PROCEEDINGS

ARCHITECTURE, ARCHAEOLOGY AND CONTEMPORARY CITY PLANNING

"State of knowledge in the digital age"

VALENCIA
18-20th May 2015

Valencia, Spain
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editors:
Giorgio Verdiani
Per Cornell
Pablo Rodriguez-Navarro

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ARCHITECTURE, ARCHAEOLOGY AND CONTEMPORARY CITY PLANNING
"State of knowledge in the digital age"

The workshop took place in Valencia, Valencia, Camino de Vera, Universitat Politècnica de València, School of Building Engineering (Escuela Técnica Superior de Ingeniería de Edificación) Building 1C, first floor, boardroom.

Workshop organizing committee:
Pablo Rodriguez Navarro, Giorgio Verdiani, Per Cornell

The workshop has been realized in collaboration between Universitat Politècnica de València, Spain, the Architecture Department of the Florence University, Italy, the Department of Historical Studies, University of Gothenburg, Sweden.

Proceedings Editors: Pablo Rodriguez Navarro, Giorgio Verdiani, Per Cornell
rodriguez@upv.es / giorgio.verdiani@unifi.it / per.cornell@archaeology.gu.se

Scientists participating at the workshop:
Pedro M. Cabezos-Bernal, Juan J. Cisneros-Vivó, Per Cornell, Víctor Gamero Bernal, Paolo Formaglini, Filippo Giansanti, Enrico Tomassini, James Dixon, Anna Frascari, Angela Mancuso, Alessandro Camiz, Santiago Lillo Giner, Liisa Seppänen, Per Cornell, Stefan Larsson, Gianluca Belli, Silvia D'Andrea, Rafael Marín Sánchez, Indalecio Pozo Martínez, Giorgio Verdiani, Iacopo Giannini, Matteo Scamporrino, Liisa Seppänen, M. Teresa Gil Piqueras, Pia Englund, Anna Frank, Francisco Juan Vidal.

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WORKSHOP PRESENTATION

In discussions on urbanism, the need to involve new actors has been a major theme of recent debate. In this field, throughout Europe, various ways of allowing citizens to take a more direct part in planning is stressed. It is also important to look at the role or lack of role played by particular research fields. Architecture plays a major role in city planning. While archaeology has become increasingly involved in field projects in urban environments, the discipline seldom plays an important role in city planning. In several countries and particular cities this situation has been questioned during the last decades.

In Sweden, certain studies indicate an increased interest in an active involvement of archaeology from the part of individual municipalities and provincial governments, and even on the state level in certain cases.
In France, Lavendhomme at Inrap has discussed various possible new kinds of uses of archaeology in the planning process, and similar discussions start to appear in other countries. In the UK, archaeologists are increasingly involved in mitigating heritage impacts of building projects at the design stage rather than during construction (excavating).
To take just one example, in Sweden the archaeologist Stefan Larsson has developed a project with the municipality of Kalmar, in which city planners, architects and archaeologists collaborate in making suggestions for a city plan in a segment of the city.

In this workshop we will focus on possible new ways of collaboration between architects and archaeologists. We wish to open a new kind of communication between these research fields and related praxis.
The urban process creates complex physical and social environments. The series of meetings between scholars to which these proceedings belong have right now explored three towns: Gothebourg, Firenze and Valencia. These three explorative and briefly discussed examples, gave the occasion to measure ideas and theories with three cities in different countries and settings, and with different historical trajectories, the way the urban landscape is formed and changed has been analysed. The role of particular larger intentional projects and their design and imagery is one of the factors discussed, but also other variables has been addressed. The idea and use of the metaphor of the organic, and its varied applications and effects is in the centre of attention.

The reading of the context is now more complex than ever. Our time had been quickly populated with the presence of the past, from the recognization of ancient traces to the recent industrial residuals: the migration of production processes, their variation, switching to new procedures in favour of changing needs and new requirements to restore healthier environments, led to the creation, within about a century, a substantial change in the urban asset. A change that on principle has led natural or agricultural areas to be included into large and small cities, sometimes becoming places of abandonment and decay in a time shorter than a lifetime. The potential comprehension of the past and reuse the opportunity of reuse for abandoned spaces only sometimes takes place in an

appropriate form, in many cases meet instead stagnation, the completing of a transformation into non-place that brings these spaces to shrink and disappear from perception.

The possible contributions from archaeology include questions of conservation, diffusion of archaeological knowledge by different means, but also other fields, including practical knowledge on the development of particular districts over time, general knowledge in comparative studies of urbanism, questions of design or questions of "gestalt" in urban settings, and the intersections between archaeology, architecture and public art.

We hope this workshop will help to open this field, and that it will be followed by other scholarly meetings on more limited particular cases and questions and, potentially, by a larger conference building on the workshop's outcomes.

Per Cornell
Pablo Rodriguez-Navarro
Giorgio Verdiani

PROCEEDINGS

TOWNS AS HISTORICAL PROCESS, TRACES AND STRATIGRAPHY

Per Cornell* & Stefan Larsson**
* Department of Historical Studies, University of Gothenburg, Sweden
**The Archaeologists, National Historical Museums (SHMM), Sweden

Abstract: Insisting on a processual view on the socio-economic and the historical, the potential of such an approach will be discussed. The larger general process is of great importance, but in order to improve the general scheme, the micro-level is a good starting point in analysis.
At another methodological level a processual and micro-archaeological approach can play a role also in archaeological fieldwork, and in particular when addressing complex stratigraphy.
Documentation in archaeology has changed considerably over the last couple of decades through the introduction of digital methodology, which today offers a wide range of interesting possibilities in archaeological fieldwork and analysis.
The use of total stations, GPS-stations, and advanced GIS-based software has deeply transformed fieldwork. Today geo-referenced photography is becoming a new digital tool for archaeology including structure to motion and other techniques. Digital scanning also offers new possibilities, in particular in relation to buildings. Still, however, the possibility of thinking process in relation to image is a challenge, and this question needs further attention.

Keywords: Architecture, Archaeology, Historical Process, Traces, Towns.

Even in major change, in a rather dramatic permutation of a given larger urban setting, older monuments and practices are often important elements. When it comes to the monumental, these tendencies are often fairly strong. There is often a certain degree of re-connection to selected older monuments, and a certain tendency to iteration of ancient themes or forms. Thus, both temporisation and spacing are of major importance in any discussion on towns and cities. In this article we extend on some discussions in the first AACCP volume from 2014.

We hope the discussion will continue at future AACCP events and, of course, in other contexts and arenas.

The present always must be what matters most to humans and the social situations in which we live. The frame of the generation is always an important point of reference in our lives. Not least existential and phenomenological discussion has helped us to see this. But what is actually the present? Does it really make sense to reduce the present to a simple and straightforward entity in front of us, at the moment of now? To Edmund Husserl (2001) the ”outside time” is key. There is in a human “inner dialogue” both a *now* here, as well as a *protention* (a “forward-thinking”) and a *retention* (a “memory”), all occurring “simultaneously”, outside time. This is the pre-condition for a true (and pure) intention; in Husserl’s phenomenology, intention is a key. It is only through intention, a perception and meaning can come about. For such a perception to take place, with no external influence, the dialogue occurring within the individual subject must be a-temporal. This is a problem to Husserl, and Jacques Derrida shows how this creates a certain lack of consistency or coherence in Husserl’s study. As Derrida has pointed to out, the present is not a simple and straightforward phenomenon. From these points of incoherence, Derrida builds another perspective (1967a, b). One of the main problems in Husserl is, then, that the signified concept is never present in itself and of itself, in a sufficient presence that would refer to itself. To Derrida, *the temporal* must be in focus. There is always a *trace*,

the trace in its most universal form, and this trace gives the possibility of a process of life and meaning. Thus, a world is implicated by the movement of time, by temporality.

The present is never self-explicative, it cannot operate without elements and traces and elements from other earlier occurrences. The present is never simple and straightforward in its composition, rather highly intricate and complex. In order to avoid misunderstanding, it is necessary to stress that insisting on the relevance of complexity does not exclude the search for large scale connections, even kinds of "totalities" which will emerge inside a field of complexity. What interests us here is mainly to look at how heterogeneous elements may form part of particular spatio/temporal settings. In a certain sense, repetition and re-connection is what establishes place, what gives it a kind of effect beyond any particular socio-cultural present.

