14. G. Strappa, A. Camiz, P. Carlotti, G. Galassi, M. Longo, M. Maretto, P. Ciotoli, *Riqualificazione di un'area del centro storico di Carezzano Maggiore*, international design competion, 2012, first prize.

Inside the new civic centre a portico unifies the spaces of the different building units by connecting them and is served by a main staircase placed to the left of the entrance. The portico is constituted by reinforced concrete pilasters cladded in bricks and is, together with the new staircase, the only addition to the pre-existing volumes. This addition also performs an energy saving task, through the presence of horizontal shingles that provide the passive protection of the façade facing the south. The entrance to the inner square is redefined so to allow pedestrian access as well as the occasional use for vehicles, both for functional and architectural reasons. The definition of the entrance in architectural terms becomes the visible indication of the transformation of a part of the urban fabric into a public building. The new public space inside the perimeter of the civic centre is designed as an inner square, paved in local stone slabs as a public space, and can be used for public events, along with the urban system of public spaces connecting to St. Eusebius' church existing public square and to the square in front of the City Hall, by the use of the same and design and materials. The language, the technology and the materials with which this project was expressed are sincerely modern, with no mimicry of vernacular or classical forms, with no post-modernist accent.

The transformation process adopted in Carezzano though is the same of that of Palazzo Rucellai, by recasting existing residential units, courtyard houses in this case, row houses in Florence, into a new organism, the palace, by keeping and updating the existing bearing walls, and adding only a portico, a staircase and a façade. In this case it was not possible to define by demolition a square in front of the new organism, but the existing public spaces were connected using the design of new floor, conceived to unify the system of public spaces of the city of Carezzano Maggiore. This project demonstrates clearly how it is possible today to apply the methodology of urban morphology and building typology to an architectural design. Within the contemporary debate of architecture, characterised on one side by the star architecture, conceived to serve as a spectacular object for the media, rather than an organism useful for the city, and on the other side by the multiplication of radical organic forms, this approach constitutes a rigorous example of the application of a theory to a praxis. Based on the consolidated researches of the Italian school of urban morphology, this approach is continuously developing through the research of the urban tissues in different parts of the world conducted by various researchers. It is not therefore a static methodology based on given rules, but rather a field in continuous development.

Figure 15. G. Strappa, A. Camiz, P. Carlotti, G. Galassi, M. Longo, M. Maretto, P. Ciotoli, *Riqualificazione di un'area del centro storico di Carezzano Maggiore*, international design competion, 2012, first prize.
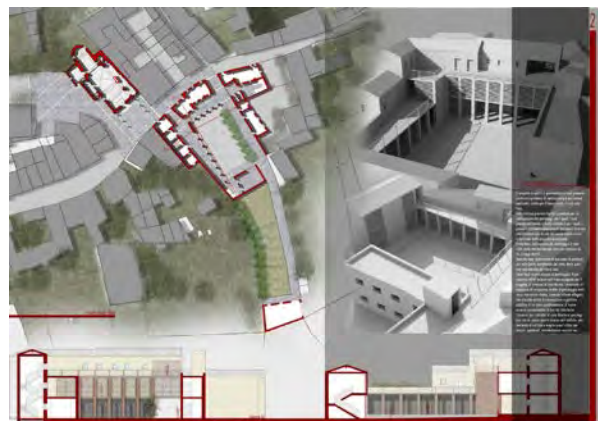
Figure 16. G. Strappa, A. Camiz, P. Carlotti, G. Galassi, M. Longo, M. Maretto, P. Ciotoli, *Riqualificazione di un'area del centro storico di Carezzano Maggiore*, international design competion, 2012, first prize.

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TO SEE AND OPERATE BY DRAWING

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Abstract

The practice of drawing by hand is one of the most valuable teaching in Portugal that attracts many students of ERASMUS, but on the other hand there are many other schools where it is no longer part of the program studies in Architecture.

Still drawing? Why? What for?

It is about reflecting once again on the discipline of observation drawing integrated in the didactics of architectural studies as a propedeutic component of the training of architects and designers, questioning the roots of curricular sharing between *Drawing* and *Architectural Design* and framing the observation Drawing and the methods that support it. The drawn observation understood as a way of thinking, is a fiction operated by graphic signals, marks, resulting from a directed interpretive choice, and in this sense it is already a project. It is also a process along which resources and means are shaped in order to obtain a major coverage and ability in architectural practice. By deepening the observational draw goals, methods, strategies and specific means, we develop a scope of arguments that reinforce manual design as an active component of architectural design.

Keywords: to see; intention; process; expressive synthesis

1. Introduction

Still drawing? Why? What for?

What are the benefits that the drawn observation brings to the practice of the project?

What is the contribution of Observation Drawing/Freehand Drawing as a design propedeutic training?

The reflection carried above, intends to evaluate the drawn observation as a propedeutic component of the training of architects and designers, questioning the roots of curricular sharing between observational drawing and project, framing it and the methods that support it.

In the first two years of architectural studies, manual design intends at an early stage, in the first year, to construct a way of thinking and sediment a very clear alphabet so that we can write, draw, think through drawing freely. In the second year, the idea is to flexibilize, multiply, monetize ways of doing.

As a starting point and in the impossibility of definition, drawing will always be the production of a mark on a surface The mastery and understanding of these marks allows us to create a system that activates in a certain way the support in which it is established. The representation is a fiction operated by graphic signals, marks, resulting from a directed interpretive choice, we can call a project Representation is already an act of design. A fiction operated by graphic signals, marks.

The Drawing is an abstract, conceptual system that has the ability to simulate, in particular, three-dimensionality; The discovery of this illusory magic results in a notion on which many other notions can be constructed. To draw is to trace marks on a medium characterizing them properly and leading them and unified mode - by the discipline of the

right-handed gesture of a determined communicative purpose.

2. To see and operate by drawing

Believing in Drawing as a tool of thought

What does Draw add to SEE? Or how do you transform it?

How can critical questioning before the pre-existences of the physical world influence the creation of new existences?

Consciousness and will, or even desire, appear as opposed to chance, spontaneity, recklessness:

We can draw in a playful, unexpected, spontaneous way, without a defined path, or solve fully formalized and precise questions. In teaching practice there is always a pedagogical project. Without pretending to ignore the unconscious dimensions, there is a load of programming and predictability.

The term project comes together with a determination of consciousness or self-determination. Drawing is a process based on the multiple components of its didactics. It hides a complexity of relations between object and subject, perception and culture, search and result, intention and communication. When the desire to transform the result of this process happens in another reality, the Drawing ends and the Project begins. Instead of observing from the outside in, observes from the inside out.

2.1 Observation and intention/invention

If living the visual experience were equivalent to drawing, any person with vision ability would achieve with little training, to draw with all likelihood. The drawn observation is an understood operation of inventive potential. The drawn representation is a fiction of reality operated by graphic signals (marks). Any coincidence between drawing and reality is a

mistake, strongly obstructive to the discovery of the full operative and operative potentialities of the Drawing. Each representation results from a directed interpretive choice, and from the rejection of as many others as possible.

As a starting point and in the impossibility of definition, drawing will always be the production of a mark on a surface The mastery and understanding of these marks allows us to create a system that activates in a certain way the support in which it is established. The representation is a fiction operated by graphic signals, marks**, resulting from a directed interpretive choice, we can call a project Representation is already an act of design. A fiction operated by graphic signals, marks.**

The Drawing is an abstract, conceptual system that has the ability to simulate, in particular, three-dimensionality. The discovery of this illusory magic results in a notion on which many other notions can be constructed.

2.2 An infinite possibility of saying things

By fixing one or more representations of an object, the Drawing multiplies the possibilities of existence and perpetuates them. It overcomes the passage of time and begins to function as a cognitive prosthesis of a visual nature that substitutes itself for the object. The eye is always guided by our knowledge, memories and desires. Intentionality. It must be an intentional act open to the maximum diversity of ways of doing.

2.3 Deliberated vision – We must want to see

It is not possible to imagine without being based on what we know. To awaken, to fix attention, to learn to see, to do all this through an active observation posture inseparable from the physical action of the pencil in hand. A designer has to know how to look, in order to discover the essence of things, which is not immediate. Only the continuous observation of reality allows our brain to discern the essencial.

Figure 1. Moore's *Sheep Sketchbook,* 2004, s. p.

As an example, in the sketch of Henry Moore, the line is protagonist, controlled in intensity, density and levels of vibration, it configures and determines the weight of the volumes and directs the surfaces in the space, configuring them and illuminating them. In some drawings they share in the same support the first lines with other thicker lines tending to occupy a foreground which are to them as alien, intrusive in the initial logic of their manufacture. They are lines that advance with design aims in the sense in which they begin to denounce the vision not of the reader-designer, but of the designer-sculptor in his project of transfiguration of the real.

2.4 Process

The great richness of the drawing of observation is not in the result but in the mental process involved and in the mark that this activity leaves in us. It's always about what to do next. The project is a moment that is going to seek the future that the drawing can bring to the present. The word representation means to present again, to represent. It is a doing that does not dispense thinking. The more I draw the better the drawing, the better I think, the better the drawing.

The future designer must be oriented to the *process* and less to the final result. The methodologies encourage the development of research capacities and autonomy in the student. Assess the problem-solving capabilities that the methodology increases based on the ability to formulate questions. To establish the methodology of observation as a structure of inquiry, capable of conferring visibility not so much to the observed / questioned object, but to the projective thought that in the pretext of representing it interconnects

in a single entity each line and each spot thrown on the paper.

2.5 Disciplined attitude / Selective ability - Drawing is choosing, we will not draw everything

Drawing is as representative artifice as conception. The two realities (the existing one and the one to be constructed) have the same status: one is in front of my eyes and I can easily go back there. Another is inside me, but I need to draw it to see and communicate it. In both cases the process is always by trial-error (observation and conception), it is by successive approximations that we construct any of the representations. It is a work-in-progress that presupposes continuity.

2.6 Time

It makes us think a bit more, contain, spend some time thinking about a particular gesture. Recognizing the world through drawing allows a deeper understanding because it implies a time, a stop, a moment of reflection, a certain slowness. It`s a rich maturing process that new technologies in their instantaneous response cannot (yet?) match.

2.7 Lack of time

In another time there was time for failure, time for suggestion, and time for self-discovery. Now there is no such time, we teach tricks so that they can jump much faster. The process of self-discovery in those who achieve it is done through the Graphic Diary. Besides, the exercises have to be very controlled, the process very orchestrated; The current student cannot handle no more ancient exercises that lead us to spend much more time in a very slow way.

2.8 Mistake/Error

The Drawing is regarded as the eternal sketch never definitively closed fostering a dominance of the process about the result, and the interrogative attitude about the affirmative. So in the hierarchy of the trajectory we recognize the path from

impulsivity to intentionality. In the guide lines, the hypothesis of correction. The distintion between wrong and certain lines through graph weight. A palette of hierarchies created by intensities, thicknesses, density.

Figure 2. Student drawing

3. Methods

Based on the capacity of problematization and experimentation, the drawn observation needs a rational formulation of objectives and methods to be fulfilled. In the words of Umberto Eco, one must invent limits to be able to create freely.

The methodologies, combining the theoretical and empirical aspects, critically evaluate the mechanisms intrinsic to the methods that guide their learning. More than "how to do" they aim to construct "a knowing to see" that translates into a knowledge to think "in visual forms," to introduce a graphic system that will help to sharpen the function before this or that category of objects giving the reader the possibilities Which these offer to imaginative exploration"(Collier 1985).

3.1 To guide the seeing and doing

Each method is selective to its mode by framing the look in a certain way. The various methods cover a field of problematization essential to the intellectual structuring of the trainee. Apply rational and regulating knowledge of representation problems without neutralizing intuition. Bring the student to look for the possible platform from which observation and conceptualization dialogue. From the exercise of representation-by-observation, to that of representation in the abstract, In the present times as we do not have enough time, we must pursue the reconciliation of method and strategy.

In the period between 1861 and 1867, Tolstoy had written: "The best teacher is the one who has, at the Language, the explanation of what is bothering the student. These explanations give the teacher the knowledge Of the greatest number of methods, the ability to invent new ones and, above all, not an adhesion Blind to one of the methods, but the understanding that all methods are unilateral and that the best Method would be the one that would respond in the best way to all possible difficulties presented For each student, that is, not a method but an art and a talent. Every teacher should, considering all the imperfections in the student's understanding not as a defect of the student, but as a Defect in his own instruction, strive to resolve within himself the ability to discover new methods (Schön 2008).

3.2 Modelling by line, by spot , by linear plot

Each method addresses a specific representation problem: Modeling and description as the two propedeutic methods.

This way of seeing implies the sense of the whole, from the general to the particular. Dimension, position and proportion are conscious choices. According to the exercise in question a special attention is given to mass, volume or visual weight.
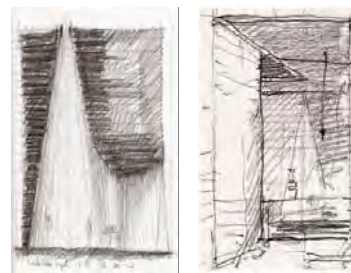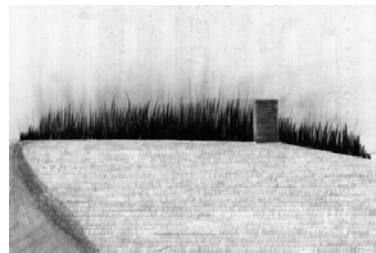
Figure 3. Drawings by Peter Zumthor

Figure 4. Drawing by Álvaro Siza Vieira,

3.3 Description by the line

It goes from the particular to the descriptive and analytical all. It`s a kind of drawing also called informative, linear, or contour drawing. It goes from the particular to the descriptive and analytical all - drawing. The drawing begins in detail and exists as a sum of parts.

Figure 5. Student drawing

P l a c e + L o c a l i t y vs M o d e r n i s m
Examples of emerging new paradigms in Architectural Design
2017

4. Gestural Drawing - Beyond the methods

Thinking gives way to feeling

It results from a basic and instinctive action, in which each performer commands his own path   A diagram in the words of Goldstein, that expresses the designer's emotional intelligence. The key, that lead us to find the visual character of each theme, and the recognition of its general expression in space. An empathic response, result from our *kinetic sensibilities – our ability to identify through* our senses, the many tensions, movements and weights, among the things we observe.
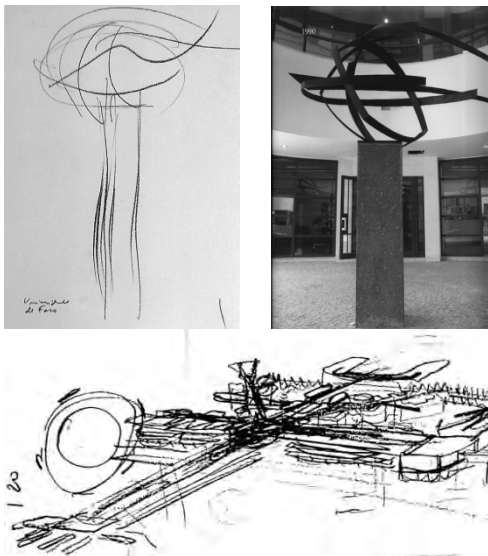
Figure 6-7. Fernando Conduto, drawing and sculptore, *Universidade do Algarve*, Faro.
Jean Nouvel, drawing to the *Bibliothèque de France,* Paris, 1989*.*

5. Expressive Synthesis – Olympian Gods

Rooted in one or another method (modeling and description), the *expressive synthesis* stems from the continuity and practice of these ways of seeing.

There are drawings of slow action, very slow, fast or very fast. Great and good synthesizers operated

by manual designs of maximum speed and dexterity are not easy to attain and are the result of a long and persistent slowly consolidated learning.
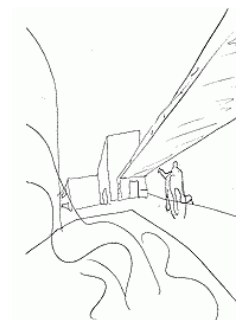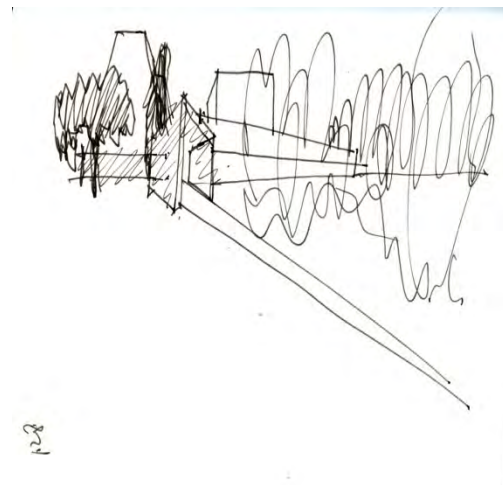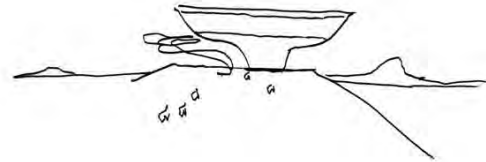
Figure 8-9-10. Drawing sketches by Oscar Niemeyer, Souto de Moura, Siza Vieira.

6. Conclusions

It is a shared task [of drawing] with the philosophy, *the ability to ask* but figuring the question.

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Technology-driven design as regulator of the local.
The case of inhabitation of Mars

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Abstract

Locality in architecture is mainly expressed with the way of adaptation to a specific environment's identity, culture, people, etc. Global architecture is characterized for its ability to exist universally, by using tools or methods of construction that do not necessarily or always coexist with the local. At the same time, it may well be stated that technology-driven design, i.e. the global, may regulate the local through adaptation and tuning of the senses and experiences of the users. This position, is investigated in the current paper on the basis of an extreme case design that refers to the inhabitation of the extraterrestrial environment of Mars. Primary purpose of the design is the development of a structure, which enables human survivability and continuity in a hostile environment. By extent, the built environment constitutes 'the whole world' of the inhabitants. The design of the inner environment and the improvement of viability of each place supported by the social behaviour of the users are equally significant. It is well understood that people 'carry with them' their culture, their laws and psyche, which in combination with the obligatory adaptation to the environment results in creating a Martian locality. The development takes place in two stages, and involves the initial mission and a future expansion in case of increase in human needs during the mission. Emphasis is given on the construction and erection process in preserving minimal human effort, as well as a protected inner environment for the inhabitants. While the technology-driven syntax of design creates a self-sustaining center on Mars that satisfies the needs for protection and survivability, adaptation to the local environment and sustainability of human life are made possible through the architectural and social environment created in coexistence with the Martian locality.

Keywords: Technology-driven design; Space architecture; Deployable structure

1. Introduction

Architectural design implies that different types of knowledge need to be an inherent part of any related decision-making process, which includes individual, rational and design driven ways of thinking and knowledge production. Given the interrelation of architectural design and technological aspects, a technology-driven architectural design process may be applied to associate the complexity levels of design articulation and evolution (Phocas, 2015). The approach is acknowledged, due to its potential to apply a heterogeneous set of discourses, types of knowledge and disciplines, through comprehensive iterative closed-loop cyclical processes of development. In addition, it enables further interdisciplinary advancements in terms of advanced performance-based research or technology transfer within architecture. Within an integrated context of cross-disciplinary collaborations, the approach can address the challenges of bringing together various aspects of the built environment with regard to global design and construction tools available on one hand and the local contextuality of the site on the other.

Common backbone for architectural skills acquisition and related research processes to be achieved with regard to the advancement of the field is the argument that "architecture encompasses several disciplines and uniquely brings together modes of research that are often kept apart and so provides possibilities for multi- and interdisciplinary research" (Rendell, 2004). In this frame, it has often been suggested that instead of trying to conform an architectural praxis to a scientific paradigm, architecture should provide a new model for research practice in all disciplines, which carries academic and social mandates and is intellectually coherent, capacious and integrative (Wortham, 2007). Since the connection between research and design gradually becomes established, the question how to construct knowledge and understanding out of a design or a design process increases in significance (Salomon, 2011). Along these lines, the case study presented in the current paper, comprises a design-based research on the inhabitation of the extraterrestrial environment of Mars. While the design focuses on the development of a self-sustaining center on Mars that satisfies the needs for protection and survivability, adaptation to the local environment and sustainability of human life are made possible through the architectural and social environment created in coexistence with the Martian locality. In this frame, local conditions are evaluated for the architectural conception and construction to be developed.

2. The Planet of Mars

Mars is the fourth in the row planet of the solar system, and perhaps the only one that may support human life. The planet's major condition characteristics are included in Table 1 (NASA, 2010).

	Mars	Earth
Mass	$0.64*10^{24}$ kg	$5.97*10^{24}$ kg
Volume	$16.318*10^{10}$ kg/m^3	$108.3*10^{10}$ kg/m^3
Equatorial radius	3396 km	6378.1 km
Surface density	0.02 kg/m^3	1.217 kg/m^3
Mean density	3933 kg/m^3	5514 kg/m^3
Surface gravity	3.71 m/s^2	9.8 m/s^2
Natural satellites	Phobos, Deimos	Moon
Rotation around sun	686.98 earth days	365 earth days
Duration of day	24.62 h	24 h
Synodic period	779.94 days	
Equatorial inclination	23 degrees	23.44 degrees
Surface pressure	4 – 8.7 mb	1014 mb
Average Temperature	-63°C	15° C
Diurnal Temperature fluctuations	-89 to -31°C	10 to 20°C
Wind speeds:		0 - 100 m/s
Summer	2 - 7 m/s	
Autumn	5 - 10 m/s	
Dust storms	17 - 30 m/s	

Table 1. Comparison of Mars to Earth conditions

In general, the existing conditions of the Martian environment are similar to those encountered in other extraterrestrial environments, but burdened with the difficulty of landing, due to the thin atmosphere. Possible viable areas on Mars are shown in Figure 1 (NASA, 2010).
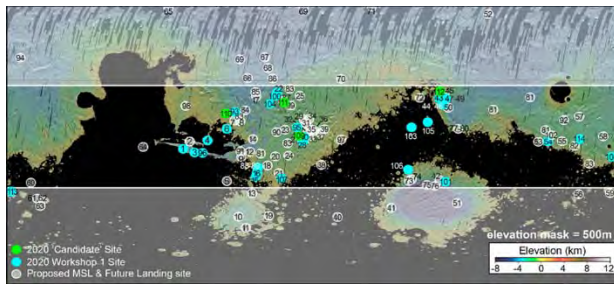

Figure 1. Possible landing points on Mars viable zone

As far as an inhabitation is concerned, the absence of oxygen in the atmosphere makes breathing impossible and requires mechanical support from spacesuits or other systems, throughout the astronaut's stay on the surface. The suits are airtight to prevent any contact between the human body and the outer environment. At the same time, they have the role of keeping the internal atmospheric pressure constant. Any leak could cause rapid decompression resulting in expansion of the astronaut's body, putting live in imminent danger. In addition, due to the sparse atmosphere, people on Mars would be under constant cosmic radiation, causing long-term body harm and carcinogenic side-effects. This radiation can penetrate even a 10 cm thick metal surface. Typically, on a 460-day trip (30 days on the planet's surface), an astronaut receives about 730 mSv radiation dose, with the limit being at 3.6 per year. In addition, future settlers will face Mars giant dust storms, which can cover the entire planet. These phenomena are unpredictable, and may block habitants for months in shelter, while cutting out possible communication with the earth and any exterior visibility. The respective wind speeds amount to 2 up to 17 m/s, which are not particularly strong compared to the earth's standards. However, due to the lesser gravity, their

severity changes, as they are more difficult to dissolve. At the same time, electrical discharges are likely to cause damage, as they carry large quantities of rocks and dust with them. Apart from these, one of the main elements that makes this environment hostile is the absence of raw materials, most notably water in liquid form. The lack of food and essential elements for survival lead to the need for continuous production of the required goods. A simple transfer of materials is not enough, because it does not ensure a long-term stay. Another element contributing to the hostility of the environment is the average temperature ranging from -8 to -112°C. The temperature depends on the position relative to the equator; however, the maximum known value amounts to 0°C at the equator, during summer. Therefore, no external exposure to such temperatures, nor outdoor planting can be possible. Individual persons living in such an environment, could experience isolation, depression, introspection, or even solipsism. Finally, the partial gravity on the surface may make it difficult to move and can have severe impact in the health of the inhabitants (Seedhouse, 2009).

2.1 Colonization

Sending people to Mars can last for many decades, even hundreds of years. The reasons for supporting such missions lie within exploration, installation, tourism and colonization. Undoubtedly, the first missions, which could be achieved by 2040, will have research objectives of technological and environmental nature. The crew capable of manning such missions, would consist of three to five people including a crew leader and others with different specializations. The initial mission stage would not require any permanent center for its implementation. Subsequently, further development with more people and other specializations would be necessary for broadening up the research spectrum. The population of the original center would grow with up to 15-20 people, while the center would become more permanent. Following this transition, a colonization could follow, where permanent residents of Mars would create settlements in becoming the first organized community. This

would require at least 50 people, and a center with standards for expansion, with its own social organization and structure. The purpose of such a

center would be to search for new sources of wealth and further development. The final stage would be to achieve space tourism and commerce

Figure 2. Mars colonization process scenario

between communities following the permanent establishment. A prerequisite in later stages is the accomplishment of terra forming, through transformation of the existing conditions on Mars to those of earth (Zubrin, Wagner and Clarke, 1997). A respective colonization scenario is shown in Figure 2.

People who will live on Mars are expected to be facing everyday challenges. These include long-term absence from home and limited contact with relatives and loved ones, living inside the same space for long time, and loss of muscular mass due to reduced gravity. Physiological issues require continuous body exercise at regular basis. Loss of muscle mass can cause serious health problems, particularly evident after return to earth (Vakoch, 2011; Wise and Wise, 1988). Architecture at this point can ensure the existence of appropriate communal and recreation spaces with corresponding infrastructure. At the same time, there is the issue of viability of space, i.e. how a closed environment becomes viable through different experiences for a long time. The interior of the center is the 'whole world' of the users, not only protecting them from the outside, but also providing them necessary elements for life (e.g. oxygen, food). Apart from body physiology aspects, psychological ones directly affect the users' relationships, their survival, their efficiency and the regular functioning of the center. These aspects may provide stress and pressure on the mission success, constant danger, monotony of everyday life and inability to escape from it, as well as limited socialization. At the same time, conflicts,

feelings of inferiority, monotony and even cases of solipsism can occur. In addressing these issues, architecture may also lay emphasis on the type of uses developed and their spatial relationships. Indicatively, a space designed, so that its limits are not fully comprehended at first sight, is more likely to cause interest in engaging the user to 'explore' the unseen parts. A similar effect may be achieved through large horizontal openings between the interiors (Duerk, 2004; Kozicka, 2008). Furthermore, due to the long-term stay in an enclosed space, it is possible for the inhabitants to develop sick building, or sensory deprivation syndromes, or even seasonal affected diseases, which also make social relationships more difficult and can only be addressed with proper use of equipment and specific design techniques.

2.2 Precedents

A number of designs for the first extraterrestrial center on Mars have been proposed in the last 60 years. Respective examples in space architecture such as the ISS and MiR follow a modular-based design, whereas each function is autonomous in maintaining safety and constructability, as shown in Figure 3 (Coss, et al., 2009; Kitmacher, 2002; NASA, 2010). Further aspects with regard to new design methods and utilities have been considered in the example of the Mars Ice House on the basis of 3D-printing of in-situ resources and robots for keeping human labor to the minimum (Fig. 4).

Initial missions had been based on a not well weighted daily program, with the working hours being by far more than those of leisure and rest.

Consequently, astronauts could not meet the mission demands and ended up with extreme measures (Cohen, 2002). Recent missions in space had a more balanced timetable, while each use was associated with a respective autonomous space (Fig. 5).

a)

b)

Figure 3. ISS spaceship; a) Perspective view, b) module
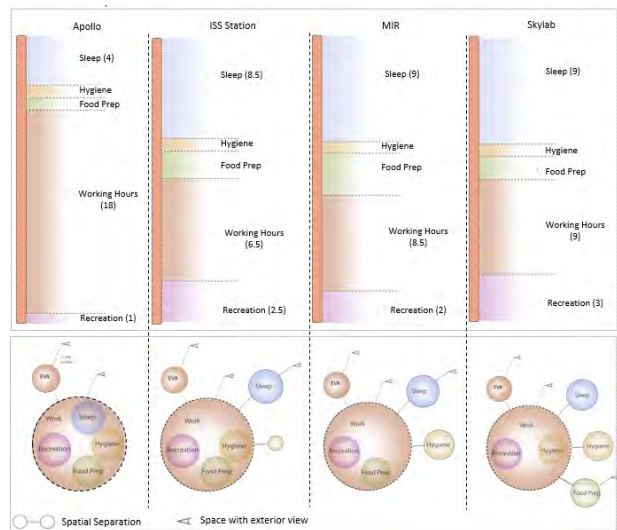

Figure 4. Mars ice house

Figure 5. Daily schedule in recent space missions (Bannova and Häuplik-Meusburger, 2016)

3. Design Proposal

The design proposal refers to the first and second stage of colonization, in addressing initial research missions with certain expansion possibilities. The proposal refers to a research center of maximum capacity of five people for the needs of the first mission (Phase A), which is then able to extend and support a larger number of individuals (Phase B), in case of more research needs (Fig. 6).

Following landing of an initial lander, this comprises the base of the structure. Drones and 3D-printing robots carried within, prepare (flatten) the ground for the main building. Subsequently, the main building develops with circular plan. It consists of two parts. At the bottom, there is a protective skirt, and on top, the main inflatable elements, which include the structure and the internal walls folded. The structure unfolds by the actuators integrated within the beams and the membrane is inflated by the lander. The interior roofs are unfolded vertically by using hydraulic rods, while external elements (the airlock units) are added (Gruber et al., 2007; Bannova and Häuplik-Meusburger, 2016). The construction of the first phase is completed by unfolding the interior walls and positioned through rails (Fig. 7).

The overall structure follows an elliptical hemisphere in shape, in order to ease the distribution of the internal atmospheric pressure (Fig. 8). With regard to the installation, there is an outer perimeter ring that connects the central spaces, and leads to the airlocks. In principle, one entrance is sufficient, but two more hatches are placed for emergency situations and the possibility of extension. Functionally, two wings, for habitation and work, are formed through the communal space, including the food preparation

and the mission control point. Individual crew quarters have a connection with the central common space through a small nursery, as well as the outer corridor. Finally, one of the two hatches is used as an entrance to the vehicle, which is connected to the main building to maintain internal atmospheric pressure and oxygen. At the top of the dome there is a hatch, which offers lighting or outward view. On the outer surface, photovoltaic panels or storage bins may be

a)

b)

Figure 6. Research center; a) Phase A, b) Phase B
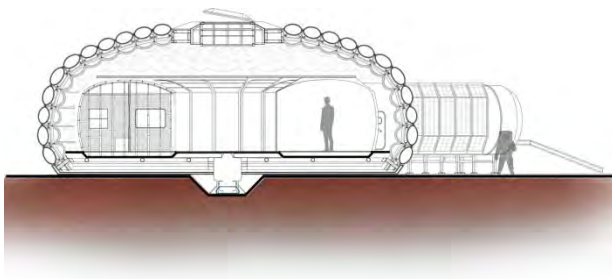
Figure 7. Initial center section

Figure 8. Floor plan of initial center

used for energy support of the building's operations.

The structure is extended through the outer skin and additional elements positioned radially. These elements have rails, on which the structural supports are anchored. Following anchorage, the lander transmits inward air, and the actuators move the structure outwards. Subsequently, the external decompression spaces (airlocks) are placed again. Upon completion of the process, the inner walls in folded elements are placed in place. The floor plan extends to two levels, enabled through the specific growth of the building volume and the alteration of the curvature in section (Fig. 9). Main axes are formed according to the location of the entrances and exits, which are moved radially outwards.

The original common space is completely open and now supports uses, such as dining, gym, recreation and mission control (Fig. 10a). At the perimeter of the central space the laboratories of biology, engineering, geology, 3D-printing, technical support and practice are developed. Outside of the laboratories, a ring functions as a

green zone. This develops along both levels and acts as interconnecting space with the vertical circulation located next to it. The green zone is divided in three wings, depending on the type of plants cultivated within. For example, there is a wing of vegetables and legumes, a general plant wing and one of experimental nature. The outer ring contains mechanical, storage and hygiene spaces. The level above consists of a single ring zone that includes the green ring, the main corridor, the private areas and the small

wardrooms (Fig. 10b). The individual spaces (crew quarters) are centrally located and have access from two corridors on both sides allowing visual connections with the level below (Fig. 11). The three wings of the green zone separate the individual spaces. Each wing includes six bedrooms, communal space and sanitary facilities.

3.1 Deployable Structure

The modular hybrid tensegrity structure proposed may deploy from Phase A to Phase B
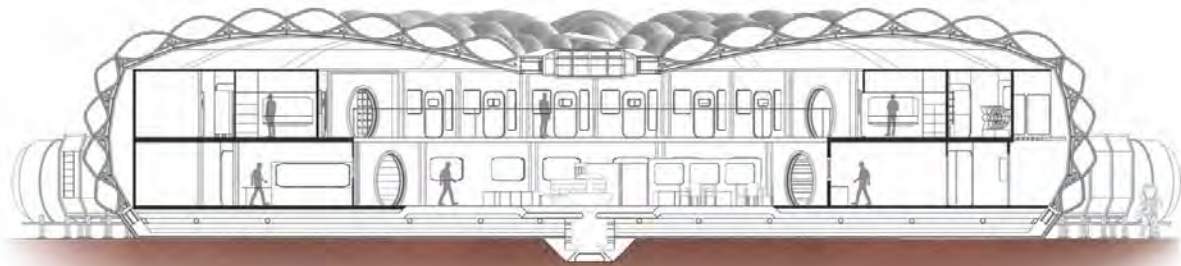
Figure 9. Extended center section

a)

b)

Figure 10. Extended center; a) Ground floor plan, b) 1st floor plan

a)

b)

Figure 11. Interior views; a) Airlocks, b) Central space

autonomously and with minimal human intervention, in order to provide an airtight system and reduce exposure to the external conditions (Fig. 12). A structural unit consists of hinge-connected beams, strengthened by a secondary system of struts and cables of variable lengths. The

telescopic beams should extend up to 2.3 times of their original length. In addition, bending-active members are supported on the struts for fixing a package of protective membranes. In the initial structure, the flexible package of membranes is curved. When the deployment of the structure is
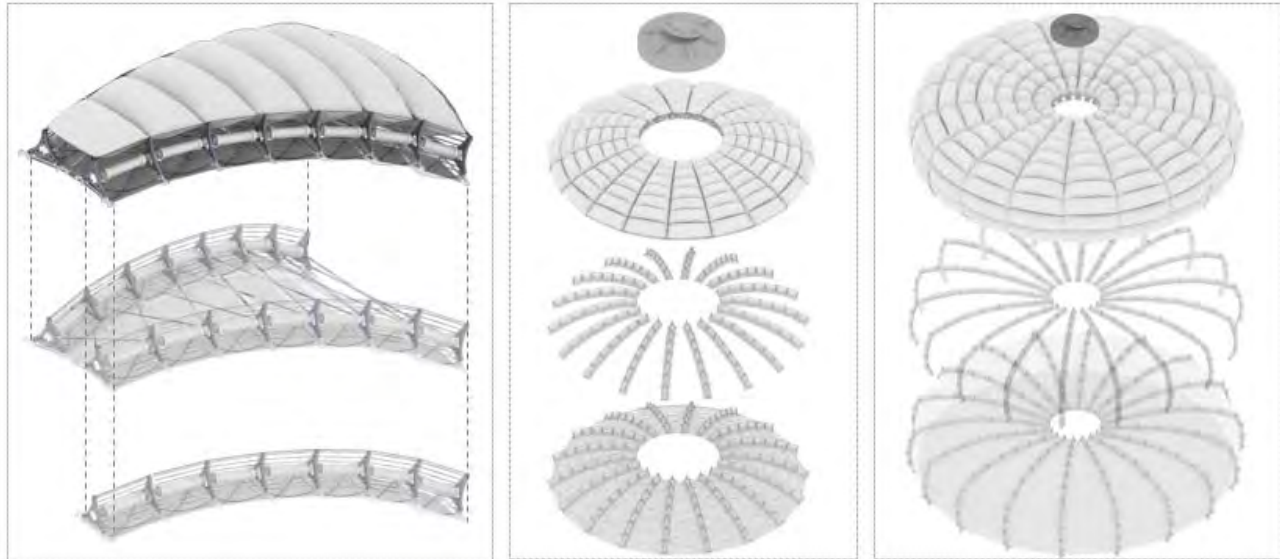
Figure 12. Structure modularity and deployment concept

completed, the membranes are stressed. The outer shell of the structure is covered with inflatable pillows. To achieve a diaphragmatic behavior of the system, diagonal cables connect the structural units in pairs, which are connected with the central ring on top and the lower grid-plate of the building.