Subaltern life and the question of history

The 16th century still remains a basic referent in our times, for god and for bad. It is the time of More's Utopia (c. 1516), which is, actually the dream of the town as a solution to contemporary problems. But it was also described by More as an explicit colonial project. The 16th century also sees the beginning of the Spanish colonial town in the Americas (inspired from many different fields and cultural contexts), the first grand-scale attempt to impose a grid-iron model as a general solution to human spatiality, with far-reaching consequences (cf. Stanislawski 1947, Hardoy 178, Kubler 1978, Socolow 1981, Gonzales-Aragón 1993, Rose-Redwood 2008). Looking at the colonial setting is instructive for getting at more general aspects of the Early Modern and the bases of our contemporary urban thinking. In this setting the question of many dimensions to time becomes crucial, and the capacity to see one of the roads to the new as the result of (complex, at times violent) encounters.

Hayes (2015) interestingly problematizes concepts like diaspora and indigeneity. There are varied positions as to these complex issues within the field of postcolonial debate. To summarise briefly, scholars like Gayatri Chakravorty Spivak (1999) stress the difficulty to communicate from the colonised to the coloniser, which she summarised in her famous words that the subaltern cannot speak. Homi Bhabha (1994), on the other hand, has a somewhat less negative position, in which there may be a kind of "third space of enunciation", in which there is a kind of communication between the colonised and the coloniser, albeit through indirect means, not necessarily based on an actual understanding, but rather based on observations on socio-cultural effects.

The evident question arising from the postcolonial debate is certainly one concerning the question of what history could be. If there were no communication, as Spivak insists, it is difficult or at least not easy and straightforward to write a unified history for the colonial period. If there can be a general history – and we tend to be inclined to think there is, in the sense of being about all humans - it must include conflict, difference and variability as parts of the historical process. However, the logics of such a history should not be limited to one set of actors or social settings, but rather focus on the results of interactions or lack of interactions between different social settings (cf. Badiou 2006, Cornell 2007).

We do believe concepts like Feudalism or Capitalism may have a value when discussing certain kinds of colonial settings, like those of the Americas in the 16th and the 17th centuries. We even think these concepts may correspond to particular processual tendencies (cf. Bois 1976, Wickham 2007, Roskams 2006, Godelier 1972). But these tendencies operate on a complex set of settings, which cannot be *reduced* to these processes. We address something similar to the idea of critical temporalities, discussed by Hayes and Cipolla (2015).

Thus, we must be prepared to find other kinds of social realities, which may consti-

tute entities that escape most of the social theory tool-box concepts available at present. As discussed by Simone de Beauvoir (1949a, b), the other is largely a definition of the suppressed.[1] There is a need to look for the new, which escapes the official definition of the other. The French philosopher Jacques Derrida, who developed interesting discussions on the concept of time and Other, urged us to remember that it is not sufficient to make a repository of catalogued examples of the "official" other.

There is, in his discussion a difference between the other, as defined as something of a potential enemy, and Other as the unknown, that which we do not know (Derrida 1967, 2000). What he addresses is the *unexpected*, l'objet trouvé (in Picasso's words) – and the continued relevance of such unexpected encounters and their importance for any historical development (cf. Marder 2009).

Subject and time: Derrida reading Husserl

In order to understand better our argument, a brief discussion on time in Derrida is necessary. Among Derrida's early studies, some works on the German philosopher Edmund Husserl (1859-1938) stand out. These include Derrida's dissertation from 1954, *The Problem of Genesis in Husserl's philosophy*, which was only published much later. Also, an introduction to a French publication of Husserl's *Origin of Geometry*, published in 1962. Further, the well-known study *Voice and phenomenon* (*La Voix et le phénomene*), originally published as a book in 1967a (and one Derrida said he particularly liked, cf. e.g. Positions 1972). Voice and Phenomenon is a detailed reading of Part I of Husserl's Logical Investigations (*Logische Untersuchungen*, originally published in 1900, Husserl 2001). Husserl is one of the most important names in 20th century philosophy, influencing various currents in philosophy and science in general. His profound work on what perception is interested Derrida. From a close reading of

Figure 1 - Excavations in the Old Town district of Gothenburg 2015, with remains of the 16th Century town Nya Lödöse, photo Markus Andersson. Courtesy of the Nya Lödöse Project, Christina Rosén.

Husserl, Derrida succeeded to identify interesting ways of addressing the problems involved, but in a way departing from Husserl, working out a new track. What he is doing is not a phenomenology, Derrida insists, but neither is it *against* phenomenology.

Derrida's study on the *Voice and the Phenomenon* is largely concerned with the concepts of sign, understanding, meaning, and intention and the use of these terms in Husserl's work. Derrida largely focuses on the terms indication (*Anzeichen*) and expression (*Ausdruck*), as used by Husserl. Indication should be the arbitrary use of a sign, while expression is linked to another level, a *Bedeutung*. An arbitrary use of a sign carries no deeper meaning in itself. But it may, in certain situations, be used to stand for something, a sort of "belief". To Husserl this difference is important, because he relates *Ausdruck* to the process of individual human perception.

Husserl asserts that pure expression only exists in the voice; other ways of "expression", e.g. through gestures, lack Bedeutung. Put in very simple terms, Husserl is interested in how an individual subject perceives/gets a meaning of the surroundings, through an "*eidetic*" act of inner dialogue, which iden-

tifies the intended object (*noema*). In a way, it is a kind of purifying act, which produces the idealized object. Thus, to Husserl, the individual subject makes an observation through an inner dialogue within, a "hearing of one-self", a silent voice inside the subject. The subject remains identical, the same, all through the process. This is what Husserl seemed to conceive as a "pure" dialogue, in which the "surroundings" have no interference. In such an internal dialogue, there are only "expressive" signs, with *Bedeutung*, no indicative signs, according to Husserl. Derrida questions Husserl on this point and in an elaborate argument tries to demonstrate that there can be no such "pure" expressive "inner talking"; there will always be a "contaminating" indicative element (cf. Hägglund 2002, Derrida 1967a,b).

To Husserl, as mentioned previously, there is in a human "inner dialogue" both a *now*, as well as a *protention* (a "forward-thinking") and a *retention* (a "memory"), all occurring "simultaneously", outside time. This is the pre-condition for a true (and pure) intention. In Husserl's phenomenology, intention is a key. A perception and meaning can only come about through intention. For such a perception to take place, with no external influence, the dialogue occurring within the individual subject must be a-temporal. This is a problem to Husserl, and Derrida shows how this creates a certain lack of consistency or coherence in Husserl's study. From these points of incoherence, Derrida builds another perspective. One of the main problems in Husserl is, then, that the signified concept is never present in itself and of itself, in a sufficient presence that would refer to itself. To Derrida, *the temporal* must be in focus. There is always a *trace*, "/.../ the trace in its most universal form/.../"Derrida 1967b:134, and this trace gives the possibility of a process of life and meaning. Thus, a world is implicated by the movement of time, by temporality (Derrida 1967b:156).

The living now of the self is originally a trace. The trace is not an attribute, and we cannot say that the living now of the self "originally" would be a trace. It is necessary to think the origin departing from the trace, not vice-versa. (Derrida 1967:158)

To Derrida no observation can take place outside a field of *general text* (and this word should be taken in a very broad sense, including a wide array of forms of communication, and ways through which human signs may have effects; in its widest sense, it is everything socio-cultural). There is, to Derrida, a gap that differentiates the subject from itself, me from myself; a gap without which I would not be a hearer *as well as* a speaker. This gap also "makes up" the trace, certain iteration. This repetition is found in the very moment of hearing-myself-speak (cf. Derrida 1967b:136, Lawlor 2002). To Derrida these reflections have far-reaching consequences; one of them is to make the limit between one "subject" and another much less sharp. Another linked theme is that the "inner" and "outer" worlds no longer can be easily separated (Derrida 1967b:120, 158). It is not necessary, Derrida argues, to know who an I is in a given text, in order to "understand" the word. While Husserl asserts that such a word would have lost its "normal meaning", Derrida stresses a sort of meaning of the I of the given text, beyond a knowledge of the speaking living subject (Derrida 1967b:172-173).

Derrida's complicated relation to Husserl and his phenomenology passed through two main stages, as understood by Marsden. The first phase corresponds to what was sketched above; the ambiguous position of "intentionality", not entirely within consciousness, nor entirely outside. This means that the "eidetic" object will always be derailed from the subject's intentional acts. This means that to any perception there is a "subjectively" loaded part (Derrida prefers to call this a signature), and a much more open social part. The second phase somewhat changes the focus of the argument, and introduces the notion of the ghost, or spectre. The ghost is the excess that goes beyond consciousness

and, in Marsden's words, which affects the conscious subject "with the intentionality of the thing itself" (Marsden 2010:35).
In order to continue our discussion on Derrida, it will be necessary to take a brief look at Of Grammatology and Writing and Difference.