4. Conclusions

In exemplifying ways that technology-driven design may support locality with regard to contextuality of the site and the environment, a design-based research on the inhabitation of the extraterrestrial environment of Mars has been presented in the current paper. The environment of Mars is characterized by extreme hazards and changing dangerous conditions for human survival. In this case, the local environment has direct implications on the way architecture is conceptualized and realized, which needs to be in correlation with the viability of the spaces and safety of the inhabitants.

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Of Shadows and Light

– fundamentals and diversities of Mediterranean architecture and its approaches to teaching

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Abstract

In this article we start by recapitulating, trough some examples, the overall values of Mediterranean architecture and how can they be perceived as common fundamentals, or archetypes, from tradition to modernity, as a whole richness of diversities, plurality and contrasts of typologies, regions, cultures (north/south; east/west). But the way we approach this problematic, as researchers, may – or may not – influence our role as pedagogues. This depends on the reforms we are willing to considerer in the Mediterranean architectural schools, curricula, activities and/or methodologies. This also raises another question: can these fundamentals and/or diversities become "operative", specifically in architectural/urban design studio? And how do they respond to the globalization phenomena and the possibility of real sustainable achievements for our students?

In short, this presentation aims to raise three main questions and how can they be commonly related: 1) Does the identity of Mediterranean architecture come from common fundamentals or from a richness of contrasts and diversities? 2) Which/how these fundamentals and diversities could/should be taught, structured, integrated or highlighted in architectural school of Mediterranean countries? 3) Can these fundamentals and diversities become "operative" in architectural/urban design studio? How do they respond to the globalization phenomena and the possibility of real sustainable achievements for our students?

Keywords: identity; diversity; fundamentals; pedagogy

Introduction

One can say that Mediterranean space and climate was previously shaped by light. The inner qualities and regional aspects of its medium temperate to warm and dry weather have shaped by itself its landscape. Settlements, as a creation of men, were breed into this meridional conditions and grew trough adaptation. Natural phenomena shaped traditions which, in their own, have shaped architecture of what is mostly known as the "rational south". So, isn't this consequence of the vernacular related to the natural human need of understanding space both as pragmatic and symbolic phenomena? Does the need of spearing local materials and specific building techniques – some of them going back to Antiquity – is enough to understand regionalism phenomena and architectural identity?

1. Identity , fundamentals & diversitiy

First, can we perceive the existence of overall values in the Mediterranean architecture? Does its identity come from common fundamentals or from a richness of contrasts and diversities? If we postulate a presence of common fundamentals, we can also recall that some archetypes manifest themselves from tradition to modernity and into a whole richness of pluralities and contrasts, regarding building and urban typologies, regions and cultures, from north to south and from east to west.

On the other hand, we can also postulate that the homogeneity of the Mediterranean urban traditional landscape depends on the scale at which we are analyzing some particular issue, either at an urban scale or just exploring the variations of some particular housing typology.

This problematic is also related to the adaptation of modernity in the Mediterranean, the genesis of XXst century modernism and its own globalistic paradigm and adaptation. Let us not forget that the "rational south" contemporary definition of "meridional architecture" can somehow genetically be related to the famous definition of architecture by Le Corbusier, as *"the masterly, correct and magnificent play of volumes brought together in light"*, which can be consider, at its origin, a Mediterranean definition of Architecture or, at least, a very "southern" aesthetical approach by the Swiss master – mostly influenced, at start, by his famous "Voyages en Orient" in the late 1910's, under the influence of Cézanne's modern theory ("*Il faut traiter la nature selon le cube, la sphère et le cône*"), and continued with his own quest of purism, along with Amedée Ozenfant in the 1920's (Le Corbusier, 2011).

On a phenomenological approach, we can see that the Mediterranean is also a contrast between what Christian Norberg-Schulz has called, on one hand, the *classical landscape* and, on the other hand, the *cosmic landscape* (Norberg-Schulz, 1980). By this categorization, we can recognize that Classical landscape defines mostly the northern side of Mediterranean (most meridional European territory) as the typical aesthetics of Provence and Toscania landscapes reflect and, on the southern side, the cosmic landscape of north Africa, the east Mediterranean, from Turkey to Israel, and southern Iberian Peninsula, where the images of old seaside villages of Algarve (الغرب, *al-gharb*, i.e. "the West"), the Baleares, or Sicily, can be, at first glance, mistaken for some urban settlements in Morocco or Tunisia. How could we forget that Alfama (ألف مـاء, from *alfa*, i.e. "thousand", and *maa*, i.e. "water") – Lisbon's iconic district – is, at its origin – like Grenada and other southern cities – a very old medina?

If we take a look at several south Mediterranean cities, we can easily recognize resemblances in urban morphology and buildings typologies. Houses, neighborhoods, streets, pathways, squares and markets create a natural balance between the private areas – the "hidden" city of intimacy and mystery of most Mediterranean historical urban centers – and the public ones –, of social economic grandness, symbolism and monumental exposure, as the Athenian ancient Agora, the roman Forum, the venezian *Piazza San Marco*, the Renaissance's *Piazza della Santíssima Annunziata* in Florence, the

Capitol in Rome, the *Plaza Mayor* in Madrid or the Neoclassical *Praça do Comércio* in Lisbon. This diversity creates a richness of fundamentals values that could not have created meaning without diversity. Even some idiosyncratic or picturesque aspects participate to the embodiment of identity trough the introduction of variety.

One classical example of this phenomenon is Malaparte's House in Capri: a typical case-study on its own and our first one here. The main difference between Adalberto Libera's version and Curzio Malaparte's final version is the difference between a globalistic modern functionalist proposal and a final solution based on the local and on the clients program, circumstances, pragmatism, memory and poetry. This resulted in a most unique place and a symbolic statement that has built its mythical identity as an idiosyncratic case-study in the History of Modern Architecture. Paradoxically, one could almost say that if Libera's functionalistic proposal would ever been built, it wouldn't have had the same charisma and poetry as the Malaparte's *parti*, like an Ortega y Gasset's metaphysical thought, in which man is himself and his circumstances (Ortega y Gasset, 2004). Therefore, approaching this typical "modernity vs. tradition" case-study by this point of view is also reflecting on the "global" vs. the "local" issues in the Meditteranean context. An aesthetical approach that could be regarded not so far from the early 1900's catalan's "noucentisme", as opposed to modernism, or late 1930's Torres Garcia's Constructivist theory, a redemption of modernity through what the painter-poet called "direct symbolism", as a reflection on classical tradition and timeless Mediterranean archetypes, which should form, according to the latter, "The tradition of the abstract man". In other words, we could say that the question of identity in the Mediterranean comes from the diversities and the cultural balances that feed its own *kairos*, between reality, imaginary and myth.

On the other hand, common – and sometimes opposite – fundamentals create its own richness of contrasts and diversities. The contrast of cultures and civilizations (north/south; east/west) has always existed at the very heart of this great "inner sea". Either being its geographical, climatic, urban, typological, social or symbolic aspects, we believe that its own memory should be preserved in the globalization issues. Like Aldo Rossi and Françoise Choay, one should remember that *identity is build up on memory* – and this applies not only to persons but also to buildings, places and cities.

2. Teaching & transmission

If we agree on the existence of these fundamentals and diversities, can we value them in an academic context? This leads to us to our second question: which/how these fundamentals and diversities could/should be taught, structured, integrated or highlighted in architectural school of Mediterranean countries?

According to the analysis of Pierre Von Meiss regarding Hydra's urban landscape (fig. 1a, b), it is almost impossible to recognize the differences between two apparent identical images of the town. According to the author: *"Hydra: two identical images? Almost, but not quite, because when you look better at the second one, you discover the insertion of very modern works: a) part of Alvaro Siza's ensemble at Évora (1977); b)+d) Le Corbusier's and Hans Scharoun Weisenhoff houses (1927); c) Adolf Loos Moller House (1927). Yet, everything is still quite harmonious – even maybe for the curator of the heritage center. This is due to the consistency of factors well beyond any attempt at imitation. There are good reasons to reconsider our protective regulations or develop another approach to the protection of sites."* (Von Meiss, 2012, Fig. 63, p. 54). Besides the wise criticism and pedagogical approach in Von Meiss's lesson – let us not forget that this example is taken from a book addressed, firstly, to architectural students –, we can nevertheless point out that the author chooses carefully to insert modernist models in accordance with the "cubic white image" of some Mediterranean traditional typology, in an almost iconographic "mise-en-scène".

In opposition, it is rather obvious that the same analysis would be completely different if we had to

choose, for instance, any Frank Lloyd Wrigth prairie house's model, Mies van der Rohe's Barcelona Pavillion, Le Corbusier's Villa Schodan, Alvar Aalto's Saynätsalo Center or even Eero Saarinen's JFK-TWA Terminal. So, we can conclude that there is *some* modernism that is adapted to the Mediterranean landscape *because* it is genetically related to the rational and southern approach of dwelling and man's relation of building its own cultural space. The modernistic examples in the image are accurate, not because of its functionalist principles, but because of their analogies with the local typology and urban morphology, where the almost prophetical quote of Le Corbusier blooms to the uttermost, as *"the masterly, correct and magnificent play of volumes brought together in light"* comes full circle.

Figure 1a, b. a): Hydra's urban lanscape ; b): a photomontage with the inclusion of some modern architectural major works: a) part of Alvaro Siza's ensemble at Évora (1977); b)+d) Le Corbusier's and Hans Scharoun Weisenhoff houses (1927); c) Adolf Loos

Moller House (1927). In Von MEISS, Pierre, *De la forme au lieu+ de la techtonique*, fig. 63, p. 54.

In order to integrate, or highlight, these fundamentals in architectural school of Mediterranean countries, we agree on going back to the basics of classical Platonic-Pythagorean principles that can be found in *some* origins of XX century modernity. Furthermore, we should lead students to understand how these archetypes are related with the empirical, non-scientific and traditional Mediterranean architecture, as they represent links in profoundness, beneath the scientific, positivist and functionalist approach that was developed later on by the Modern Movement and the globalization phenomena of the International Style.

So, if we can identify and integrate fundamentals on architectural school, what can we learn about diversity? If we take a look at Siza's Malagueira, we can see that diversity lies mainly on volumetric variations on the housing typologies and its blocks adaptation to topographical variation. Nevertheless, one can see that street typology and the overall urban design morphology is basically the same. Paths and ways are mainly identical by repetition of type, so most habitants don't seem to have created a strong sense of identity with "their own" street. In some way, this may be due to the author's idea of spatial continuum, as a fragmented design process of urban growing continuum. Nevertheless, we should not forget that repetition on street typology and overall urban morphology and, last but not least, result in some absence of real structuring public squares – with the exception of some common "terroirs" –, public equipments, and therefore, a lack of psychological centeredness and social identity within the community's district.

On the other hand, if we take a look at another classical example of Mediterranean design, like Hassan Fathy's New Gourma village in Egypt, we can see that the author created a urban form based on traditional housing, equipments, streets and squares typologies, adapting some basic models to the village morphology in order to

create a diverse urban spatiality, avoiding repetition of models, and therefore creating a richness and strong locus identity throughout diversity (Fathy, 1970).

The lesson we can learn by this modern Mediterranean experiences is that repetition "kills" identity, and one should understand that models should adapt to the local. If we take a look on the actual adaptability of some late 1950's structuralistic experiences in urban design and social housing in north Africa by some of Team X members and followers, it is impossible not to feel that the globalist theories have failed its integration because of its lack of adaptation to the economic, social, cultural contexts and its implications in the territory and specificities (Figure 2a, b). We believe that case-studies like these should be understood – in their strengths and weaknesses – by students of Mediterranean schools in order to overcome globalist and local issues.

Figure 2a, b. André Studer & Jean Hentsch, *Sidi Othman Apartment Buildings*, Casablanca (1955). Past (a) and present (b).

All of these fundamentals and diversities could be taught, structured, integrated or highlighted in architectural school of Mediterranean countries. In the first cycle of studies, we believe that the undergraduate student should start by knowing them at an informative/formative level and, at the end the cycle, he should be able to progress to a critical level of thoughtfulness.

3. Operativeness

This leads us to our third and last question: can these fundamentals and diversities become "operative" in architectural or urban design studio? How do they respond to the globalization phenomena and the possibility of real sustainable achievements for our students?

"Be aware that 99% of your future design projects will be on common matter", said Professor Von Meiss addressing to students (Graduation speech at Universidade Moderna de Setúbal, 2001). This interesting – and somewhat "provocative" statement – also means that even if they can learn a lot from the major architectural/urban "masterpieces" (either from past or present), one should not forget that these examples represent only about 1% of building reality, and that our students should be taught to understand localness, at the same time they study major historical and theoretical aspects and global movements phenomena. In other words, one should study the *typological* but should not forget the *topological* aspects in the design process. This also means that without a proper topological understanding of the site there is no "local" or "southern/Mediterranean" approaches to design matters and consequents pedagogical skills and operativeness.

This can be related to research trough design in a lot of ways: in the model presented in Figure 3, it is possible to analyze the possibilities of several basic relations between three major trinities that can be combined together in an attempt to help and guide the student throughout his design process: a) – first trinity: what we can consider, commonly, the architect's basic "tools" of analysis

and representation: geometry/drawing, technical drawing, physical models (and more recently, BIM analysis); b) – second trinity: the program, the site and the materials (in accordance with Pierre von Meiss mnemonic of what he defines as "the three architects best friends"); and c) – third trinity: three conceptual paradigms: mass, structure and skin (which can be correlated to Quatremère de Quincy's archetypes: Cave, Hut and Tent).
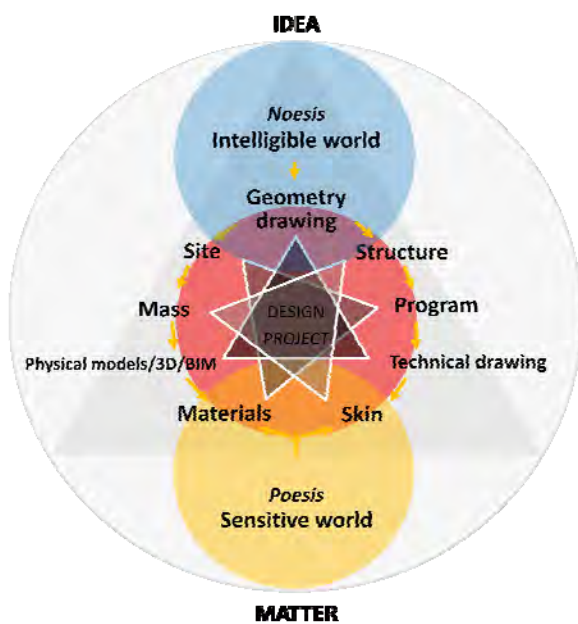

Figure 3. "Ars Combinatoria for architects": a proposed model to develop strategies of self-learning based on the study of *a)* three basic elements of architectural study and student's awareness : the program, the site and the materials, which are articulated with *b)* three architectural "tools": geometry/drawing; physical modelling/3D/BIM and technical drawing. Trough this combination can be introduced other general concepts, such as *c)* three basic conceptual paradigms based on Quatremère de Quincy's myths: cave (mass), hut (structure) and tent (skin).

Inspired by Raymond Lull's *Ars Combinatoria* concept of a "thinking machine", the analysis on the multiplicity of combined criteria is enhanced through dynamic liaisons. Each one of those liaisons creates binomials, trinomials or even more complex configurations. This enables the possibility of multiple schematics made by the student, which

act as mnemonics, creating flexible reflexion supports about design strategies and (plus) can generate debate and discussion in (and out of) class. From one or several approaches the student can then systematise, experiment or define analytical strategies in the creative process which can, conversely, be confirmed on many architectural examples or research references that he has in his mind (or are "externally suggested" by others). In its overall theoretical aspect, this reflexion raise some fundamental questions about design methodologies based on Platonist values and Aristotelian categorization, or between what is "known" and what is "unknown", or from *noesis* to *poesis*, and the "operative intuition" that emerges between *idea* and *matter* which lies in the heart (art?) of designing.

Of course, the possibilities of combinations are infinite, as each student can correlate and create its own permutations according to whatever circumstances – like in an *Ars Combinatoria* approach (from Raymond Lull's models, a I-Quing mutation, or even design-parametric software). We can also overcome analytical thought and synthesize theory and practice, combining *idea* and *matter* through a Mediterranean classical approach and its fundamentals. There, lying between Plato's *noesis* (i.e. the *intelligible* world) and Aristote's *poesis* (i.e. the *sensitive* world) can be found operativeness for a *research through design* process (Fig. 4).
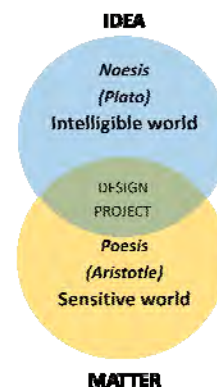

Figure 4. Relation between Plato's *noesis* and Aristotle's *poesis* through design project/process.

In harmony with the two poles, a convergent structured synthesis emerges through the student's architectural project/process. There, one can see that there is no divergence between theory and practice but, on the contrary, a *mental locus* where theoretical and critical thinking structures practice and practice confirms theory. Conversely, this same practice – or should we say, specifically, the student's process driven design – should be understood, by itself, as a critical reflection of its own, or a structured thinking in a demonstrated strategy, path, *parti*, or personal point of view that constantly evolves and modifies itself – *mutatis mutandis* – either in what comes to be pedagogically considered the students *process driven* aspects or its *product driven* goals.
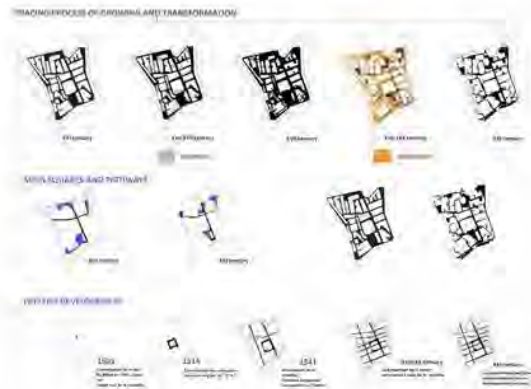
Figure 5. Urban analysis of Mazagan (Salma Jahidi/Miriem Moukhtari/Amine Fadili/Sara Boutam/Fayçal Bentana – DTA – coord. Prof. Hugo Nazareth Fernandes/EAC 2017).

Finally, case study number three (Fig. 5) is an example of an academic study of Mazagan by our Moroccan students, where a mixity between northern and southern civilization have created an urban dialogue between eastern and western morphology, and were north/south, past/present and urban Mediterranean problematics can be observed. Trough the urban analysis of the XVIth century Portuguese old citadel of Mazagan, the student's analysed the evolution of its morphology based on some thematics: urbans changes; the public/classical/latin city vs. the "hidden" Islamic city; its characteristically semi-public spaces and "dead ends" where public space is diluted into almost private streets or paths; the private spaces of the housing typologies; the equipments, the commerce and the facilities; the heritage and the memory values.

The students have identified, trough drawing and local visits, a noticeable "morphological clash" between the primitive functional and military hipodamic renaissance early tracing and the slow natural morphosis, through centuries of sedimentation and transformations, that lead to the actual Muslim urban morphology, in which they could conclude, at the contrary of Christopher Alexander's famous thesis, that a city can – in some cases – be "a tree".

After this first step, based on knowing and understanding, the students elaborated several site's rehabilitation proposals based on a critical/operational level, and have concluded that any rehabilitation process of this monumental site should be based on the evidences that emerged from this urban heterotopy, as an historical, social, local and cultural reality (Fig. 6).
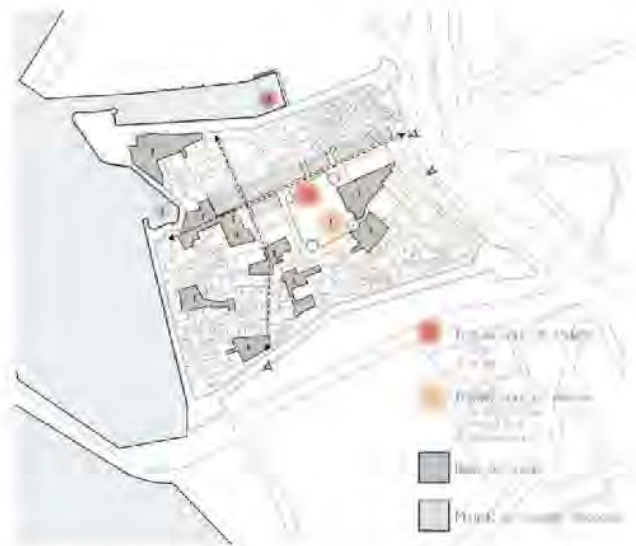

Figure 6. Study for a rehabilitation program of Mazagan (Sofia Sibari/Amellah Malak/Oumaima Eddahmani/Zakaria Naamad – Workshop masterclass "Réabilitation urbaine et patrimoine" – coord. Prof. Hugo Nazareth Fernandes/EAC 2017)

4. Conclusions

4.1. In order to synthesise some answers to our three initial main questions, we could say, firstly – regarding question number one ("identity, fundamentals & diversity") –, that the identity of the Mediterranean comes from its own diversity and cultural balance. Common – and sometimes opposite – fundamentals create its own richness of contrasts and diversities. This contrast of cultures and civilizations (north/south; east/west) has always existed at the very heart of Mediterranean. Either in its geographical, climatic, urban, typological, social or symbolic aspects, its memory should be preserved in the globalization issues, as without memory there is no possibility of identity of space, places or people. However, despite the evidence, this idea raises some other questions, such as: *a)* the negation of the local implies the oblivion of its identity; *b)* the *typological* exercise should be considered within a *topological* approach, in order to contextualize architectural programs and urban strategies in order to create new meanings; *c)* conversely, at a local level, Mediterranean heterotopias can have their own multi-layered identity, provided that one can recognize spatial, psychological and cultural perception behind the sum of its parts.

4.2. Regarding question number two ("teaching & transmission"), we should retain that that all of these fundamentals and diversities could be taught, structured, integrated or highlighted in architectural school of Mediterranean countries. As an undergraduate (first cycle of studies), the student should start by knowing them at an informative/formative level, and at the end the cycle he should be able to progress to a more critical thoughtfulness.

4.3. Finally, in question number three ("operativeness" – considered as "teaching: part two"), we conclude that these fundamentals and diversities should become operative in architectural/urban design studio, mostly in graduate/master level (second cycle) and – mostly – in a practice based doctoral level (third cycle of studies). Furthermore, they can respond to the

globalization phenomena if the consciousness of diversity is preserved, understanding complexity and heterotopia over dystopia, and typology *through* topology.

4.5. In an attempt to propose strategies that fulfil the main objective of improve teaching and pedagogical operativeness in the Mediterranean schools of architecture, and in the context of the Programs of higher education in the European Higher Education Area (EHEA), at undergraduate, graduate (master level) and doctoral studies, we propose the inclusion in curricula of a minimum of 25% of Mediterranean thematics and/or related contents in the main schools scientific domains, i.e. Architectural Design Studio; Urban & Territorial Planning; History, Theory & Critic Of Architecture; Building Technologies; Drawing, Arts & Humanities (Fig. 7).

Figure 7. A proposal for the inclusion in most curricula of a minimum of 25% of Mediterranean thematics and/or contents in the main schools scientific domains. The main goal here is to enhance the transversality of Mediterranean thematics in order to: a) encourage the student's pursuit on a multidisciplinarity approach to knowledge and self-experience and: b) strengthen the teacher's horizontal coordinations in each semester and the vertical coordinations in all cycle of studies.

Our main goal here is to contribute to strengthen a multidisciplinary approach based on the transversality of some Mediterranean topics. Those are just some examples of simultaneously local and global topics, cultural and civilizational issues. But we believe they could serve as contents indicators, in the sense that they benefit the main

objectives of architectural schools in southern countries, as their own transmission values and the understanding, research and design of the XXI century main Mediterranean global issues and challenges. We therefore would not end this reflexion without the following statement:

The Mediterrannean is a balance between private and public; shadows and light; classical landscape and cosmic landscape; northern culture and southern culture; western civilization and eastern civilization. It is the "middle earth" – the media terrae –, a richful balance on diversity that must be preserved and, for all of that, a unique place on earth.

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4nd Session: REFLECTIONS and CASE STUDIES

Toursoglou - Papalexandridou D., Assembling Narratives

Tormenta Pinto P., Social housing policies in Portugal in the last 25 years - Three study cases

Vaz Milheiro A., Middle-Class Mass Housing: rethinking modernity since the sixties(Luanda, Lisbon, Macao)

Baptista-Bastos M., Cultural rupture in the city of Lisbon:
The early sixties, when architecture finds other artistic expressions: The Third
and last Portuguese Modernism.

Assembling Narratives

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Abstract

The project premises lie in the reality of dissolving the artificial polarities between the human and the non-human, the natural and the artificial, the indigenous and the foreign, the stabilised and the nomadic.

Starting from population flows, the project is suggesting that living in sympathy with the human activity, and the transformations of natural and artificial elements, a new form of ever-changing territory could arise. River Evros is chosen, as a natural ever-changing element perceived to either separate or join Greece and Turkey. Flood is studied as a generator of notional and tactile connections. It is challenging the role of architecture as a mediator between matter and fact, capable of orchestrating the emergence of social and/or environmental ecologies.

The transformation of the level of the water is transforming the topology of the area in multiple dimensions and scales. In terms of materiality, through the deposition of matter, geopolitically through the alteration of the borderline, ethographically through the transformation of the periods of cultivation and the way of crossing the river.

Experimenting with the mycelium growth of the river and programmed drowns the artificial barrier of the here and there could be potentially bridged, augmenting pre-existing local materiality, revealing a spatiotemporal continuum and prompting alternatives to the geopolitical issue.

Is it possible that the robotic systems are integrated in the contemporary world away from the mere exploitation of their power after all? And which is the role of architectural education in this act? What is then defined as locality and place if not a continuum in ever-changing condition?

Keywords: local materiality; robotics; geopolitical issue; architectural education; ever-changing condition

1. Introduction

The current project is perceived as an ongoing process of rethinking the impact of architecture, philosophy, technology and architectural education on the current state of things. As a practice currently it is being applied to a Fabrication Laboratory in the city of Ioannina, for humanitarian purposes.

The project is questioning the role of the architect in a technologically-mediated world. While understanding the world as un-segmented, architecture is defined in the project as a part of it. At the same time, technology is understood as capable of taking part and promoting this process. The space that is formed between architecture and robotic technology is being questioned. In this state of things, the reality of dissolving the artificial polarities between the human and the non-human, the natural and the artificial, the indigenous and the foreign, the stabilised and the nomadic is explored. In order to understand the emergent it is essential to understand the way that it emerged and not the parts that it came from.

2. Population Flows

As starting point was set a current topic, the population flows, a process that suffers due to the understanding of the world as pre-segmented.

2.1 Area of Interest and Process

The area between the city of Orestiada and river Evros is chosen as a site. River Evros is chosen as a natural ever-changing element perceived to either separate or join Greece and Turkey. Flood is studied as a generator of notional and tactile connections. It is challenging the role of architecture as a mediator between matter and fact, capable of orchestrating the emergence of new ecologies be it social and/or environmental. As a starting point, the question what is happening in the case of the flood is raised.

2.2 Analysis of the Site

The transformation of the level of the water is transforming the topology of the area in terms of materiality, through the deposition of matter, geopolitically through the alteration of the borderline, ethographically through the transformation of the periods of cultivation and the way of crossing the river.

2.3 Process

The city of Orestiada was originally set as a military ground, standing in a defensive way towards the borderline. It is constructed forming an absolute grid, turning its back to the border, and consequently to the river and nature.

While understanding the area as an assemblage, and not as a total of distinctive elements, was conducted the transformation of the grid to a network of fibres that is functioning as a joining element and as an axis along which any kind of transformation is taking place. The grid was transformed according to the flow of the river and the population flow, and depending on the distinctive routes of the groups that are currently understood as distinctive users: the immigrants, the residents and the farmers that work in the area.
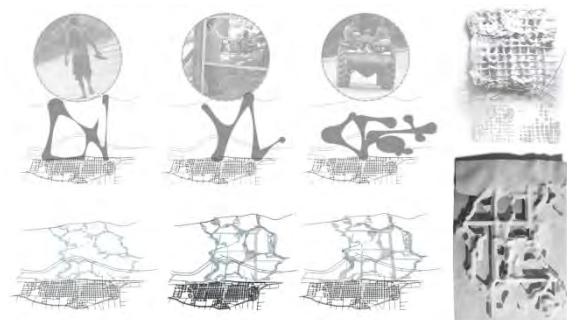

Figure 1. from the grid to the network of fibres

Every pre-existing route can not be objectively set by its own. Every flow, by definition, is defined by interactive patterns. The fibres that are formed function as a base where a multiplicity of spatial patterns is established inside different temporalities.

The logic of an aristotelian pre-segmented world, is conceiving the world as a puzzle of its parts, each one of which is contributing with its internal characteristics. Understanding the world as unsegmented, as an emergent result of the assemblages, each element is contributing in its particular way to the emergence of a unique result, incapable of being explained by the internal characteristics of its parts, but from the way that the interact with one another.

3. Materiality

The constant spatiotemporal transformation is expressed in terms of materiality in multiple scales. As a material, the Mycelium roots is chosen. They are roots of fungi that grow in humid environments and are capable of transforming the agricultural wastes in a construction material. Consequently, the fact that the material could be potentially produced in the cultivated fields of the area and through the research that is conducted in the university of agricultural studies of Orestiada, creates relations of effect and affect between the nature and the citizens that produce it.
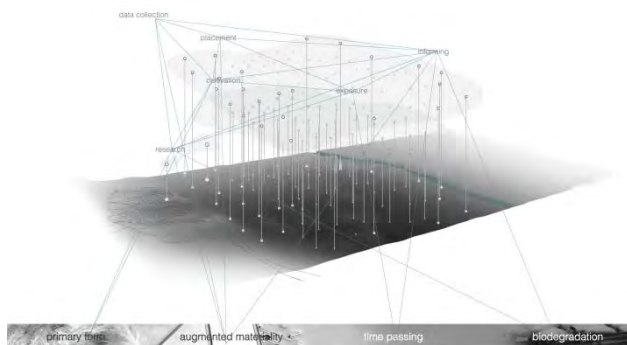
Figure 2. augmentation of local materiality

A multiplicity of capacities are potentially unlocked from the computationally-enhanced lines of thought and creation, with the use of the general purpose machines, opening new worlds, creating iconic or imperceptible ways of existence. The revolution that will lead to the new state of things is possible only through the bridging of the gap between technology and society that has collapsed.

Mycelium roots consist of an ephemeral material, with the capacity of quick transformation between its phases. With the presence of the element of water, its life shortens and in a small timeframe it begins to biodegrade. The routes are informed by the levels of water. The technological system, receives data about the change of the water level from the barrage in Bulgaria and informs through a robotic system and with the natural enhanced material, together with time, the construction. In a sympathetic relationship with the water and robotic system, a constant deterritorialisation is achieved.

Space is hosting the transition of bits of information, functioning as a catalyst in the process of formation of a contemporary ecosystem. The architectural element is understood as an emergent system from the process of constant feedback loops, and no end-point could be pointed in its transformation. Materiality is informed and at the same time informing the architectural discipline when the digital and physical processes coexist end interdepend. Architecture is set as the intermediator between matter and fact.

Figure 3. creation of a fluid space able to host any local condition

4. Process for a Common Ground

A fluid space is revealed, in spatial and temporal terms, a unifying parasitic structure, in a sympathetic relation with every animate being that occupies it. The escape towards an indeterminate land, a land that supports any kind of activity, is capable of contributing to the liberation of any kind of established limit. However, it is essential to point out that this escape is not merely passive; on

the contrary, it also involves an active creation of lines of flight, a production of new spaces, possibilities and alternative territories. Subsequently, the routes are not specified as an absolute spatial quality, but are formed as potential bases for the development of multiple alternative territories.

The narration of the transformation is constructed in a way that a movie is directed. Space is revealed as a sequence of frames where the continuity is formed perceptively. As a narrative of the transition, that transforms in a non-linear way in between multiple spatiotemporal localities connected in multiple dimensions.
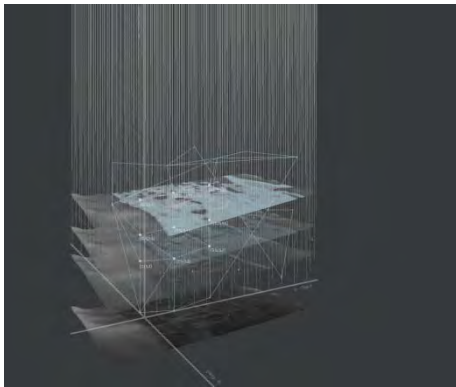
Figure 4. study on a spatiotemporal locality

This way, the architectural elements are not reflecting a specified form, but a constantly changing condition that were depicted through imaginary instant potential qualities. Not as a mere depiction, but as a way of reflecting the notional process of the project. Space and time act simultaneously in any possible point of the grid.

Figure 5. space and time act simultaneously to create the local condition

The transition of time is reflected in the phases of materiality and its microstructure. The natural material is augmented to function as a construction material and through the existence of water recreates the fungi that it came from. Afterwards its consistency is being gradually alternated up to the point that it biodegrades and stops existing. At the same time, the robotic system is informing the construction in order to support alternative ways of inhabitation due to the needs of the users.