Temporisation and spacing – the question of trace

De la grammatologie (1964-1965), was published in book format in 1967a, but was largely based on some articles published in the journal Critique in 1965 and 1966. In these early articles, the concept of *différance* makes its first appearance. In 1968, Derrida gave a paper on the concept of *différance* at a conference of philosophy, which was later published in the *Journal of the French Society for Philosophy*. It also appeared in a publication called *Theory of the Ensemble*, which was edited by Foucault, Barthes and Derrida, together with several younger scholars in 1968. This article briefly summarises Derrida's concept of the *différance*, and the main argument of *Off Grammatology*. It is a good starting point for us here. The article opens with a mention of the letter "a", which Derrida used to make a new word, departing from différence, namely *différance*. The French word *differer* stands for aspects of two entities, which are not the same and are not identical, an alterity. This sense of the word Derrida links to distance and *espacement* (*spacing* or spatialisation). But the French *differer* also means something related to a detour, a delay, a differential. It has to do with *temporisation* (*temporisation* or temporalisation). *Différance* tries to capture this double sense, which is not in the French différence - the ontic and ontology is *made* in *différance*, there is no "world-view" or anything similar prior to *différance* (Derrida 1964-65:38). *Différance* is written to be "an economic concept which stands for the production of "*différer*" in the double meaning of that word".[2] It is about the constitutive production of difference. There is, thus, no simple relation between presence and absence. This is the point of departure for Derrida's critique of the concept of Presence, and the use of the idea of this absolute presence. To put it in simple terms, we communicate all the time, and in doing so we use signs, which are in life, not secondary to it.
Différance is not an origin with "a content"; it is the beginning of the production of difference (which may eventually give meanings). Thus it is not a traditional absolute origin. *Différance* is the movement by which, say, a language is "historically" produced. There is a movement of *spacing* (espacement), a "space becoming time", and a *temporisation*, a "time becoming space" (1964-65:99,103). This is the movement of the archi-trace; there is no beginning of identity, but only in trace, the trace opens the *appearance* (cf. 1964-65:90). Thus, we could state, "In the beginning was the trace", to paraphrase a famous Book.[3] Derrida comments here that there are traces, and retentions and protentions – but he states that he finds the phenomenological and transcendental language inadequate again and again. The *différance* is a movement, but no "thing", and no kingdom, it is merely a movement, which in itself cannot be defined or grasped in any sort of "entirety". *Différance* is not Being, not even a horizon of Being; Being is a *result* of the play of difference. Derrida insists, and this is important, that *différance* is not astructural, rather the contrary. It produces systematic and regulated transformations, but not according to any simple given general teleology or unified structural pattern.
There are traces of such movements, of temporisation and spacing of this complex iterability all around us. The archaeological excavation, the dig, is an activity in which such movement takes place, and it continues to operate in its documentation. An interesting example is that of cave art, and another the unearthing of ancient sculptures in the Mediterranean, an activity which has been going on for centuries. The use of "Primitive African Art" by modernist painters is also an intriguing example.

Figure 2 - Excavations in the Old Town district of Gothenburg 2015, with remains of the 16th Century town Nya Lödöse, photo Markus Andersson. Courtesy of the Nya Lödöse Project, Christina Rosén.

Extreme forms of "presentisms" were common among some 20th century modernists, the idea of an absolute presence, explaining itself, without reference to the past. In an article for the 50th anniversary of the French journal *Les temps modernes*, founded by Sartre in the 1940s, Derrida criticised an editor's comment written by Sartre for the first volume. In this text, Sartre said that an intellectual, and perhaps even their statements, could only last 50 years. Derrida was not prepared to accept that notion, and pointed to the continued relevance of many long since dead authors, and also to the continued relevance of Sartre himself and of the journal *Les temps modernes*, even its first numbers. The idea of the particular relevance of 50 years, seems to have entertained certain popularity. The French architect Le Corbusier, for example, stated that each city should be re-built every 50 years; no city should last longer than that, after which they ought to be completely re-built. In a competition to make a plan for central Stockholm in the 1930s, Le Corbusier proposed the demolition of the medieval old town, and suggested a new city layout for that part of the city. Following his logics, if the city he proposed had been built, it should already have been torn down.

Contrasting views could be found even in Sartre, in his later writings. In *Critique of Dialectical Reason* (1960), Sartre actually discusses how the layout of a city has effects on people living and working in it; how an older tradition of building may continue to affect people far beyond the life of the builders. Roy Bhaskar, the *critical realist*, in a study on modern Platonism, has similarly described how various times may "coalesce" in a locale, and this quotation contrasts interestingly to Corbusier's vision.[4]

Archaeology and the trace

In *Chora L Works*, Derrida, speaking with architects, states that:

When I speak of writing or texts usually I insist that I don't just refer to writing words on the page, for me building is the writing of a text. I call this writing, and I call this text (Derrida & Eisenman 1997:112).

Derrida argued at length about traces in relation to communication, and of the impor-

tance of a broad concept of communication, based on the idea of *effect* rather than deep understanding. These traces are not about absolute origin, but rather a condition for communication. Derrida's insistence of time is relevant for archaeologists, and the question of "spatialised time" (1965-1966, cf. Cornell ms 2011) invites fascinating perspectives. Inspired by the archaeologist Leroi-Gourhan, Derrida discussed cave art in terms of advanced communication across time (Derrida 1965-1966, 2000), almost at the limit of deconstruction, Derridean way. What we suggest is that we must be prepared to find evidence of an unknown Other. It is in the encounter with these "mute" objects, lacking an evident signature, that the human social setting and the Thing is at its closest to us, and this is a true moment in which an impossible event of the Other can occur. When it comes to history, there is the rest, the cinder, and it is the officially "vomited" (but not at all irrelevant) part of history. It is what comes close to the Thing, to *the real thing* (Marder 2009). But what we may encounter is merely *traces*, and this is of utmost importance; they are never the authentic past preserved in bottle.

Archaeology, stratigraphy and the town

In trying to get at a richer, sharper and deeper knowledge of towns and particular townscapes, several distinct approaches must be used. Different scholars must participate, including geographers, sociologists, architects, art-historians, historians and archaeologists, just to mention a few relevant examples from humanities and social sciences, but also disciplines form natural science and technology may play an important role, in order to grasp yet other dimensions. When it comes to sources, the historians can find new dimensions of already existing sources, or, in certain cases identify new and hitherto un-used archives. The Archaeologist can contribute in various ways, but not least through the analysis of excavated evidence of different kinds. Archaeology is one of the tools for getting at a better knowledge of time(s), and it has not yet been used sufficiently, and neither been given the place it deserves in the debate. However, this requires the archaeologists to innovate and develop yet more sophisticated methods and techniques, and to refine their theoretical framework.

Archaeology will only be productive if developed in a relation between theory, methodology, technique and the empirical. Any archaeology discarding one of these elements will become sterile and repetitive. Addressing any material evidence as archaeology means referring to another (even if recent) context no longer in existence. Thus, archaeology always need to operate, to a certain extent with "controlled fictions". There is no archaeology which does not utilize some kind of controlled fiction.

In the archaeological analysis of 'accumulated' material from prior times, there are several intricate methodologies problems, involving reversed stratigraphy, intentional operations on past cultural layers etc. Grasping the stratigraphy and, in the next step, particular processes, is always about human practice as related to process and stratigraphy.

In an archaeological excavation stratigraphy presents itself as 'mass' superimposed on 'mass', leaving 'time' and duration to "interpretation" or rather "controlled fiction".

The starting point for stratigraphic analysis is the realisation that we seldom deal with 'passive accumulations'. The reasons behind most deposits was, in one sense or another, to modify the physical environment and are as such the product of explicit or implicit social and cultural actions – spatial practice. What sort of surface, or interface, and space produces is related to historically specific social structures (or modes of production). Regarding the individual stratigraphic units, whether they are deposits or constructions, as objectified social matter, forming sequences of actions, practices reconstructing space, enables a better conduct in relation to 'time' as a re-presented category along the

lines discussed here. The criteria for 'phasing', or similar representations of analytical time, is thus based on creation, modification and use of space and spatial practices, without the 'forced' causality that often seems to be the case in the commonly applied chronometric narrative.

What we try to order is the duration of social practices, defined by its interfaces (cf. Harris 1979, Larsson 2000). These limits are material, 'mass' and volume constitutes space. But there is one 'time' of the deposit of the 'mass' – often datable through its contents of finds – and another of the interface and space, which is a duration rather that a fixed date.

In the setting of a town, certain parcels develop at one pace, others another. Certain parcels may "avoid" becoming involved in certain major general transformations, while others are deeply affected. In certain cases, like in Rome during the 15th and 16 centuries, older cultural layers become operative in the present, e.g. through the use of older paintings discovered in excavations. The many dimensions of time and the study of process are necessary dimensions in any analysis of built environments. Relating to human practice, there are several distinct processes going on at any point in time, at any spatial point. There are certain developmental tendencies in a given process, but never an absolute defined ending. Where the process ends is in the last instance a question of "empirics", or, in other terms, of the development of a particular human practice in a given environment. Certain processes have a wider significance and importance, but the relation between varied processes is never straightforward or simple. The time/space relation discussed by Derrida is an important point, which makes any full and closed structural analysis problematic. Actually, it could well be argued that the time-rich built-environment is the most human kind of built environment. The presence of varied times makes us aware that no present is omnipotent, and that any ideology, "cosmology" or discourse has limits and cracks. Time is of the essence, and can never be left behind in our thinking on the urban; still less in our practice in an urban setting.A city is built on itself, overcoming misery, war and destruction. Just like the individual buildings forming it, the city has come to be over time, a long time and to our eyes stands out as a complex yet solid (or uniform) entity. Its parts come together and live together in a kind of exemplary harmony, formed from dissonance.

Likewise the smaller centers take shape a little by little, through annexations or extensions.

Yet these settlements have suffered, often more than the historic city, interventions that have not always been carried out with competence and respect.

The arrival of modern technology as well as the gradual lack of interest towards the use of local materials has later led to a progressive loss of identifying features, and to an altered relationship, which had traditionally bound function and form.

The architectural composition requires a thorough knowledge and a constant confrontation with the historical time(s), the established traditions and an in-depth knowledge of the site. The sites possess, from the accumulated human efforts at the location, the ability to suggest functions and forms. Time is of the essence, and, curiously, only from dissonance a truly human built environment will emerge.

Notes

1 - Thanks to Anna Nilsson, School of Global Studies, University of Gothenburg for important contributions on this point.

2 - Cf. Derrida 1967b:39, "Concept economique designant la production de différer, au double sens de ce mot".

3 - The translator's use of word in the phrase "In the beginning was the word" (The Bible, Gospel according to St John: 1:1) is a rendering of the Greek *Logos*.

4 - However, though Bhaskar admits to be inspired by Derrida, the former has felt it necessary to launch a harsh critique of the latter.

> The claim that "there is nothing outside text" is unsustainable and entails performative centrality. After all, Derrida's own text is "materially inscribed and causally conflictive writing (in the media of the pen, computer

and micro-cassette), replicated, published and discussed by jet-flying, video-watching, hamburger-outing defecating human beings" (Norris 2009:186 quoting Bhaskar 1993:15).

As will be become increasingly evident to any reader of this present text (in book-form or otherwise), Bhaskar's way of thinking Derrida is simply a big misunderstanding. "General text" is not only written alphabetic text, and there are many other levels and points in the Derridean argument which has escaped Bhaskar. Bhaskar's rather elegant rendering could actually be seen as a general Derridean statement on what it is to be an author today. Despite the differences, there are striking similarities between Bhaskar and Derrida, but this is not the place for a deeper argument on that.

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REPRESENTING THE CITY, THE CHOROGRAPHIC TRADITION FROM THE RENAISSANCE TO THE PRESENT DAY

Pedro M. Cabezos-Bernal, Juan J. Cisneros-Vivó
Universidad Politécnica de Valencia

Abstract: This chapter will carry on a historical review about the chorographic tradition that began in the Middle Ages with a literary genre known as Laudes Civitatum, in which the cities were described literarily for propagandistic purposes. In the Renaissance, chorography widens its meaning to be understood also as a graphic description and many views of cities began to be included in books. These images were gradually gaining relevance in comparison with the text and they constituted a genre by their own, as in the case of atlas. Despite the intrinsic beauty of these representations, chorographic views allow us to study the morphology of the city and its urban evolution. They become, in many cases, the only graphic information source about some missing architectural elements. This study will expose the main chorographic works, the different typologies and the stylistic evolution until reaching excellence, as in the case of bird's-eye views made in the eighteenth century. The development of aerial photography led to the extinction of this pictorial genre, giving rise to modern geographic information systems, which are nowadays an essential tool, nevertheless is important to highlight the work of these chorographic pioneers and of many virtuous artists devoted to this art.

Keywords: Chorography, Urban representation, bird's-eye view, City Plan, City Map.

The Chorographic Tradition

Chorography comes from the Greek *choros*, which means "country" and *graphia*, which means "description". Originally, the chorography had a purely literary character, as in *De Chorographia*, written by Pomponius Mela in the first century, in which the features of many cities and their habitants were literally described. This literary genre was known as Laudes Civitatum and it had mainly propagandistic purposes.

During the Renaissance, the chorography acquired a wider meaning to be understood also as a graphic representation of the territory. Unlike the cartography, which is more abstract, the chorography allowed a better understanding of the urban features to any person. Petrus Apianus, in his *Cosmographicus Liber* (1524), exposes that the objective of chorography is to represent a particular place like an artist paints an ear or an eye or other parts of the head (Fig. 1).

The first chorographic representation that we want to show was made in early twelfth century by the Chinese painter Zhang Zeduan and was entitled: *Along the River During Qingming Festival*. The painting is over five meters long and 25 cm wide and it captures the daily life of people from the Northern Song period in Bianjing, today's Kaifeng. This magnificent work is full of details and the author uses a pseudo-perspective in a very advanced way and the foreshortened objects are represented with great realism (Fig. 2).

The development of printing resulted in the emergence of the first universal chronicles; some of them were illustrated with views of cities that gradually gained more relevance in comparison with the text.

Some examples are works such as *Fasciculus Temporum*, by Werner Rolevinck (1474). We can see an example representing the city of Cologne (Fig. 3).

This other view of Rome was published in *Supplementum Chronicarum orbis ab initio mundi*, by Jacopo de Foresti (1483) (Fig. 4).

These early representations aren't realistic but idealized and schematic views of the city according to the medieval prototype

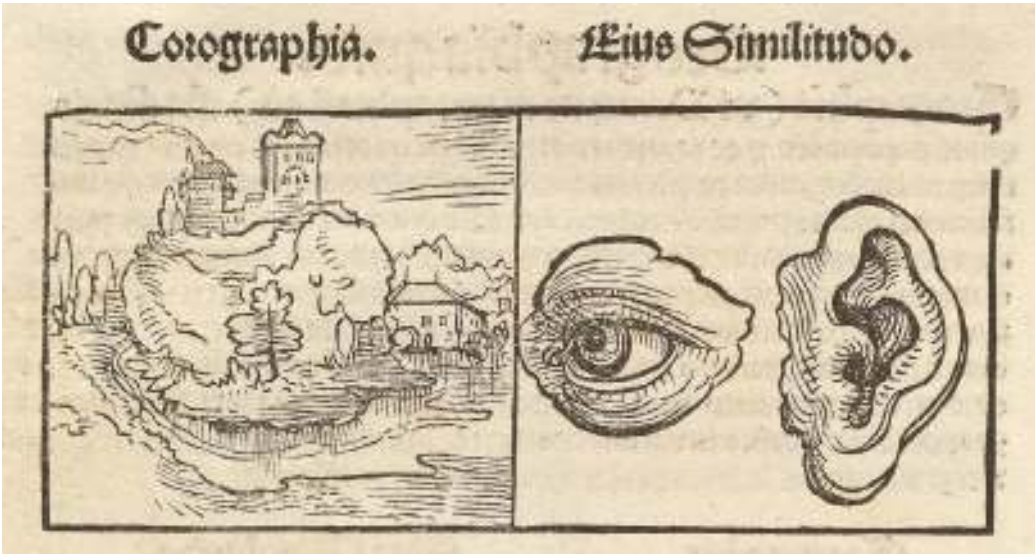

Fig. 1 - Petrus Apianus, 1524, Cosmographicus Liber. Illustration concerning chorography