The x axis of space is defined as a line that is connecting the city of Orestiada with the river, since it consists of the main line of flight in the area and is notionally extending towards infinity passing every preexisting limit. Thus, along this axis, we could observe different qualities. In proximity to the city, the constructions is inviting the residents to approximate to the physical phenomenon. In the in-between space in a proximity to the field, the construction is subsiding so that it allows the cultivation process. Near the river the construction is expanding as long as the borderline is moving as if another construction would approximate in order to be connected with that.
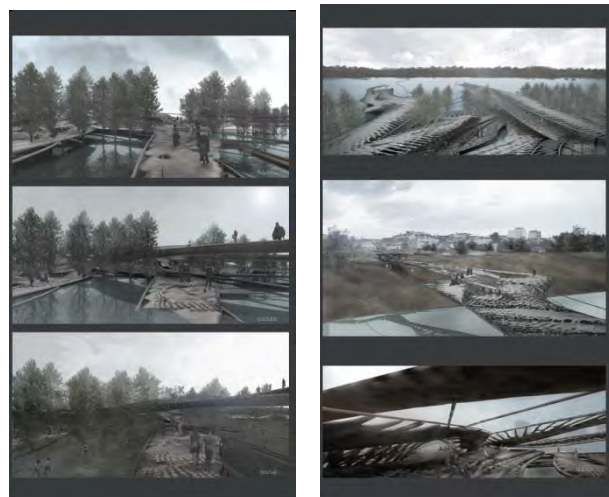

Figure 6. frames on the axes of time and space

5. Educational Implementation

All this reality of transformation is a case observed in the FabLab that is functioning in the city of Ioannina. A space that is addressed to the refugee community that is located in the area of Epirus, the community of the city of Ioannina and the university of Ioannina. It is a proof of concept to be repeated later in other cases of humanitarian crisis, as Palestine.

The point when the technological know-how is combined with the thinking of the machine and is provided to the general public in an open way, is the one that could render it possible to turn the evolution from the dictatorial exploitation of the power of the innovation to a social incorporation and the construction of a contemporary world.

The act of migrations includes all the aspects of eternal transformations. Thus, FabLab Ioannina is restoring a sense of empowerment and inclusion to people who are stuck in transit for indeterminate periods of time, with few intellectual or creative stimuli. Understands the fact of constant transformations be it in the population using the FabLab through the constant relocation of people using the space and the arrival of new users, and also in the lives of people that the skills are provided to. The biggest challenge of the space and the first point that the theoretical analysis was integrated was this understanding of each point of the spatiotemporal grid as a unique moment of instant balance.

Figure 7. educational activities and thinking on locality and technology in FabLab Ioannina

What is happening when a local population interacts with the refugee community and all together understand the world that surrounds them? The locality is perceived as a constantly changing condition. What if people in this condition are called to address their needs and the

needs of the others, by using the local materiality and digital means? Architecture and architectural education is understood in this space as a way to understand the world, as a way of creating for your needs instead of buying, as a way to be connected with a society and interact with it. At the same time, digital means are introduced as a way of easily producing your designs in any part of the world and sharing your way of thinking and providing in an open source way everything that is designed.

It could be defined as the place were the theory about the artificial boundaries that, between the stable and the nomadic, the local and the global, nature people and the machine is more clearly stated.

So, through the FabLab creativity skills are being provided through workshops and knowledge share between tutors and participants. A balance between practical skills, thinking on the making, the machine, the society and the tactile world and cultural interaction and interrelation is achieved. The categories of the workshops include theory and thinking, materiality, create for the others and address your personal needs and design for them.

6. Conclusions

We could point out that architecture in the contemporary unsegmented world is currently called to surpass its limits and explore, experiment and take part in the assemblage.

The transformations that are evoked in material and immaterial elements, as culture, communities, consciousness, are themselves subjects of external relations. In order to understand our era it is essential to understand this complexity, and in order to understand the complexity it is essential to understand what differentiates the current moment from the past.

What is different in the current state of complexity is not the transformation itself but the acceleration and the level of transformation. A

sense of vertigo is provoked that pushes various analysts to seek the return to basic values. Values that were created in a totally different way of understanding the reality and the world.

The intention of making assumptions on the way of evolving, and triggering the thought on the new means and the societal, built and natural environment renders it possible to understand the social and humanitarian side of the evolution.

Is it possible that the robotic systems are integrated in the contemporary world away from the mere exploitation of their power? And which is the role of architectural education in this act? It is a question raised inside the reality where these systems and we belong. A reality that every addition and transformation is causing a series of reflections. An ecological reality that is characterised by interrelated systems of interaction.

Figure 8. general view of a potential local condition

6. Acknowledgements

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Social housing policies in Portugal over the last 25 years - three study cases

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Abstract:

Theory of the Portuguese contemporary of architecture had based fundamental concepts on the answers given to the lacks verified in the 1970s when the Carnation Revolution (1974) happened. In those years, Housing subject was deeply debated among the architects, foreseeing the resolution of the dramatic situation of Portuguese society of that time.
After the SAAL program, launched in the revolutionary period, between 1974 and 1976, other programs were framed, giving continuity to the housing
policies built under the democratic Constitution text (1976). This article
focuses three study cases, presenting the architectural features that resulted from the applications three different political lines. The article aims at reflecting about a temporal arch of 25 years, analyzing as main cases, a new intervention in the outskirt of Lisbon located in Sargento Abílio neighbourhood, the renovation project of the Lagarteiro neighborhood built in the early 70s in the limits of Porto municipality, concluding with an intervention in the historical area of Porto in Tomás Gonzaga street, close to the borders defined by UNESCO as Humanity Heritage.

Keywords: Social Housing; Sargento Abílio; Lagarteiro; Tomás Gonzaga

1. Introduction

This article aims at presenting a vision about Social Housing in Portugal in the last 25 years. To reflect on this theme, three study cases designed by the author of the paper will be presented. Those interventions were projected in different moments, corresponding to different visions and policies about housing. The temporal period which frames the projects can be defined by the demands of the democratic process consolidation, after the entrance of Portugal in the European Union (at the time CEE) in
1986 and the challenges of the present time, featured by the global economy and its effects on the housing policies.

By the time of the Portuguese Carnation Revolution (1974), housing was one of the most important subjects of the social debate in the
1970s. Industrial investments launched in the late 50s under the development programs, resulting from the Marshall plan, implied a rural exodus to the main Portuguese cities namely Lisbon and Porto. In the 70s the situation was dramatic, featured by a large concentration of slums, over occupation and an old housing stock. The situation involved and motivated architects in the resolution of the country necessities, their contribution was relevant to a general conscience that housing should be considered as a fundamental right of all citizens, as it was quoted in the Democratic Constitutional Text of 1976.

In a certain way, the debate and the research about housing made by the architects on the 70s supported the definition of theoretical bases for Portuguese contemporary architecture. Those bases were published as the main subject of several publications of that period, being the issue 'Portugal An 2', published in L'Architecture

d'aujourd'hui in 1976, a remarkable moment of cultural dissemination, and an opportunity for presenting Portuguese architects and their architecture in an international approach.

Figure 1. 'Portugal An 2', in *L'Architecture d'haujoud'hui*, 1976
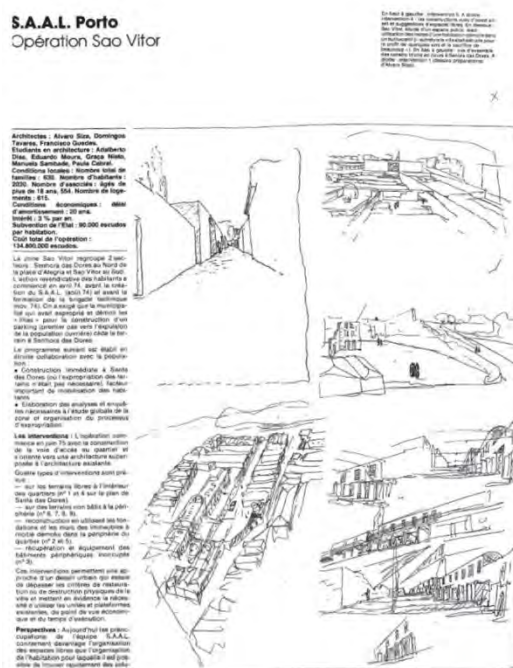

Figure 2. Álvaro Siza, SAAL Porto, Operação São Vitor in 'Portugal An 2', in *L'Architecture d'aujourd'hui*, 1976

Among Fernando Távora, Gonçalo Byrne, Hestnes Ferreira, Vítor Figueredo, was also Álvaro Siza, presented as a prominent figure. Several projects by Siza, integrated in the Ambulatory Support to Local Residents program, so called as SAAL, were published. This public program had been launched in the revolutionary period, between 1974 and 1976 by Nuno Portas when he was the Secretary of State for Housing and Urban Planning, having the participation and involvement of communities as main strategy.

The SAAL created an idealistic sense of realism among Portuguese architects, which can be considered as a tool for understanding people, locations, materials and technical solutions.

2. PER – Special Re-housing Program. Sargento Abílio Neighborhood, Lisbon - 91 dwellings, 1998–2002

After the SAAL program, other public initiatives and programs were launched to solve the housing lacks. Special Re-housing Program (PER) was the biggest and the most relevant one, having as main goal supporting municipalities of Lisbon and Porto metropolitan in slum eradication. Through this program, inhabitants were re-housed in controlled costs dwellings, preferentially in the same areas of the slums. This program was available between1993 and 2003, under the coordination of the INH Housing National Institute (Instituto Nacional de Habitação — now called IHRU).

Namely in Lisbon municipality, PER was used as an opportunity for planning several areas of the city where municipal plots were located, introducing new facilities and connections with the city itself.

Sargento Abílio neighborhood was projected for 91 dwellings under the

PER program in 1998. The intervention plot was located in the middle of heavy infrastructures, such as the old aqueduct from the 18th Century, the regional train line and the urban highways that connect Lisbon with its metropolis. The area had been occupied by temporary houses, which were already demolished when the project was initiated.

Figure 3. Sargento Abílio Neigborhood location. © Google earth

Figure 4. Sargento Abílio Neigborhood before the intervention. © CML archives

Housing cooperatives and private buildings defined the environment of that neighborhood, which had grown in the proximity of Calhariz de Benfica historical cluster. The intervention was based on a clear urban typology created by row blocks and a square, which structured three different types of public space.
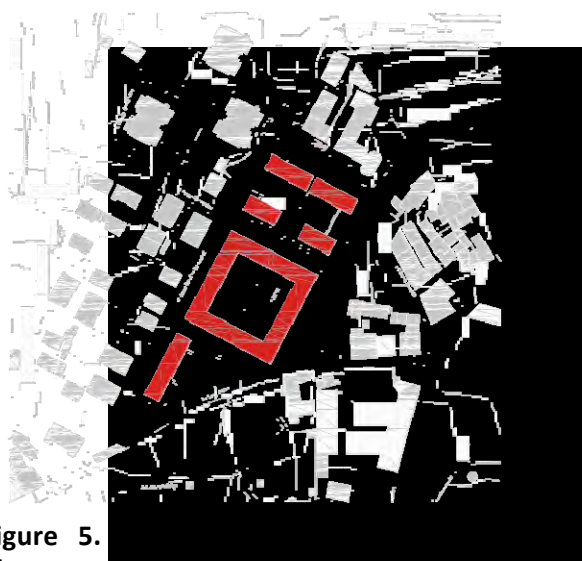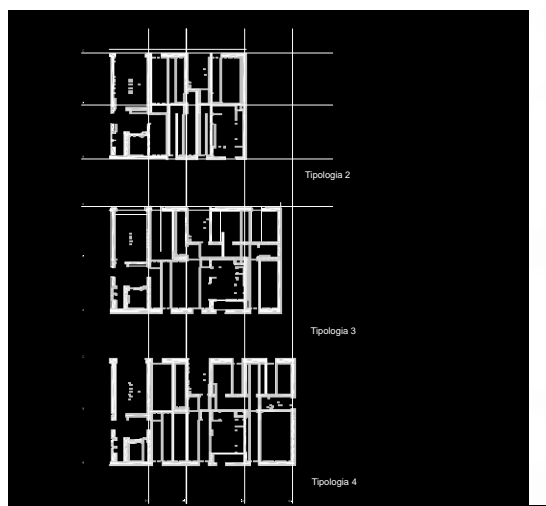
Figure 5. Plan.

Figure 6. Sargento Abílio Neigborhood Plan.

Figure 8. Sargento Abílio Neigborhood typology Plan.

Figure 7. Sargento Abílio Neigborhood during construction. © CML archives

The mediation between surrounding areas and the interior of the blocks was reached by buildings deployment and its architecture, featured by the white tectonic skin in the external relation and by three different colors qualifying the sequence of public space in the core of the intervention.

Housing types were designed giving priority to two-room apartments. This base was enlarged for three and four-room apartments. A simple division between social and intimate areas organized the three types of plans.

Housing buildings were treated as pieces of a domino game, allowing the definition of the urban public space sequence.

Figure 9., 10. and 11. Photos of the Sargento Abílio Neighbourhood.
© F. Oliveira

3. IBC – Critical Neighborhoods Initiative. Lagarteiro Neighborhood Renovation, Porto. 2008–2016

In 2005 the Critical Neighborhoods Initiative program (IBC) was launched with the aim at reverting some shortcomings of the previous processes mostly in terms of participation and integration of communities. The aim of this program, coordinated by the IHRU—Housing and Urban Renewal Institute (Instituto da Habitação e da Reabilitação Urbana), was to define guidelines for interventions in urban areas with critical factors of vulnerability. Three priority cases were defined, two of them located in Lisbon metropolis, the third one was the Lagarteiro neighborhood located in Porto. The program, which involved all the twelve ministries and local agents, aimed at defining a rigorous plan of interventions, which included the rehabilitation of the public space and buildings. It was also foreseen that a social development program would be launched simultaneously.

Lagarteiro neighborhood was built in the early 70s by the municipally, under the same model repeated in several City Hall interventions of that period. By the time of its construction, the neighborhood was included in the Improvement Plan (Plano de Melhoramentos) that the municipality had launched in the late 50s for re-housing people that lived in precarious condition in several worker's houses that existed in the center of the city, so called as 'islands'. Four-storey row buildings, surrounding basic facilities such as a primary school and a sport enclosure, featured those interventions. In Lagareiro case, people were displaced from the city center to the outskirts of the municipality in the East side of Campanhã valley.

Figure 12. Lagarteiro Neighbourhood and the Campanhã valley.©Google Earth

Figure 13. Lagarteiro Neighbourhood in the 1970s. © CMP Archives

Figure 14. Lagarteiro Neighbourhood in 2009. © J.C. Simões

Figure 15. intervention scheme (before and after). © J.C. Simões

The main idea of the intervention was to connect the neighborhood inside itself, and with its surrounding areas. The most demanding part of the project was the surgical intervention in the core of the neighborhood, aiming at introducing a street for connecting both sectors of the cluster separated by different topographic levels.

Natural granitic pavement, both in roads and pathways, was the main material used in the public space renovation. This material establishes a relationship with the concrete walls, projected as a device to control the accidental topography inside the neighborhood. The main interventions in buildings were based in energy efficiency improvement, throughout facades renovation, stairwell closure and roof changed, replacement of all windows and doors, new nets of water, electricity, communications, and gas supply.

Figure 16. Lagarteiro Neighbourhood in 2016. © J.C. Simões

Figure 17. Lagarteiro Neighbourhood entrances, 2016. © J.C. Simões

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4. Housing Renovation at Porto Historical Area. Tomás Gonzaga Street – 8 dwellings Porto 2016-/…

Considering the huge development of the tourist sector in the last few years, Porto municipality decided that social housing investments should be also done in the center of the city as a way to control gentrification and maintain the popular atmosphere of Porto historical areas considered by UNESCO as Humanity Heritage since 1996.

The intervention on Tomás Gonzaga street, still under project phase, is located close to the borders of UNESCO delimitation, in the parish of Miragaia, close to Saint Peter's Church considered National Monument, and the Customs House designed by the French architect Jean-François Colson in 1859.

Figure 18. Porto Humanity Heritage delimitation by UNESCO

Figure 19. Intervention area from the Douro riverfront. © PTP

Vertical narrow buildings built in several layers opened to the Douro river feature Porto façade, as a legacy of the 18th century based on the plan launched by João de Almada e Melo as mayor of the city.

The intervention area integrated several kinds of buildings, some of them in ruins. Looking at the area from the river, a granitic masonry building standing itself, together with a granitic small construction at the bottom of the plot. The intervention was designed aiming at preserving these two buildings.

Two new housing volumes will be settled on each side of the area. Also a multifunctional building was proposed on the limit of the intervention.

Figure 20. Tomás Gonzaga Elevations.

Figure 21. Tomás Gonzaga sections.

The new housing buildings were designed following a grid of granite slabs, which organizes the windows, contributing to emphasize the vertical reading of the set.

The North elevation was composed taking into account some existent elements, and was adjusted to the shape of the proposed volumes. Two-steel grid doors allow reaching the houses entrances, providing visual connections between Tomaz Gonzaga street and the river.

Eight dwellings will be displaced by the plots, some of them designed in duplex. Typologies with one bedroom, living room, kitchen and bathroom are the base of the project.

Figure 22. Project of the model, view from the Douro riverfront. © Renata Sousa

Figure 23. Project of the model view from Tomás Gonzaga Street. © Renata Sousa

5. Conclusion

The study cases presented in this article allow understanding relationships between different conceptions of social housing policies and the way architecture figure out solutions to operate in different contexts and demands. Starting from a new intervention in the outskirt of Lisbon, passing from a renovation project in a neighborhood of the 70s, and concluding with an intervention in the historical area of Porto, a temporal arch was traced showing how social housing programs were managed over the last 25 years in Portugal.

Social housing projects compel architects to work on a low budget, as a condition for discovering essential solutions to solve basic needs of people.

A sense of realism is always present on those interventions. In the Portuguese case, the legacy of the debate, which happened in the period of the 1974 Revolution, allows a continuity of the theoretical discourse about social housing, transforming those programs into a kind of laboratory to rehearse the fundaments of architecture, as such, a good basis to reflect on the 'locality' and 'Modernism' as a contribution to this seminary.