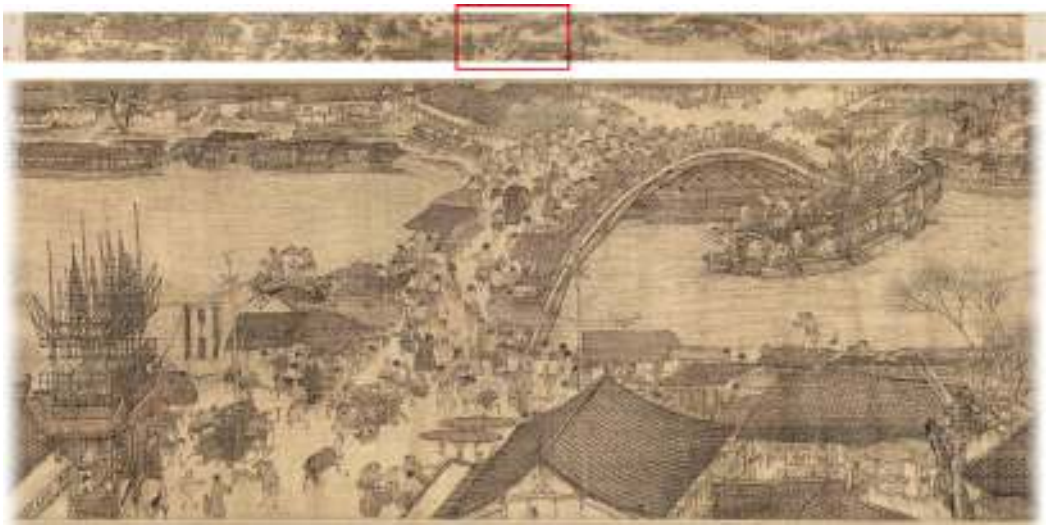

Fig. 2 - Zhang Zeduan, early 12th century, Along the River During Qingming Festival, 523 x 25 cm

consisting in a circular walled town, containing the most representative elements, such as temples and defensive bastions, which are highly emphasized. Chorographic views were acquiring greater importance and truthfulness in later works such as *Liber Chronicarum*, also known as *Nuremberg Chronicle* by Hartmann Schedel in 1493. Figure 5 shows a hand coloured view of the city of Nuremberg.
Other example is the book entitled *La crónica General de toda España y especialmente del Reyno de Valencia*, written by Pedro Antonio Beuter in 1538, which contains a schematic and idealized view of Valencia styled like those published in the universal chronicles, in which the city is shown from its northern face, embraced by the Turia River and primarily showing the Serranos Towers, one of the most important gates of the Christian Wall. The *Miguelete* and the dome of the cathedral are also highlighted (Fig. 6).
Views of cities become more relevant and they were reproduced using the xylography technic, as in the case of the view named

Fig. 3 - Werner Rolevinck , 1474, Fasciculus Temporum – View of Cologne

Fig. 4 - Jacopo de Foresti , 1483, Supplementum Chronicarum – View of Rome

Pianta della Catena, attributed to Francesco Roselli, which is considered the first perspective view of Florence (Fig. 7).
Another great example can be found in *Sanctae Peregrinationes*, written by Bernhard von Breydenbach (1486), which is considered the first travel guide, it contains many illustrations of the German artist Erhard Reuwich, which includes a stunning dropdown panoramic view of Venice. This view offers a more realistic description of the city, although it tends towards bidimensionality as architectural elements are represented frontally and we can appreciate very few foreshortenings (Fig. 8).
One of the drawbacks of these representations was their relatively low point of view, which made impossible to obtain a whole overview of the territory, therefore Renaissance artists began to represent the cities using a bird's-eye point of view. This is the case of the outstanding view of Venice made by the Italian painter and engraver Jacopo de 'Barbari in 1500, which allowed to obtain a complete view of the city (Fig. 9).
The development of perspective favoured the start of this tradition and even it has been speculated that a hypothetical view of Venice, made by Alberti from il *Campanile*, could have inspired Barbari's view. However, the majority of realistic views did not employ properly the linear perspective.
One of the most representative example is certainly the work made by the Flemish artist Anton van den Wyngaerde, who carried out

Fig. 5 - Hartmann Schedel, 1493, Liber Chronicarum – View of Nuremberg

Fig. 6 - Pedro Antonio Beuter, 1538, La crónica general de toda España y especialmente del Reyno de Valencia

Fig. 7 - Francesco Roselli, ca.1480, Veduta della catena. Hand coloured version.

many views of the cities and the major towns in Spain, commissioned by the King Felipe II. The whole work contains views of 62 cities and towns and includes many preparatory drawings, which were made between 1562 and 1570. At same time, Joris Hoefnagel was also traveling in Spain making views for the city atlas entitled *Civitates Urbis Terrarum* by George Braun. Wyngaerde drawings also were done to configure an atlas which finally didn't see the light. Figure 10 shows a view of Valencia from the northern side of the city with the river, the bridges and the neighbourhoods that were appearing outside the walls due to a lack of space inside the walled city.

Undoubtedly, Wyngaerde's view shows a qualitative improvement in detail and realism compared to the precedent ones. However, despite his documentary vocation, the author takes certain licenses in order to idealize the urban space.

This fact is evidenced by the appearance of a fictitious straight axis between Serranos Towers and the gate of San Vicente, in north-south direction. Moreover, the city contour seems to be an almost perfect circle and the most important architectural elements have a big scale to gain relevance.

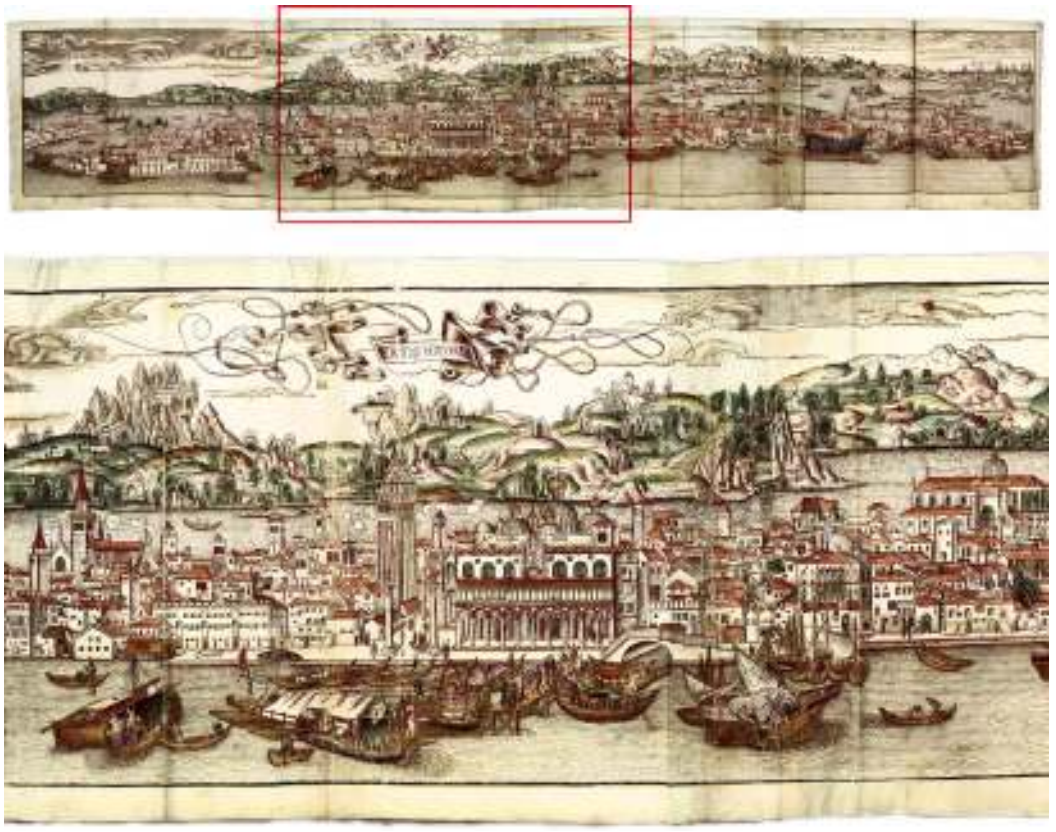

Fig. 8 - Erhard Reuwich, 1486, view of Venice in Sanctae Peregrinationes by Bernhard von Breydenbach

Fig. 9 - Jacopo de'Barbari, 1500, View of Venice, 281 x 134 cm

Wyngaerde made several partial drawings which were used to compose the final view, so this may be the reason why the perspective tends to be frontal, somehow like in the panoramic view of Venice by Erhard Reuwich. Regardless realism, other kind of representations tried to combine the metric properties of cartographic representations

Fig. 10 - Anton van den Wijngaerde, 1563, View of Valencia

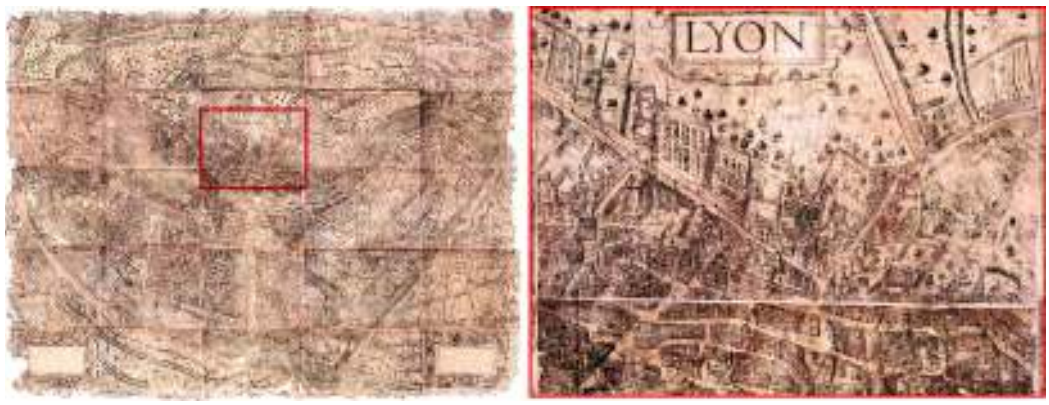

Fig. 11 - Unknown author, ca.1548-1553, Axonometric Plan of Lyon, 240 x 170 cm

with the readability of chorographic views. Thus, some prototypes of military projection were appearing. Elevations from the plan usually were carried out in an unorthodox way, as the foundations of axonometric drawing would not be defined until the

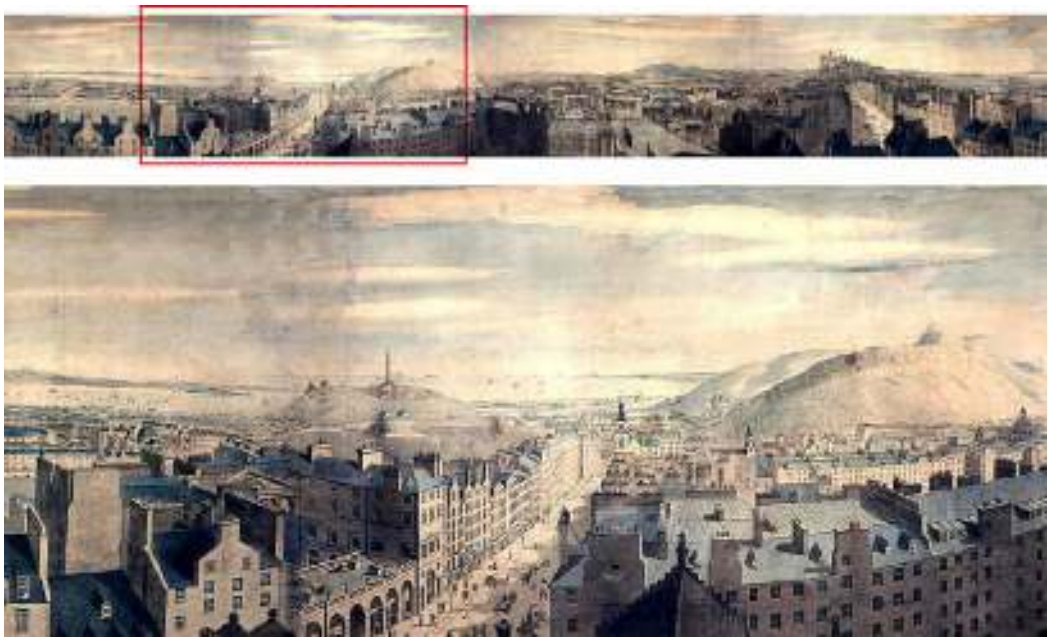

Fig. 12 - Robert Barker, 1792, Panorama of Edinburgh

nineteenth century. Early examples of such representations are the map of Lyon (Fig.11) and others like the map of Florence made by Stefano Buonsignori.

Another different way to represent the city was employed by Robert Baker in his panoramas made in the late eighteenth century.

The panoramas used a cylindrical projection to obtain an image with a 360º field of view. We can see in figure 12 a panorama example representing the city of Edinburgh, this panorama is unwrapped, so to obtain a proper visualization we have to bend this image over a cylindrical surface and place the observer in the centre. These kinds of panoramas were shown in special cylindrical buildings which were constructed in the big cities during the nineteenth century, but nowadays only a few of these panorama buildings have been preserved.

In the late eighteenth and early nineteenth century, appeared many publications narrating the experiences of the romantic writers around Spain, which became one of the most attractive destinations due to the mystical halo and the anachronistic image created by these publications. As a result, many guidebooks were emerging as well as some lithographic or engraved drawings from the main Spanish cities, such as the bird's-eye views made by the French architect, draftsman and lithographer Alfred Guesdon, who was specialized in this kind of representations, reaching a really commendable perfection. Guesdon drew the main cities of France, Italy, Spain and Switzerland. These views have a certain intention to extol the innovative aspects of the city, showing usually dynamic cities with a large industrial activity and modern means of transport like steam boats and trains (Figs.13 and 14).

The views of Guesdon reached the excellence in chorographic representation, but the advent of aerial photography led to the disappearance of bird's-eye views, since they were only used to represent the planned or imagined city, as in the case of the utopic cities dreamt by the futurist architects, like in *Città Nuova* by Antonio Sant'Elia. Nevertheless, the new digital techniques and the CAD software have changed completely the way we draw so we can obtain hyper realistic representations of the city.

One of the most important innovations to

Fig. 13 - A. Guesdon, ca.1848. La France à vol d'oiseau.View of Nimes / A. Guesdon, ca.1849. La Italie à vol d'oiseau. View of Rome

Fig. 14 - A. Guesdon, ca.1855. L'Espagne à vol d'oiseau. El Escorial / A. Guesdon, ca.1858. La Suisse à vol d'oiseau. View of Geneva

represent the city have been implemented in Google Earth, as we can explore a lot of 3D texturized cities which can be seen from any point of view. To conclude this brief review about the history of chorographic representations, we will show a last example that we have obtained stitching some images, acquired from Google Earth, to configure a spherical panorama of Valencia. They were taken from the same point of view,

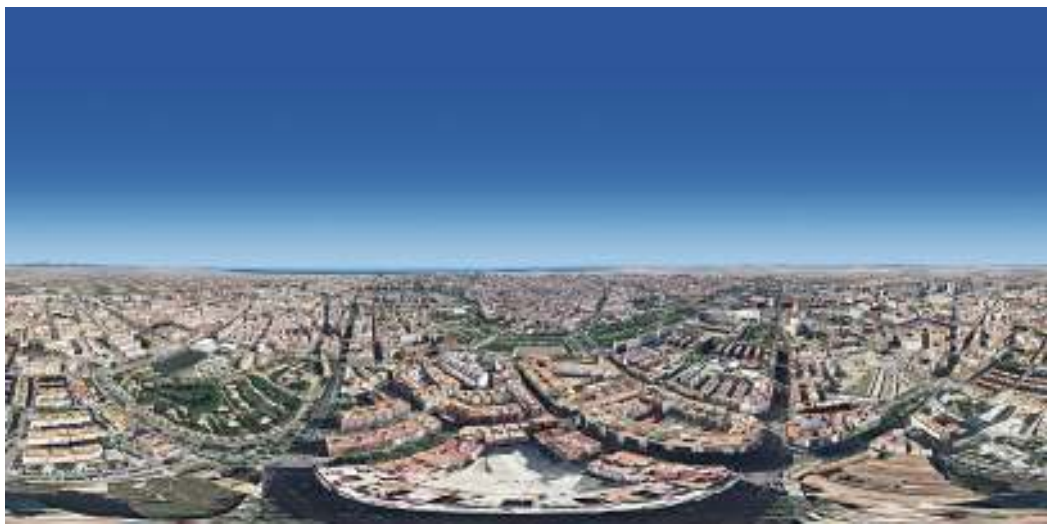

Fig.15 – Spherical panorama of Valencia

but looking in different directions to cover the sphere surface and then, they were stitched together with Hugin and remapped as an equirectangular image. If this spherical panorama is seen using the proper viewer you will get a full immersive experience.

You can visit https://pcabezos.webs.upv.es/aacp2015/esfera.htm to visualize online this panorama. An internet browser with Adobe Flash Plugin installed is required.

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THE NEW EARLY 20TH CENTURY CITY CENTRE OF VALENCIA

Víctor Gamero Bernal
Universidad Politécnica de Valencia

Abstract: In the early 20th century, the city of Valencia began an important modernization process and urban transformation. The epicentre of this urban renovation was the creation of a new centre in the city, which was claimed to be a modern and a cosmopolitan urban square in comparison with other European's city centre. There were three different factors involved in the transformation. Firstly, the construction of a New City Hall, the old building placed in front of the Basilica was in ruins. Secondly, the Regional and National Valencian's Exposition in 1909 and 1910. The success of these contents and the hard task organisation work encouraged Valencians to make important city transformations, for instance, in order to receiving and accommodating for the first time a large number of tourists. Finally, the necessity of a new wide square that permitted local citizens meetings. The 19th Valencia century city was a walled town with a serious space problem owe to an increase of the population. The new square was projected in the Convent of "San Francisco" and the surrounding area: the old "Barrio de Pescadores". The redevelopment plan included a total demolition of the Convent and the Quarter. In the new urban layout regularization the square resulted in an irregular triangle place due to the Convent's floor shape, facing the New City Hall with the new Postal and Telegraph building. In fact, the urban transformation of the "Barrio de Pescadores" caused the Postal building plot, which occupied an entire city block, and became the best city area, with modern and eclectic buildings in wide clean streets. This kind of transformation is an example of the 20th century urban layout redevelopment. Today is part of the centre of the city but it was a suburb of the Renascence period city. The research of the original layouts and buildings reveals an important hidden heritage, whose analysis give us back a part of our history and culture.