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Middle-Class Mass Housing: rethinking modernity since the sixties (Luanda, Lisbon, Macao)

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Abstract

Between the 1960s and 1980s an expressive number of residential complexes emerged in different Portuguese territories and contexts (including the metropolis and former Portuguese colonies in Africa and Asia). These new neighbourhoods, however, shared a similar matrix: privately developed high-rise buildings aimed at the middle-classes and located in the periphery. This paper stems from a wider research project entitled "Homes for the biggest number: Lisbon, Luanda, Macao" (PTDC/ATP-AQI/3707/2012), and its main intent was to analyse the residential models that were applied in the construction of the peripheries of cities with a Portuguese background from the 1960s onwards, focusing on the role held by middle-class housing in the processes of development of these urban sectors in Portugal, colonial Africa and China. The three cases analysed here (Neighbourhood Unit No. 1 of the Prenda District, Luanda; the Portela Development in Lisbon; and the housing block for relocation promoted by "Sociedade de Turismo e Diversão de Macau" – STDM) take on particular importance due to several reasons: i) the influence each one had on the conception of a replicable model that could be reproduced elsewhere; ii) their considerable size; iii) the high population density they introduced into their respective urban contexts at the time; iv) and its distinctive architectural quality. These characteristics distinguished these developments from the urban forms that had been previously built in their respective cities

Keywords: Portuguese city; Angolan city; Macanese city; Mass Housing; Middle-Class.

1. Introduction

In the post war period, in Luanda, Lisbon and Macao – all cities of Portuguese design and foundation – it was observed the emergence of a number of housing complexes with a shared matrix: high-rise buildings, privately developed, aimed at the middle-classes and located in the periphery. This paper focus on the role held by middle-class housing in Portugal and its former colonies in Africa and Asia (namely Angola and Macao) in the peripheries spread, between the 1960s and 1980s. Particular attention will be given to demographic and population evolution, taking into account the April 1974 revolution, the decolonization process in Angola (with the repatriation of the European population), and the handover of Macao in 1999 with the transition from the colonial government to the People's Republic of China.

The three case-studies: Neighbourhood Unit No. 1 of the Prenda District, Luanda; the Portela Development in Lisbon; and the STDM housing block, Macao, take on particular importance due to four main reasons:

1) the influence each one had on the conception of a model that could be reproduced elsewhere;

2) their considerable size;

3) the high population density;

4) its architectural quality.

The architects Fernão Lopes Simões de Carvalho, Fernando Silva and Manuel Vicente – who designed these housing sets – shared a vast experience in the articulation between public and the private promotion, even if they demonstrated different understandings of the City and Dwelling.

Figure 1. Prenda District, Luanda, Angola [Photo: Isabel Guerra, 2014]

2. The Prenda District, Luanda

In the earlier sixties, Luanda was experiencing a strong population growth as a result of the colonial war (started in 1961) and the emergent European colonization. The urban plan of the Prenda District was elaborated in the Urbanization Office of the City Council (between 1961 and 1963). The bureau was conducted by the arch. Simões de Carvalho, a cities's native who had been an intern in Paris under André Wogenscky supervision. This experience would allow the young Portuguese/Angolan architect to reproduce urban practices and housing solutions performed by Le Corbusier, re-adapted to the Tropical environment of Angola.

The Prenda District was part of a strategy to expand the city to the south. It was intended to encourage private developers to exchange density building rights in downtown, for new building permits on municipal land in suburban areas, with greater potential for high-rise construction. The Council provided the urban plans and the private promoters hired the architecture team. Simões de Carvalho would accept to be part of the design team in order to consolidate a modern pattern as an image of the new residential areas. The new Neighborhood Unit (conceived between 1963 and 1965) would consist of 28 slab blocks and towers. Twenty were built: 3 dwelling and office towers, 2 housing towers, 15 residential slab-blocks, one in height. Three blocks were started and never completed. The equipment that should help

consolidating the neighbourhood was never built, with the exception of school buildings. The process ended with the Angolan independence in 1975. During the colonial period, as slab-blocks and towers were being completed, the European population occupied all the neighborhood. Most of them returned to Portugal, after 1976, leaving the apartments vacant for the African inhabitants. The research main interest was in the postcolonial occupation age.

Today, most of the population identify the presence of the neighborhood in the city as a consequence of the homogeneity that characterize its architecture. They also highlight the proximity to Luanda downtown where is located the most important services. The survey carried out during the research project (2015) showed that it is a renewed neighborhood, with an expressive number of students. The population in general have an academic qualification above the Angolan average (39% say they are attending higher education or hold a university degree). Most have been resident since the end of the civil war (2002). The satisfaction with the building and the neighborhood is always above 65%. Reaching higher rates in relation to the apartment cell where the Corbusian influence is more visible and the climate devices marks its presence.

In the urban design, the architect applied the zoning principles of the Athens Charter introducing – however - more humanized features based on sociological assessments. As a result, urban configurations favourable to socialization - as courts - contrasted with the anonymity associated with high-rise buildings. The implantation was directly related to the family pattern, priming the accommodation of traditional and numerous families in the slab-blocks and assigning towers to singles and couples without children. The Prenda also brought the newness of racial miscegenation, through self-construction plots, making a difference in a colonial city where the African population was segregated in non-planned neighborhoods. Nowadays, the Prenda maintains a strong urban unit, but its modern layout revealed to be permeable to the musseque invasion, a

colonial pre-existence intensified in the postcolonial age.

Figure 2. Portela Development, Lisbon, Portugal

3. The Portela Development, Lisbon

The Portela Development underwent an identical process of urbanization. The lack of qualified housing for the middle-class in the center of Lisbon dictated the occupation of the new periphery, where the neighborhood was built in the earlier seventies. Some conditions reinforced the expansion of the city in the north direction:i) the implementation of a new road system, in the north; ii) the devaluation of rural activities (Lisbon Region Master Plan, 1964); iii) the Tagus River, on the south, which operated as a natural barrier. The new neighborhood was designed to 18,500 inhabitants, distributed by 4,503 apartments. It raised an ideal of a new urbanity for the Portuguese metropolitan middle-classes, inspired by the European models successfully applied since the post-war reconstruction, such as the New Towns movement. The 1974 revolution caught the Portela Development incomplete. The arrival of an uprooted population from the former colonies and the growing demand for housing accelerated the built process and the occupation. The post-revolutionary period also leaded to the loss of some of the urban and constructive principles of the primitive project. However, the new neighborhood remained an important reference for other promoters that began to operate in the region, by the enclosed character justified by the pre-existences of the plan. In Portela, there is no

permeability to the surroundings, consisting of industrial, military and religious facilities, with high potential for segregation.

The option for a centralized commercial plot reflected the difficulties in finding urban references outside the neighbourhood, thereafter it would operate as a uniform unit with a strong identity in the landscape. The slab-blocks and towers maintain as reference ten and thirteen floors. The residential buildings are placed on platforms, disregarding the topography. The proximity of a Catholic seminary in the south area of the plan forced a lower height to the slabs-blocks sited here, generating an exception to the high population density. The façades design followed the International Style principles, already in decline, imposing an abstract configuration with no apparent relation with the interior functions. The option for horizontal stripes, the ceramic lining (used for easy preservation), and the pastel palette, would be recurrent solutions (both technical and aesthetic) in the Lisbon middle-class new districts. The division of the primitive lots, sold by the initial promoter to more than one hundred private companies, made unviable the application of innovative technological built systems. Based on six initial residential typologies designed according to the standard family patterns of the late sixties, a total of a new hundred cell variants were build and sold.

The sociological survey accomplished during the research allowed to identify the main period of occupation, during all the seventies. A "pioneer" group was recognized and described as the initial population. Repatriated people from the former Portuguese African colonies embodied a third of that initial group. This social, economic and cultural background reflected on the personal experiences and neighborhood socialization, and also in the high satisfaction level mainly expressed on living in Portela. 80% of respondents declared enjoying the building. The number rises to 85% when it concerns to the "urbanization".

Figure 3. STDM Housing Block, Macao, China, c. 1984 [Manuel Vicente, Archive]

4. The STDM Housing Block, Macao

The STDM Housing block construction was directly connected with the new gambling regulations promulgated in Macao in the sixties. Its promotion was one of the counterparts of the STDM company for having the casino activities monopoly in this small Asian territory under Portuguese rule. The building was located in the extreme north of the Macanese peninsula, near the frontier with the mainland China. It merged the two mass-housing typologies associated with the modern Macau urban development: the horizontal slab-block (here with eleven floors) and the tower (twenty-six floors). It was divided into three units to host six hundred and twenty-five families in a short-term housing regime. In the slab-block, an interior corridor connects all the housing cells implanted in battery. The tower apartments were clustered around the vertical circulation core. The most apartments basic functional program and

minimum areas are explained by the rehousing primitive STDM agenda. Nine cell variants were accomplished. In the main typology used, balcony served as a transition space between the unique compartment (both room and bedroom) and the sanitary installation. By being the first high-rise building set in the China's frontier, the STDM redesigned the Macao's skyline. Its vertical form printed a new urban periphery, opposite to the primitive historical center sited in the south of Macao, and providing a clear urban visual reference. It also rehabilitated old urban structures, designing the corner or introducing transversal crossings between streets. Here, Manuel Vicente introduced traditional city leitmotifs, handling with the high-rise construction, typical of a periphery context, with a continuous urban front and a commercial arcade, liberating the ground floor of any residential function. The main objective was the establishment of the public space by designing collective use devices. The STDM stood as an "urban monument" promoting itself as a reference in the city.

5. Final Considerartions

I conclude by addressing three points that differentiate the three case studies presented here: a) Their role in the consolidation of an idea of periphery (different in each case); b) The process of construction a district, including urban and architecture design); c) The importance of private value - the residential cell - over collective ones - common and shared spaces. Historical factors help to explain the process of designing, building and occupying the three districts.

1) The operation in Luanda is part of a public initiative (only the urban plan was a technical responsibility of the city council), but all subsequent processes would be delegated to private developers (Precol), in charge of the architectural, construction and marketing activities;

2) Beside the legal and official regulation such as the Lisbon Region Master Plan (yet not approved), Lisbon operation was dominated by private promotion in all other stages;

3) In Macao, the case of STDM points to a very particular specificity. Being a counterpart to the State by a private company, the design process and the decisions taken during the architecture project benefited from the same creative freedom generally associated with public enterprises. The architect thus had carte blanche to test urban and residential solutions that would be unthinkable in a private realm.

The circumstances described above were reflected in the changes undergone during the built process and immediate appropriation of the residential units. Checked that: 1) In the Prenda, the construction process did not result in significant changes to the urban plan or density originally planned; 2) While, in Portela, successive changes during construction led to an increase in density; 3) Already in Macao, the project was built as planned.

These dynamics were reproduced equally in architecture:

a) The delivery of the architectural project in Luanda to the private initiative, although contracting part of the urban design team, would eventually allow changes in the management of interior spaces. In a later stage, the hiring of architects outside from the initial team, would end up compromising the quality of some blocks;

b) In Portela, the abstract façades design – slab-blocks and towers - ensured the homogeneity of the unit, not being externally visible the changes of internal organization of the buildings in relation to the initial project (namely the passage of two apartments for three in the same floor);

c) In STDM there was no change to the initial design before the real estate occupation.

The appropriations and subsequent transformations to the designed and accomplished were essentially felt in the residential cell:

1) In the case of Luanda, the major alteration was the transformation of the collective areas into housing cells, with the introduction of rooms in the elevators voids or the construction of apartments in the mezzanines (intermediate floors) taking advantage of the height in the communal areas of the condominium. These changes respond to the shortage of accommodation that still exists today

in the Angolan capital, which leads to the optimization of all areas;

2) In Portela, the left / right organization thought by the architect often gave way to the introduction of one more apartment per floor, resulting in the transformation of the logic of the residential cell initially thought in function of the solar orientation. These changes occurred during the construction process and are prior to the real estate occupation. Presently there are minimal conservation works (with modernization of the most functional spaces such as bathrooms and kitchens). Exceptionally, there are more complete changes to the structure of the apartments;

3) Changes in STDM are a very recent reality. They result from the alteration of the property regime that allowed the lease and purchase of the apartments and consequent renovation works. Outside, the most visible interventions are the traditional "cages" that habitually parasitize Macanese residential buildings and which began to change the image of the complex in a period close to its initial occupation, continuing until today.

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Cultural rupture in the city of Lisbon:
The early sixties, when architecture finds other artistic expressions: The Third and last Portuguese Modernism.

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Abstract

There was a very specific period in Portuguese culture at the second half of the twentieth century, more accurately at the beginning of the 60's, where artists from different cultural areas came together to create innovative artistic expressions which portrait a time through the "State of the Soul" of the country.

From painters to writers, photographers to sculptors, poets to journalists, they organized their works always depending on the opinions and revelations of others. It was the Third and last Portuguese Modernism. In this work, we connect the architecture filtered in literature which created innovative plastic expressions of the city.

Keywords: Lisbon, Modernism, Culture, Rupture, Artists.

1. The 60's: Third Portuguese Modernism in the 20th century.

The Third and last Portuguese Modernism was based on an extreme metamorphosis, created through direct relations with the profound change that the city of Lisbon had and, simultaneously with the emergence of a new generation of artists who had as references Modernism and Neo-Realism, without however wishing to be bound by these criteria and foundations of Portuguese aesthetics from the beginning until the second half of the twentieth century.

This period begins with the publication of a magazine that marked the time, entitled "Almanaque"[1]. This magazine brought together a whole new artistic generation, not only of writers and poets, but also of photographers, graphic designers, painters, architects, sculptors and filmmakers, forming a new way of observing the country aesthetically. With a strong visual component, this magazine stood out from all other Portuguese artistic expressions, for it had a very strong relation to the seemingly lightened image of things, but with an intense political load. The policy

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[1] Financed by Figueiredo de Magalhães (editor of *Ulisseia*), a total of eighteen issues were published. With facilities located in Chiado, in the centre of Lisbon, the editorial team was coordinated by José Cardoso Pires, attracting an exceptional group of collaborators, among them Alexandre O'Neill, Luís de Sttau Monteiro, Augusto Abelaira, José Cutileiro, João Abel Manta, Baptista-Bastos, Vasco Pulido Valente, etc. The design was ensured by Sebastião Rodrigues, who carried out pioneering work, considered a fundamental landmark of Portuguese graphic design at the time.

of that time was what determined this expression, since all the collaborators were strict and some even recognized activists against the political system in force in the country, of extreme right fascist, headed by the dictator Salazar.

copies of the magazine cover "Almanaque".

The censorship and abolition of any form of art or artistic expression that was considered subversive was one of the government's weapons of action against the forms of manifestation and liberties of citizenship, and these artists had with this plastic expression a direct political intervention and activist.

Some of them were arrested, such as the architect Nuno Teotóneo Pereira, who was one of

the main figures of this innovative artistic expression. A new uneased formalism was expressed plastically in the shapes of his projects. The famous building "Franjinhas" and the "Sagrado Coração de Jesus" Church, built in the centre of Lisbon during this period, express an apparently conflicting aesthetic with the territory and reveal themselves in the surroundings with an intense expressiveness: this relationship with the urban landscape of Lisbon was never peaceful - in fact, the common denominator among those artists was a conflict with the status quo, not only political but also aesthetic.

"Sagrado Coração de Jesus" Church (1962), and "Franjinhas" building (1966), Lisbon, Nuno Teotóneo Pereira

The collection "NOVOS" – novelist series, promoted by Portugália Editora – appeared in that period of time, with two books that would mark the Portuguese society: "O Secreto Adeus" by Baptista-Bastos and "Os Passos em Volta" by Helberto Hélder - both published in 1963. These fictions disclosed original urban expressions, transmitted in Portuguese literature, and are still prominent in the Portuguese literary aesthetics and more, since they helped rethinking other artistic expressions, such as architecture, painting and especially cinema, as it will be explained in the following paragraph.

Cover of the first editions of "O Secreto Adeus", by Baptista-Bastos (1963) and "Os Passos em Volta", by Herberto Helder (1963).

O "Novo Cinema Português"[2] (or New Portuguese Cinema), was the great landmark of the

[2] "Novo Cinema Português" (New Portuguese Cinema) or "Cinema Novo" (New Cinema) is an avant-garde movement of Portuguese cinema that, in the midst of Estado Novo (fascist government), in the 1960s, broke with the current ideology and assumed itself as vanguard, starting a movement that would thrive in the following years. The movement, which involves both fiction and documentary and which extends in the

Portuguese national cinematographic culture in the 20th century, mainly with two films: "Verdes Anos"[3] e "Belarmino"[4].

In the case of "Belarmino", the movie had the close collaboration of the writer Baptista-Bastos, where not only he appears interviewing the interpreter, but he also organized the argument.
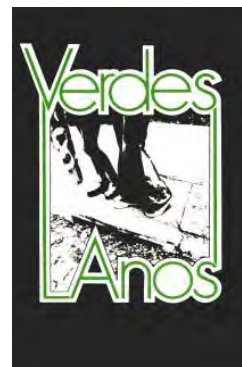
Posters of "Verdes Anos" (1963)

seventies, has proved to be one of the most innovative in the history of Portuguese cinema, arising in a context somewhat similar to what gave rise to "Novo Cinema" (New Cinema movement) in Brazil.

[3] *Os Verdes Anos* (1963) is the first Portuguese film by director Paulo Rocha. It is considered one of the founding films of the so-called "Novo Cinema Português".

[4] *Belarmino* (1964) is a Portuguese full-length documentary directed by Fernando Lopes, about the boxer Belarmino Fragoso. It is one of the first films of the "Novo Cinema Português" generation, inspired by the French *Nouvelle Vague* but always faithful to neo-realism, whose pioneer in Portuguese cinema was Manuel Guimarães in the previous decade. In the case of *Belarmino*, there are evident marks of *Rocco and his Brothers* (1960), by Visconti, in the theme and social context of the problem, and also marks of *Chronique d'un été* (1961) by Jean Rouch, in his approach to documentary filmmaking, through direct cinema using the interview. *Belarmino* is a docufiction in which the interview and the voice off was conducted by the journalist and writer Baptista-Bastos.