Keywords: Arquitecture, Architecture, History, Urbanism.

Introduction

The article deals with the evolution of a small part of the city that today is the centre of the city. This area includes a barrio known as "San Francisco" and the Postal Building Plot. The main idea, the conclusions and the relations are extracted from the City Hall archive and the investigation of the Postal Building of Valencia and the redevelopment of this area in the early 20th century. Firstly, we introduce the social, economic, reasons and a short description of the 19th and 20th early centuries. Then, the factors, which promoted the creation of a new city centre and the evolution in the urban terms.

To conclude, we make some interesting points of connection between the factors and the evolution of the city centre.

The years of the materialization of the city centre are the last years of the 19th century and the first years of the 20th century. On the one hand, Valencia was a walled city in gran part of the 19th century and the increase of the population made the city an unhealthy place of living, with serious cleanliness problems. The structure inside was -consequently- a medieval layout with the logical transformation of the Renascence or Baroque. Some engraving images remind an Italian city or town with domes, bell towers, surfacing short buildings.

On the other hand, the economy was based in agriculture, the Valencian vegetable garden, "L'Horta". Therefore, politician reasons and the essence of the city and the people themselves made a non-industrialization city in comparison with Madrid or Barcelona.

In this line of thoughts is easy to understand

Figure 1 - Asphalt in "Las Barcas" Street 1909

Figure 2 - Orange Exportation 1909

Figure 3 - View of the Regional Exhibition 1909

why the extension areas of the city and the urban redevelopment of the old city were not undertaken until well into the 20th century.

In the figures 1 and 2 we can see two examples of this situation in a year very important to the city, 1909. In the first picture, some people are asphalting a central street of the city, "Calle Las Barcas".

This street starts in the today's main square of the city. In the second picture, the importance of the orange exportation for the Valencian economy.[1]

Factors involved in the creation of the new city center

The creation of the new centre of Valencia is understandable by the event that promoted the Ateneo Mercantil with his president Tomas Trenor. The 1909 Regional Exhibition and the 1910 National Exhibition[2]. The exhibitions are two great references to know the society in that time, the necessity of modernize the city and show Valencia to the rest of Europe. In a very short period, Valencia had to fight with a lack of things like hotels, infrastructure and equipment, providing all of them to receive a large number of tourist. For example, the newspaper "Las Provincias" published in 1909 the great effort to manage the Exhibitions "…Valencia has been worried all the year in the Exhibition. The city has set urban development measures in order to decorate the city and they are good examples how our city is growing. In January started the Passarella (it is a bridge) construction, to make easier the entry to the exhibition. At the end of the year, we put the first brick in the Medicine University building. We are improving the pavement in the street, light street and new tram lines…".

The Construction of the Hotel Palace in Paz Street, the renovation in the Port and the new railway station (Estación Del Norte). The New City Hall, the new markets (Central and Colon) and the New Postal and Telegraph Building, well known as Communication Palace.

Other important event was the ruin of the city hall building. Emplaced in front of the Basilica, in "Plaza de la Virgen", was evacuated in 1854. The city council moved to the "Casa de la Enseñanza", in –"Arzobispo Mayoral" Street. This street finish in the actual square, so this was a good reason to confiscate some plots to reach the necessary area to build the New City Hall. In 1905, the architects Carlos Carbonell and Francisco Mora designed the New City Hall and this fact is important because this construction attracted other

government and economical buildings.
In addition, the eclectic-style based in other modern buildings that take up the baroque and classical elements[3], mixed to create a new style named in these streets "Segundo Imperio Frances". The style remembers the 19th French new city buildings in the wide and long avenues with double height in the ground and first floor, faced in the elevation with great windows, sometimes with arcs. Of course, plenty of ornament and decoration, frames, capitals, corbels, balusters, etc... This is not a reason itself to create a new city centre, but it is a common element used in that time that meant improvement and modernity. The new big and hygienic buildings in contrast with the two or three floors old Valencian buildings with their irregular arrangement. The streets around the new city hall building take the eclectic forms and they form a uniform group style building.
Finally, the last important factor that has their influence in the creation of a new city centre was the "Plan Maura". It is an investment of the Maura's government in 1909 to modernize and improve the Postal and Telegraphic structures[4]. In fact, the development of the communications played a part in the modern society's development, and the Telegraph or Postal building placed at central squares. In the Spanish example, The Postal Department and The Telegraph Department had different origin. The Postal were civil servant from the general administration, and the Department is created in the 17th century. The history of Postal development is very interesting but so long, for explaining easily, the main idea is the development in some stages, since the creation of staging posts in which the horse and the postal worker both could rest in the travelling, until the railway development in the 19th century. The train was very important for the Postal improvement because letters and boxes could arrive all the cities and towns.
The other Department was the Telegraphy. Around 1900 the Spanish cities were communicated by telegraphy, in a radial distribution from Madrid.

Figure 4 - Telegraph network 1910

Figure 5 - Guesdon 1858

Figure 6 - Google 2015

The figure 4 shows the telegraphic lines distributed from Madrid[5] and then other secondary telegraphic network from the cities, to relieve congestion in the network (All the communication lines passed along Madrid). Therefore, the Government put together the two Department in one Building. The plan Maura provides great palaces in every main Spanish cities in that time (designed as the main postal and telegraph office), and small postal offices in towns.

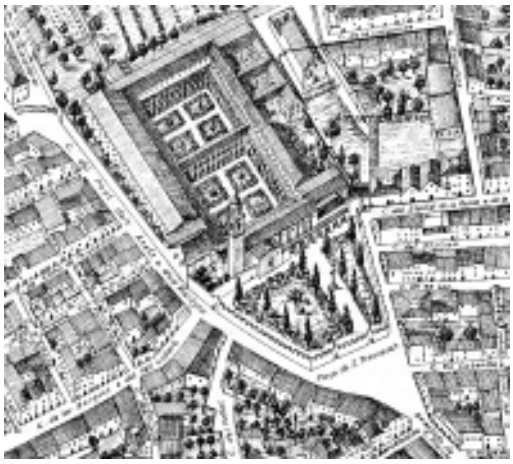

Figure 7 - Extract of plan of Valencia 1704 (Toscá)

Figure 8 - Topographic 1880

Figure 9 - Valencia 1903 – Confluence between the square and "Bajada de San Francisco" street

One of the requirement of the Maura's government was the plot. If the city hall wanted to build their postal office (palace) they would have to find out an appropriate plot: with a considerable area, in a block with the possibility of three elevations, and in the main o very near from the main square of the city. In this case, the Postal Plot is very important in designing the new plot.

Evolution of the new city centre

In the engraving (Figure 5) we can see a 18th century image of Valencia, with the wall along the Turia river, the main doors (Serrano and Quart) and the bridges. We are interested in a triangular area in the southwest part of the city, oriented to Ruzafa and other towns. In this Valencia, the centre is formed by the cathedral while other quarters are designed by churches. In the background the port and the maritime towns and referring to the introduction of this article, the importance of the agriculture fields enclosing the city, inhabitants fed from growing harvest, and they lived with animals under the roof of the houses, in a space known as "cambras".

To make the comparison we have extracted from google and trying to see the same perspective point (Figure 6). The river has been substituted by a lineal park along the original course. The commercial and administrative centre of the city is this area and now is the geographic centre of the city approximately, because the extension city in the first 20th decades is developed in the Southwest and southeast. The North of the old city is contained by the river so the city had to grow passing it until the port, in the new avenues layouts Blasco Ibañez and Avenida Del Puerto. The old centre, with the cathedral is now the tourist centre of the old city.

The triangular area is due to the San Francisco convent shape, in this engraving based on one of the first plan of Valencia in 1704 (Figure 7). This Convent appeared in the 13th century, in some area that Jaime I king gave outside the Arabian walls in front of the Boatella door to the Secular Franciscan Order. This area originally was outside the city but with the enlarged walls designed by Pedro IV "el Ceremonioso" King, the Convent was included in the city at the end of the 14th century.

The order started then the construction of the Gothic Church and large cloister paid by the devoted families. These houses and the quarters that enclose the convent were built in the 17th century and the convent was then a barrier for the inhabitants. So in 1805 were demolished the vegetable garden of the Convent, providing a new square that permitted people meetings and the circulation between the Barrio Pescadores and the Barrio de San Vicente. The church and tower were renovated, adding the baroque decoration like others in that period until 1835. In these years, the San Franciscan order goods were given to the government and the convent was managed by the military. The city grown inside the walls and the convent became a real barrier so finally was demolished at the end of the 19th century.