Poster of "Belarmino"(1964)

Writers, cinema directors, photographers, sculptors and other artists often met at coffee shops for artistic gatherings at that time. The city was teeming with the paradox of a fascist dictatorship that renounced any form of art that was not contextualized with its politics and this new wave of intellectuals who all met and were devoted anti-government activists, who, regardless of everything, never ceased to express their art form

This is how the Third Portuguese Modernism actively intervened in the change of times in a society that was branded by the absence of free thought. It was a unique moment in art history in Portugal and southern Europe.

5. Conclusions

In this extraordinary and still recent time in the Portuguese cultural spectrum, the plastic expressions gave origin to new cultural identities and revelations of the world. The desperation associated with the hope to change things, transmitted in these works, from literature to architecture, as well as cinema and image, recreated an uneasiness state of being in the Portuguese people in relation to Salazar's fascist regime that was imperative to look for an alternative, an outlet. Instead of fading away, it promoted new forms of revelation expressed in

art, as art cannot be dissociated from improvement in the living conditions of human beings and this was what moved these artists to create wonderful works.

Only art can convey the best of the worst, making us sensible to other visions of the world and things, improving our human condition.

This is what happened in this period, with these people, giving rise to other plastic expressions in contemporary Portuguese literature and architecture, internationally recognized.

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WORKSHOP PRESENTATION

Konstantinidou E., Nicolaou D. , Place and locality vs. Modernism : The case of Lavrion

STUDENTS WORKSHOP INFO

The workshop will take place from 16 to 20 of July 2017 in the Lavrion Technological and Cultural Park (LTCP), the largest industrial archaeological site in Greece, which is located in the homonymous town in south-eastern part of Attica.

[http://www.ltp.ntua.gr]

Participating Institutions

● School of Architecture, National Technical University of Athens, Greece

● School of Architecture, University of Cyprus, Nicosia, Cyprus

● School of Architecture, Aristotle University of Thessaloniki, Greece

● School of Architecture University of Sapienza, Rome, Italy

● School of Architecture, Institute Manuel Teixeira Gomez, Portimão, Portugal ● School   of   Architecture, University of Beira Interior, Covilhã, Portugal

● School of Architecture, Vallès, ETSAV, Barcelona, Spain

Hosted by School of Architecture, National Technical University of Athens

Workshop Organizing Committee (NTUA):

Coordination: Maistrou E. em. professor **Teaching staff** :Ganiatsas V, prof.,Konstantinidou E,assistant Prof. NTUA, Nikolaou D., associate prof. NTUA ,

Participating PhD Students: Karageorgi I., Kouimtzoglou T., Andronikidou E..

WORKSHOP BRIEF

[https://archimedes2017lavrion.wordpress.com/]

The workshop aims to introduce students to the concept of new architectural creation within a Mediterranean region of particular historic and architectural character. Students are asked to create a proposal to upgrade and activate a central area of the city of Lavrion, based on the overall reading of the site and the interpretation of its local and global characteristics.

In this multifaceted, multicultural and vibrant urban, social and architectural context, participating students should detect, trace, perceive, conceptualize, interpret, understand first and subsequently attempt to activate and express in architectural form the local/global aspects, attributes and manifestations characterizing the contemporary town.

The workshop will use as a vehicle architectural design themes focussing on innovative and experimental approaches to local cultural heritage and social problems and will inspect how new technologies and environmental issues can serve creatively the above themes.

THE TOWN OF LAVRION

Lavrion is a seaside town surrounded by a historical site with a large number of important monuments within an especially beautiful and historical environment. The history of the Lavreotiki area is closely related to its rich mineral resources since classical times. Located on a metalliferous land, it was a vibrant centre of mining and metallurgical activities in antiquity until the late first century BCE, when operations ceased and the area was abandoned. Thus, in 1865 the first Franco-Italian mining-metallurgical company, Roux-Serpieri-Fressynet C.E., was established , influencing the growth and architecture of the first centre of heavy industry in Greece, a genuine European port of high traffic and one of the most significant metallurgical centres worldwide. With the metallurgical industry waning at the end of the 20th century, the town has been exploring new possibilities, building upon its cultural and industrial heritage.

The architectural and housing development of Lavrion was largely influenced by its once blooming mining and metallurgical industry. Industrial buildings and facilities were evidently built to accommodate the needs of the companies that operated in the area in addition to the housing of their personnel. In addition, the ensuing economic growth prompted the construction of various elaborate buildings to cater for the religious, cultural and other needs of a flourishing community. Thus, the character of contemporary Lavrion, determined also by more recent interventions, is interestingly blended, with elements echoing its vivid industrial past. In the 19th century, numerous buildings of the popular then neoclassical style were built, among which many survive until today, co-exist harmoniously with the rest of the buildings in the quarter of Kyprianos. The workers' settlement of Kyprianos, was the first experiment of organized construction in Greece, is still inhabited and is proclaimed as a listed monument.

[https://archimedes2017lavrion.wordpress.com/lavrion/]

LAVRION AS A LABORATORY OF CONTESTING THE LOCAL AND THE GLOBAL

The contemporary port town of Lavrion is a most suitable place where the local has been continuously opposing, merging, conflating and contesting with the trans-local Mediterranean, the European and the International imports from early antiquity and still do today. A place where the global in the form of capital, industry, workforce, urban planning and architecture has been contested with the local in a most diversified sense.

Some of the global/local contestation (merged, conflated or still in opposition) can be spotted in:

- The imported mining and metallurgical technology and the local resources.

- The imported international experts and workers from all corners of the Mediterranean and the local inhabitants

- The global typologies of industrial complexes and the local building knowledge.

- The globality of Classicism and Modernism and the local vernacular

- The globality of Mediterranean refugees and the local society

THE SITE

The intervention area is located in the centre of the town of Lavrion and includes:

(A) a historical neoclassical building facing at a square - end of a neoclassical axis of the town , that initially housed the philharmonic of the town and later its cultural centre. The building is today inactive, with no use.

(B) a large-scale enclosed space at the back of the neoclassical building, including various (interesting or not) outbuildings

(C) a small park, connected to the above enclosed space

(D) the roads of the immediate environment linking the intervention area with the sea.

A refugee reception complex, is also located opposite the intervention area.

Methodology:

The workshop will include:

- The identification of the site and its immediate surroundings, expected to provide a series of appropriate uses (design scenarios) towards regenerating the area, facilitating public use and integrating the site to the urban tissue.
- The formation of design principles able to address each of the above proposed design scenarios.

Interpretation by each team should be showcased by providing in an iconographic and sketchy mode a section of the town of their choice that expresses best the coexistence, merging, conflating and still active opposition and contestation of the global to the local place and community. The interpretative scheme should then be deployed in an urban design proposal for an abandoned public place opposite to the refugee camp comprising of a neoclassical complex ,once build for the local philharmonic, its yard and the adjacent park into an integrated multi-cultural center to accommodate cultural activities.

Site Parameters to be explored:

The reading of the site involves different ways related to the "experience" and the "sense" of the place, the historical knowledge, the relation to the city, the built and un-built space, the landscape's natural facts and elements, light, movement, the brief, etc. Each parameter of the "reading" reveals different aspects of space.

Schedule and deliverables

Students will form international groups (one of each university). At the middle of the week all findings will be presented and discussed in class using tools and techniques that express each student. FINAL PRESENTATION will include 4-6 A1 posters and a brief presentation on ppt. Among other material, students are expected to use diagrams, sketches, pictures, texts, draft plans, drawings massing models, perspective collages, mixed techniques etc.

Particular emphasis will be given to the use of Digital Tools as the means of research, analysis and experimentation and students are expected to use their own laptops.

Course Material:

An exclusive internet blog will be used to share educational material, important announcements and for registering the progress of the workshop.

More details and material is available in the workshop's website: https://archimedes2017lavrion.wordpress.com/

STUDENTS WORKSHOP PROGRAM

Time	Saturday, July 15th	Sunday, July 16th	Monday, July 17th	Tuesday, July 18th	Wednesday, July 19th	Thursday, July 20th
09:30 – 11:30		Introduction to the workshop theme, briefing on the subject and the objectives of the workshop.	Studio (working groups)	Studio (working groups)	Studio (working groups)	Studio (working groups)
11:30 – 12:30		Presentation about the area of Lavrion				
12:30 – 13:30		Formation of working groups				
13:30 – 15:00		Lunch break	Lunch break	Lunch break	Lunch break	Lunch break
15:00 – 17:00		Tour in the town /Site visit /mapping	Studio (working groups)	Studio (working groups)	Studio (working groups)	Final presentation of Students Work
17:00 – 19:00		Discussion on collected data, decision of each groups thematic focus. Exchange of views and ideas.		Interim presentation of the development of the work		Evaluation and discussion on the results of the workshop

Place + Locality versus Modernism

_ The case of Lavrion

Elena Konstantinidou[1], Dimitra Nikolaou[2]

School of Architecture NTUA , Assistant professor[1]

School of Architecture NTUA , Associate professor[2]

Abstract

This article is trying to answer the question of how the characteristics of a Mediterranean place can inspire contemporary architectural creation, in both architectural design level and in design of public space, using the dipolo local and global, in other words, place and locality versus Modernism. It is based on the summary record of the expectations, goals and results obtained from an Intensive Workshop under the same subject, that took place in Lavrion, on July, 2017. The Workshop's aim was to introduce students to the concept of new architectural creation within a Mediterranean region of particular historic and architectural character. Considering that the city of Lavrion is a place where GLOBAL AND LOCAL are totally linked, the area of Lavrion was chosen as the place of analysis and intervention. The history of Lavrion, the mining areas the existence of the industry, the port, the modern architectural examples, the multicultural population, the natural landscape, the seafront, the vernacular architecture, all contain both local and global characteristics and constitute the frame work of this analysis.

" *The relation between in an new architectural intervention and a already existing architecture is a phenomenon that changes in relation to the cultural values attributed both to the meaning of historic architecture and to the intentions of the new interventions. Hence it is an enormous mistake to think that one can lay down a permanent doctrine or still less a scientific definition of architectural intervention.*
On the contrary, it is only by understanding in each case the conceptions on the basis of which has been taken that is possible to make out the different characteristics which this relationships has assumed over the course of time" Ignasi de Sola' Morales 'From Contrast to Analogy .Developments in the concept of architectural interventions.' Lotus International No 46. (1)

Keywords: Lavrion,global-local,urban intervention,place,locality,modernism,architecture

1. Introduction

This report is based on the summary record of the expectations, goals and results obtained from the Intensive Workshop on "Place and Locality vs. Modernism-examples of emerging new paradigms in Architectural Design", that took place in Lavrion, on the premises of Lavrion Technological and Cultural Park, 16-20 July, 2017. The Workshop, was part of the Archi-med.es Programme on "Local & Global - Innovative Symbioses in Architectural Education", held by Erasmus+ Program of European Community Funding, supplemented by the subsequent International Conference, hosted by the School of Architecture, National Technical University of Athens, Greece.

2. Workshop brief

The Workshop's aim was to introduce students to the concept of new architectural creation within a Mediterranean region of particular historic and architectural character. Students were asked to create a proposal to upgrade and activate a central area of the city of Lavrion, based on the overall reading of the site and the interpretation of its local and global characteristics.

In this multifaceted, multicultural and vibrant urban, social and architectural context, participating students should first detect, trace, perceive, conceptualize, interpret, understand and subsequently attempt to activate and express in architectural form the local/global aspects, attributes and manifestations characterizing the contemporary town. The workshop used as a vehicle architectural design themes, focusing on innovative and experimental approaches to local cultural heritage and social problems and inspected how new technologies and environmental issues could serve creatively the above themes.

2.1. The Place

Lavrion was the seaside town chosen as study field, an area that comprises a vast and

unequivocal historical and cultural legacy. The history of the Lavreotiki area is closely related to its rich mineral resources since classical times, as it was located on a metalliferous land, being a vibrant centre of mining and metallurgical activities in antiquity until the late first century BCE, when operations ceased and the area was abandoned.

Figure 1. Lavrion (Google Earth)

In 1865 the first Franco-Italian mining-metallurgical company, Roux - Serpieri - Fressynet C.E., was established , influencing the growth and architecture of the first centre of heavy industry in Greece, a genuine European port of high traffic and one of the most significant metallurgical centres worldwide. With the metallurgical industry waning at the end of the 20th century, the town has been exploring new possibilities, building upon its cultural and industrial heritage.

The architectural and housing development of Lavrion was largely influenced by its blooming mining and metallurgical identity, Industrial buildings and facilities were evidently built to accommodate the needs of the companies that operated in the area in addition to the housing of their personnel. In addition, the ensuing

economic growth prompted the construction of various elaborate buildings to cater for the religious, cultural and other needs of a flourishing community.

Thus, the character of contemporary Lavrion, determined also by more recent interventions, is interestingly blended, with elements echoing its vivid industrial past.

The workers' settlement of Kyprianos, was the first experiment of organized construction in Greece, is still inhabited and is proclaimed as a listed monument. In the 19th century, numerous buildings of the popular then neoclassical style were built, among which many survive until today, co-exist harmoniously with the rest of the buildings in the quarter of Kyprianos.

2.2. The globality of Classicism and Modernism and the local vernacular

Although in times of extensive socio-economic development, Lavrion has expanded widely in its urban structure, population and resources, with the discontinuation of mining exploitation, today is mainly a touristic area, having several impasse areas in its central urban tissue and many of used and abandonment of places. Also lacking serious measures of urban revitalization and regeneration in order to reactivate the central zone and recover some of its value and image, equivalent to the one once emblematized.

The long history of Lavreotiki district, its industrial heritage constituting of many, very important in terms of architecture, industrial building blocks and Neoclassical premises ,the overall landscape of the area, the strong element of the seafront and the port, and the lack of an overall planning for the city growth, create a very interesting socio-spatial character of the city ,which was the context of the student's analysis and investigation, during their short stay in the area.

2.3. Lavrion as a laboratory of contesting the local and the global

The contemporary port town of Lavrion is a most suitable place where the local has been continuously opposing, merging, conflating and contesting with the trans-local Mediterranean, the European and the International imports from early antiquity and still do today. A place where the global in the form of capital, industry, workforce, urban planning and architecture has been contested with the local in a most diversified sense.

Concerning Modernity as a mentality, as a normative way of thinking the relationship between a positive programmatic, normative thinking as opposed to the thought that emerges from indigenousness, locality, directness etc. Some of the global/local contestation merged, conflated or still in opposition can be spotted in Lavrion:

- The imported mining and metallurgical technology and the local resources.
- The imported international experts and workers from all corners of the Mediterranean and the local inhabitants
- The global typologies of industrial complexes and the local building knowledge.
- The globality of Classicism and Modernism and the local vernacular
- The globality of Mediterranean refugees and the local society.

2.4. The site

The intervention area was located in the centre of the town of Lavrion, including a historical neoclassical building, initially housed the philharmonic of the town, deactivated today. The building facing at a square – end of a neoclassical axis of the town, containing several establishments and commerce, basically intended to serve tourists. On the back of the neoclassical building is located a large-scale enclosed space with various outbuildings, also a small park, while the roads of the immediate environment links the

intervention area with the sea. A refugee reception complex, is also located opposite the intervention area.
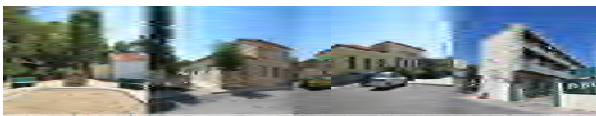

Figure 2. The site (Google Earth)

Figure 3. The area of student's intervention

3. Methodology

The workshop included the identification of the site and its immediate surroundings, expected to provide a series of appropriate uses (design scenarios) towards regenerating the area, facilitating public use and integrating the site to the urban tissue. It also included the formation of design principles able to address each of the above proposed design scenarios.

Interpretation by each team (Students were organized in five mixed groups) should be showcased by providing in an iconographic and sketchy mode a section of the town of their choice that expressed best the coexistence, merging, conflating and still active opposition and contestation of the global to the local place and community. The interpretative scheme should then be deployed in an urban design proposal for an abandoned public place opposite to the refugee camp comprising of a neoclassical complex, once build for the local philharmonic, its yard and the adjacent park into an integrated multi-cultural centre to accommodate cultural activities.

According to the workshop's program, a visit in the area of intervention was scheduled, with students and tutors, in order to clarify all the necessary components for the area "reading". The reading of the site involved different ways related to the "experience" and the "sense" of the place, the historical knowledge, the relation to the city, the built and un-built space, the landscape's natural facts and elements, light, movement, the brief, etc. Each parameter of the "reading" reveals different aspects of space. Also, a number of lectures for the historical evolution of the Lavrion area and the importance of the identity of place , proceeding the duality of global and local has been presented.

The workshop was very intense, the students have been working for 8 ?hours per day in close collaboration with their tutors, in order to fulfill the project requirements. Meanwhile, two student's presentations and discussion have been organized analyzing their projects, the one as an interim and the second presenting the final deliverables .

3.1.Main issues of analysis

The main concern of the students throughout the workshop was the understanding of the city and the needs of the inhabitants and the emergence of the special characteristics of the place. All groups, as we shall see below, focused on Public Spaces through Site Analysis, highlighted the basic problems that concern: Circulation (especially for the pedestrians), Public open spaces without use, Lack of cultural uses, different zones of uses, no visual or physical connection to the sea. Around the complex there are important public open spaces , unconnected to each other and inactive. Today's traffic situation does not encourage pedestrian movements, isolates the public areas and does not favor the connection with the sea. Also, some buildings with their location contribute to this isolation of public spaces. Because of all that facts, this site reacts like a real gap in the city, with a missing identity and no role in it.

4.The projects

 GROUP 1
Staff: Ana Bordalo, Glykeria Anaxagorou, Pere Fuertes.
Students: Rita André, Nastazia Avgoustidou, Mar Esteve, Mariella de Gennaro, Nefeli Lykka, Tiago Rodrigues, Styliana Charitou.
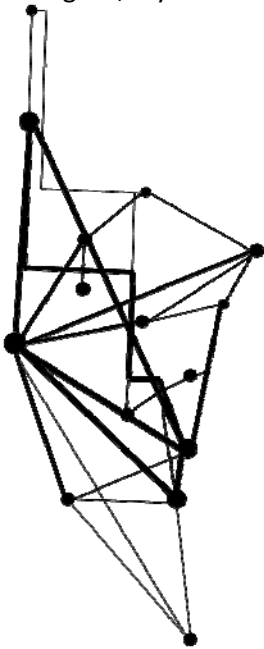

Figure 3. The transmission of public life

 Figure 4. Built areas

 The first group design project entitled "THE TRANSMISSION OF PUBLIC LIFE", suggested design tools in a network of grey spaces (the main outdoor empty - without a use -public spaces in the study area) in order to connect the fragments of the city into a dynamic network of public life. Group suggests their interconnection and activation with different activities: market,

cinema, sports facilities, information centers, creating lightweight structures. The proposal as a strategic intervention, showing modified pictures to suggest its effects on the town center. Students have used the given area as the motor of this re-connection network, linking the grey spaces in order to reveal the potential of the sites and their capacity to spread to other areas.
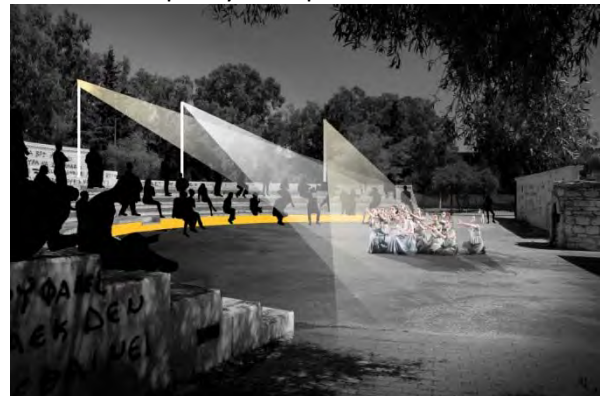
Figure 5. Open air theater

Figure 6. Sport and leisure activities

Figure 7. Exhibition panels

GROUP 2

Staff: Jorge Marum, Christina Matika, Costanza Ottolini.

Students: Martha Topalidou, Tereza Teixera, Panagiota Tziourou, Yeray Sarmiento, Isa Leao, Eduardo Marchese. Emmanuella Bernidaki

Figure 8. Reactivation

The 2nd group identifies open public spaces without use in the study area and points to the absence of collective cultural sites. Their design project entitled "(IN)BETWEEN", was based on two main principles, the "reactivation" of Lavrion's urban public space and "revitalizion" of the existing prominent buildings through multifunctionality. They create a core where different uses coexist and interact, referring to families, children, elderly people, tourists and visitors, through the commercial, cultural, green spaces and accommodation uses on the plot.

The proposal includes the "reshape" of the geometry of the site, the transform of the road (main axis) into a pedestrian path, the development of a local market with traditional products (stable or ephemeral structures) and the creation of covered passages, a galleria where could also host activities like festivals, bazaars and common kitchen. These light constructions "unify" the free spaces and activate and house activities, referring to the industrial forms , typology and characteristics of Lavrion. The existing buildings are preserved and given cultural character, there is an open green space for children.

Figure 9. Using the historical identity

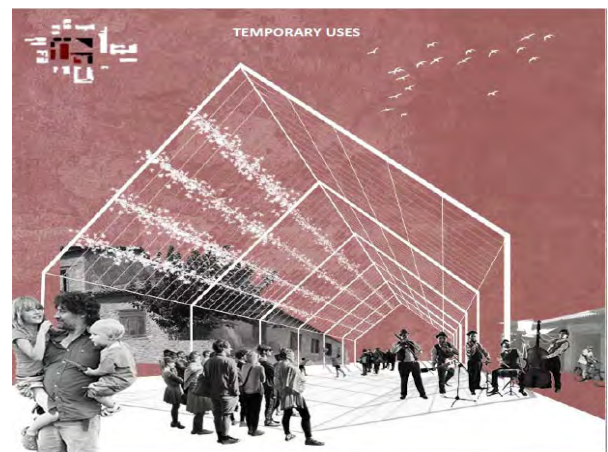**Figure 10.**New Landmarks

Figure 11. Temporary uses

GROUP 3

Staff: Eva Andronikidou, Fernando, Diniz Filippo Battaglia.

Students: Liiliana Branco, Xenia Dimoka, Josep Oliver, Anna Claudia Dionne, Andreia Domingos Freire, Iris Moustaka.

Figure 12. Walking gallery

The 3nd group identifies the existing uses, connections, open spaces, the qualities (points of interest to be connected) of the place and the elements that constitute obstacles to the development of the site. Their design project entitled "WALKING GALLERY", propose a masterplan with an auditorium, a mining centre - mining exhibitions place, places for workshops, a live museum for crafftmanship, a hostel for young scientists.

A series of successive frames forming a "gallery", a linear element that connects points of interest. This tunnel of frames becomes less dense in points to allow way out and movement through it. The main gallery connecting the central commercial axis of the city to the sea. The second gallery is a way through the industrial past of the city . These light constructions indicate movement axes / galleries, connect important points and accommodate uses.

Proposal also suggests the demolition of some buildings for the unification of the sites and their interconnection with the city and the sea front.
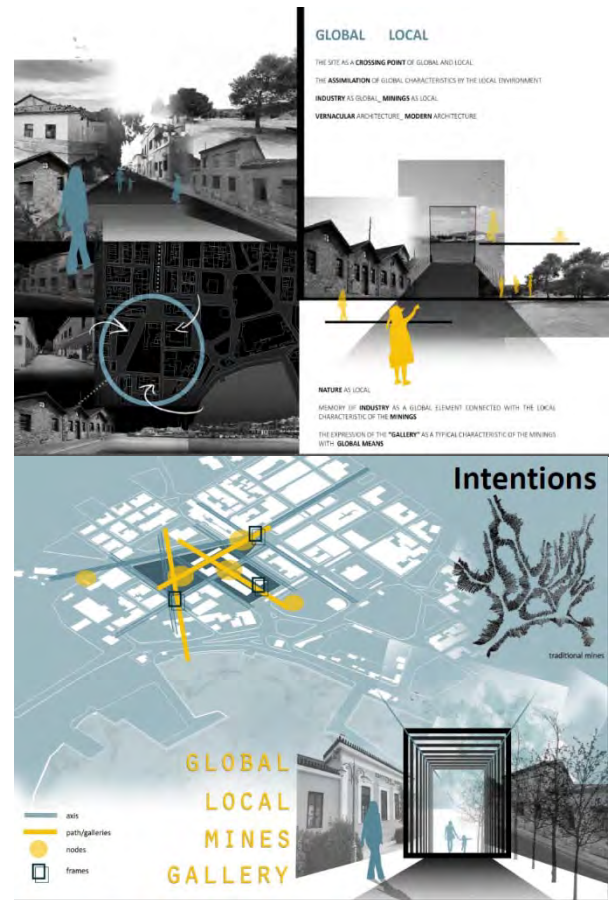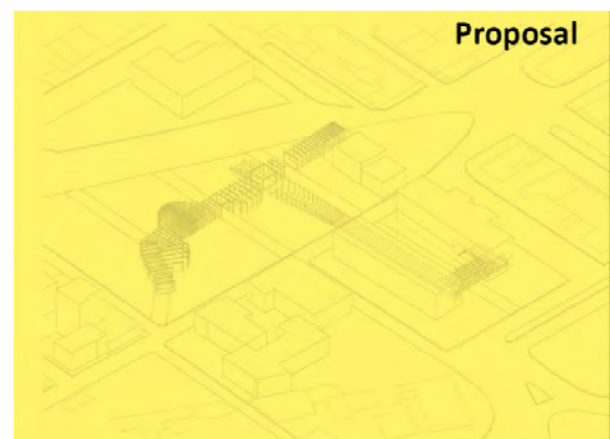

Figure 13. Global/Local -Intentions

Figure 14. Proposal-Walking gallery

GROUP 4

Staff: Antonis Moras, Irene Karagiorgi,Raimon Fare Moretto.
Students: Larisa Chagas Cardoso, Costantinos Katsabas, Artemis Kyriakou, Elisabet Farre, Simone Leoni, Jade Phillips, Renos Palapanis.

Figure 15. The Melting pot

The 4th group identifies the material and intangible features of the place, intending to reveal them, studies the movements in space and proposes the construction of standardized units which will accommodate various activities in the area. Their design project entitled "MELTING POT" aimed to create a multi-functional and multi-purpose proposal, bringing together a variety of activities in a versatile landscape. The site appeal to diverse groups of people, offering a plethora of activities and spaces for many levels of interaction. The Melting pot aims to be a paradigm of inclusion, an "alloe", a meeting point and common ground based on aspects of the topos with the local and non-local appeal.

The main points of the intervention include the reorganization of the traffic and accessibility of the surrounding area, the introduction of a building program that includes learning, teaching, producing and selling activities. They also suggest different typologies of the proposed units (the enclosed open space, the full block , the pass-through (botega).

The proposal, as an urban intervention, extends the grids of the city in the site, forming a system of fixed points where pillar - like lamps are placed. In between free space is provided for movement and activities to be developed.
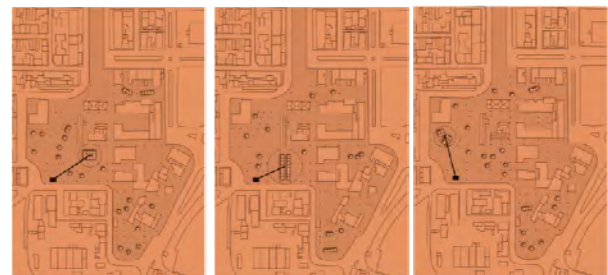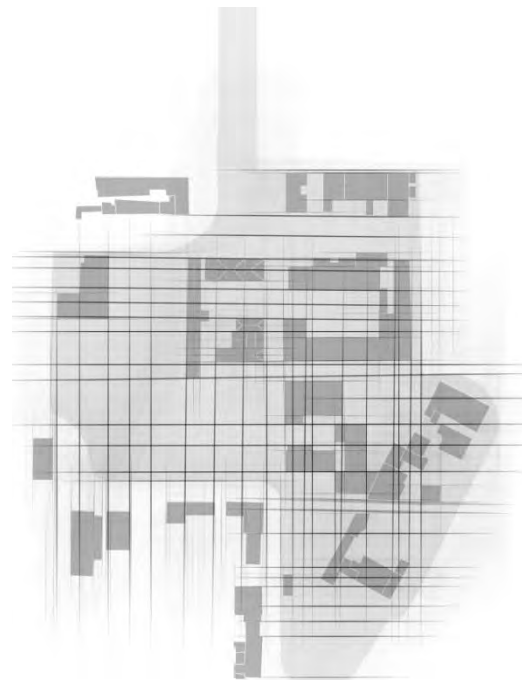

Figure 16. Proposal-a grid, a prospect, a promise, a guideline.

GROUP 5
Staff:Timos Kouimtzoglou, Sandra Morgado Neto, Kyriazis George.
Students: Miriam Robles., Kum Il Choe, Rui Miguel Ferreira, Nastasia Georgiadi, Kalypso Mavromati, Nectarios Pisimisis, Aristotelis Kaleris.

Figure 17. Seed of connection

The 5th group design proposal launches an urban intervention strategy, within the framework of the "SEED OF CONNECTION" concept, making it possible to connect the fragments of the urban tissue within a perspective of integrated growth and identity of the city, starting from a central nucleus worked in the plan of the general revitalization of the zone, particularly connectable with all the important points of the city. As if it were a rhizome, architectural elements and objects can be able to open passages and accesses, restore connections and repeat certain urban "tools" that can be repeated and implemented elsewhere in the city, thus creating a potential network of regeneration, non-finite, adaptable to time and place, but also in relation with globality.

The masterplan describes pedestrian fluxes, main areas of activity, the architectural gestures concerning the existing buildings and future variations of opportunities and site potentials. The masterplan is based on the previous tools. Visibility, circulation and function connections are depicted.   The final proposal introduces the demolition of some buildings and replace them with light permeable structures / galleries.

Analysis of the site

Figure 18. Analysis of the site. Site focus and site potential and opportunities
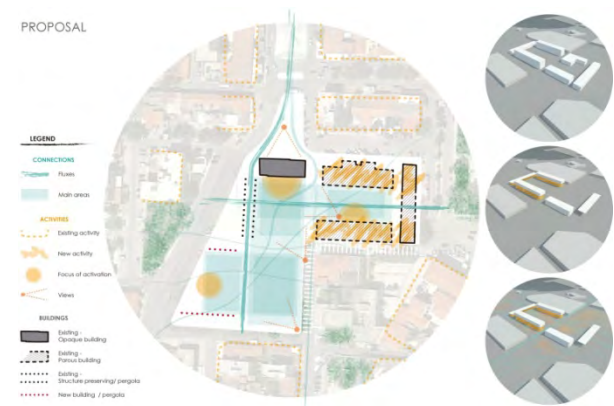

Figure 19. Proposal-Master plan of the area

Figure 20. Collage

4.1.Main issues results

All groups tried to conceptualize the hidden potentials of the place and make the best use of these, producing small gestures of locality. The luck of connectivity of different public spaces appears as a big problem so they have tried to found new ways to connect the open spaces.

Projects were based on two main principles, the REACTIVATION of Lavrion's urban public space articulating the residential and commercial areas of the site, with the seafront and the REHABILITATION of the existing prominent buildings that preserves the collective memory of Lavrion and its past regarding the mining exploration.

The proposals concern the functional activation and visual interconnection of public spaces that are now isolated, also interventions in buildings, in order create an alive, active, multifunctional meeting space for the residents of the city. At the same time, the aim is to interconnect the free spaces with the neighborhoods of the city, highlighting the special characteristics of the place.

Changes are proposed in the current traffic situation to enhance pedestrian and coastal walks as well as ην existing building uses. Lightweight structures are also proposed to provide new opportunities for new activities, provide flexibility for outdoor use and create poles of interest, while new technologies are a key tool in some proposals. Art workshops, exhibitions and sales, commercial activities, shows, musical events, gastronomy, services for residents, are some of the activities that can be developed in the area.

Summarizing the proposals, a synchronic or contested image of the city is used, like a trade mark to rejuvenate the city with an image which is familiar, local and diachronic and can be reorganized all over the city, and this could be described as a figurative procedure.

Also, in order to connect the fragments of the city students proposed a dynamic network of possible connections among different kinds of city fragments ,a dynamic network of public life that seems to be a kind of functional procedure.

The idea of the gallery, referring to this underground space , close related with the mining history of Lavrion, has been transformed, placed over ground, on surface and is used as a tool to accommodate different uses a conceptual and symbolic procedure.

The intervention area has been also conceived as a unified space, like an archipelago, in which the existing buildings are floating. Introducing a new grid, giving order in a disorder and diffused system, using a grid of pillars for electricity to unify the whole system.

Looking for the seed of connection, connection itself can establish as a tool of connectivity, using porosity and articulations. Emphasis is given in depicting important elements such as connections with the surrounding fragments and reuse of the existing buildings of the site.

In such a short time, the students have try to go through the Genius Loci of the site, unveil hidden potentials, generate a strategic procedure and form recommendations for the place .

5.Conclusions

In order to answer the question of how the characteristics of a Mediterranean place can inspire contemporary architectural creation in both architectural design level and in design of public space, the area of Lavrion was chosen as the place of intervention.

Through this workshop we had the opportunity, to see how the students have been inspired by the place, what they have conceived as problems, what kind of analysis and evaluation of its local and global characteristics they have done.

Our objective was not to arrive to glamorous architectural scenarios, in order to regenerate the place, but students and teachers to work together, developing ideas rather that to develop deliverables.

Doing this, housing and leisure activities , open spaces and new constructions, based on materiality and memory ideas, lies as an interesting attempt to revitalize Lavrion's identity

Although, basic intentions, included conceptualization of proposals, derive from the local context, the creation of literal and specific ideas, that are inspired by the "nature" of the topos, have a local as well as a global appeal.

Thus, students defined their understanding of the local elements of the place using more global aspects of analysis, such as open and unbuilt spaces, pedestrian ways, circulation axis, connections, buildings uses ,formal characteristics e.tc.

Exploring a kind of strategic intervention, as the final presentation shows, the students have focused on explaining the proposal showing modified pictures to suggest its effects on the town center. Using the given area as the motor of creating   a re-connection network, linking the problematic spaces in order to reveal the potential of the sites and their capacity to spread all over the place. Their mmethodology was global tools can't be considered as global but rather local as they have been determined in the local conditions of this particular area of Lavrio and only this, as each area has its own characteristics and its own potentials to provide.

Students tabled a number of different but complementary proposals, offering ideas that can be combined and form a single proposal. These are small gestures that do not cause significant reversals to the existing structured environment but enhance activities in the open-air public space of the city, as these are a key feature of the Mediterranean cities and settlements.

As a conclusion we can say that the city of Lavrion we can consider GLOBAL AND LOCAL as totally linked. The existence of the industry, the port of Lavrion, the modern architectural examples that can be detected and mostly the multicultural population contain also local characteristics such as mining areas , the natural landscape and the seafront, the vernacular architecture. We can mention that global and local co-exist, synthesize the whole image of Lavrion and can be detected on specific points of view. GLOBAL AND LOCAL ALWAYS were TOGETHER, and hard to distinguish.

But again, is this the appropriate method and way to teach in order to answer about the question of global and local? A basic question that emerged during this workshop was: "Is this the right way to understand the relationship between the notions of local-global in an approach to the territory of Lavrion?

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