At the end of the 17th century the Convent and the vegetable garden are configured. During two centuries the quarters and the buildings were growing enclosing the building and at the end of the 18th century the map shows a city without space (Figure 8). In this image, the Quarter "Barrio de Pescadores is composed by irregular and narrow streets. And the vegetable garden is now Libertad Square and the buildings enclose the Convent. In fact, a part of the wall had been demolished a few years before to permit the entry of the trains, in a central station there. The "plaza de Toros" was built outside the city because it was impossible to find the necessary area inside.

In 1903 owe to the demolition of the Convent, appeared a great space

Two years after, the project of the New City Hall is prepared and the area is claimed to be the new city centre. Taking advantage of the old trees, the area is called "San Francisco gardens" or "San Francisco plots" while the City Council thought of the redevelopment of the square. They needed one block for the Postal and Telegraph Building, in front of the New City Hall Building. With the project of The City Hall and the proximity of the new city extension, the place made into the commercial city centre. San Francisco square

Figure 10 - Transformation of the "Barrio de Pescadores" with the Postal Building Plot (F.Taberner)

Figure 11 - Valencia 1910.

Figure 12 - Valencia 1923. Telegraphic and Postal Building (Derrey).

was renamed Emilio Castelar Square and the street that communicate the square with the Cathedral turned into the most important commercial street of the city.

In the figure 9, the confluence between the square a San Francisco Street, with the flowers shops.

Finally the City council decided the total demolition of the Barrio the Pescadores, because it was a rough neighbourhood with two or three floors old buildings instead of five–seven floors of modern and hygienic construction.

They had a growing disorganized in the layouts of the plots and the main elevation and the Quarter, a suburb originally, now was enclosing the future main square. The new urban layouts defined four important blocks, in one of them the City Council projected the future Postal building[6] (Figure 10). In 1910, the same year of the National Exhibition the new Centre was designed, but not completed.

The San Francisco Convent was now Emilio Castelar square, with some sculptures.

The railway main station is projected outside; making new layouts that permitted the communication very important railway-postal traffic.

The new quarter with the Postal Building enclosed the square completing the new city centre.

Conclusions

The postal building plot has an important part in the evolution of the modern economical cities centre of the 20th century, especially due to Plan Maura[7]. In Valencia, the creation of a new city centre was made with the idea of facing two important buildings, the City Hall and the Communication Palace.

The necessity of modernize the city through the successful exhibition events accelerates the transformation, attracting the main enterprises and organization to the square. The lack of a sensitivity of the traditional construction heritage made our ancestor destroy the Barrio de Pescadores quarter.

This was really a poor neighbourhood but the point the view today gather this earthen architecture in a high consideration in order to conserve something more in the city than the main buildings, the intangible cultural heritage.

This kind of transformation is an example of the 20th century urban layout redevelopment. Today it is part of the centre of the city but it was a suburb of the Renascence period city.

The research of the original layouts and buildings reveals an important hidden heritage, whose analysis bring us back a part of our history and culture.

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THE BATHS AND THE ANCIENT TOWNS: FROM THE CASE STUDY OF GRANADA TO THE READING OF A PLOT

Filippo Giansanti, Paolo Formaglini
Dipartimento di Architettura, Florence University, Italy

Abstract: The study of the Banuelo in Granada is the starting point of this research. The presence of this ancient building is the trace of a previous asset of the town, with its own gate and a complete system of protection and welcome. The tower/gate called the "Cadì" and the bahs were the two parts of a defensive/hosting structure providing and controlling the arrivals and giving at the same time the possibility to get protection, to enter the town, to clean up from the dust and the dirtiness of a journey.
This is the context in which we have to read the complex and diverse water distribution system created by the Ziri dynasty. The public baths in Granada became an important urban element both for their intrinsic value and for their role inside the city that can reveal, thanks to their regulated position, valuable clues about the areas surrounding them. The Hamman of Granada, called "Banuelo", is one of the most representative because of many factors: its good state of preservation and its considerable size allow well to take the suggestion that its plan fits in a perfect rectangle. But the logic of the ancient structure is hard to read today, while the town, even if preserving most of the original asset is changed and shows only fragment of this original plot.
Starting from digital survey operated using photogrammetry this study try a virtual reconstruction and a rereading of this part of the town, trying to extend the structure and the result of the reading to other towns with similar defensive system and with similar needs. The intent is to bring back a clear plot of the relationship between welcome and protection in the structuring of the ancient town.

Keywords: Survey, Granada, Banuelo, Bath, Urban environmental relations

Our research, presented last year at previous WACCP workshop in Florence, was focused on the remains of a Moorish arch supported by a large tower that is part of the old fortification walls of Granada, named "puerta de Los Tableros" or "Bab al-Difaf".
This new work can be considered a second step of our previous research. With the previous studies about the Bab al-Difaf we have define some hypothesis; with this new campaign and survay about the arab bath in Granada, called "banuelo", we bring out a evidence that could confirm our previous ideas about the urban area.
The historical urban city planning of Granada is well known and still easily readable but, as the most famous european cities, there are some areas which have not found yet a specific location and a role within the "system" in the city and they are still waiting for a correct interpretation.

Our case study in Granada, its a small urban area next to Alhambra hill, lived day and night by a large number of tourists. The presence of two monuments in this area (the arab bath, Banuelo, and the Bab al-Difaf), close but not directly connected, makes a "suspended" character that is caused by incompleteness of the State's archival records, by degradation of the monument and also by missing oral testimony, which keeps alive its history and its location in the city.
For a better understanding of the area, it's essential to analyze the changes of the historical sights through a careful analysis of the evolution of the city.
In Granada, the relation between the city and the river Darro was always a very important aspect and the origin (VIII century d.C.) of the city reflect the canonical aspect of the medieval settlement with the city placed

above a hill not so far from the water.
The first connection, called “coracha” in Spanish, between the city and the river was made by a fortified corridor to allow secure access to water resources. (Fig.1)
During the following centuries, the dynasty Ziri has designed a new plan for the city, adjacent to the old pre-Islamic city, thanks to the increase of the population and the resources generated by the new irrigated fields. In accordance with the principles of Islamic law, a large fortified area was built in order to delimit the urbanized area.
In addition to producing more comfortable growing space and to prevent possible enemy attacks from the river, the expansion of the city had a strategic goal: to connect the fortress of the Alhambra with the city walls with a new city gate, the Bab al-Difaf. (Fig.1)
After the conquest by the Almoravids in the Iberian Peninsula (the Taifa Kingdom) the city of Granada has become one of the largest and most important cities in Andalusia. Thanks to this economic expansion, the Almoravids in 1125 have reinforced all the city walls, creating a double line of wall.
About a century later, the dynasty Nazaride conquered the Taifa of Granada, and choose the city as the new capital of the kingdom. At first, they settled in the previous building used since the beginning by the Zirid dynasty inside the old fortification of the city; but only a few years later, they decided to create a new city on the Sabika hill, on the left bank of the Darro River, taking advantage of a much more secure strategic position. Like this, Alhambra and Granada became two independent cities with different functions. (Fig.2)
The new urban settlement defined by Naziridi gave the opportunity to create a new and comprehensive system of irrigation and water distribution in the city.
All this was done not only to supply water to the new fortified city of Alhambra, but also for the symbolic importance that water plays in Arab culture.
Analyzing, then, the overlapping plans historic city it’s possible to see that the

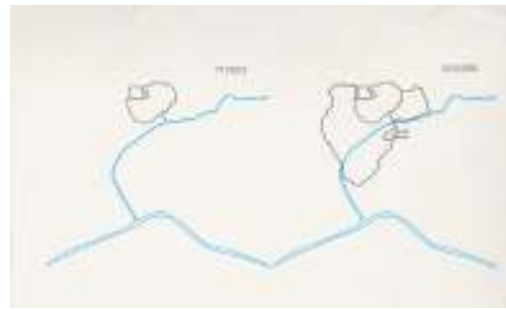

Figure 1 - Scheme of the evolution of the city of Granada from 711 to 1090

Figure 2 - Scheme of the evolution of the city of Granada from 1090 to 1492

Figure 3 - The evolution of the fortifications and the hydraulic system of the city of Granada.

evolution of the city is always related with the river Darro. (Fig.3)
One of a main document in urban history of Granada is the Plataforma de Vico, also called Platform Granada, drawn by Ambrosio de

Figure 4 - Zoom of the platforma de Vico; the red circle indicate our previous work the Bab al Difaf

Figure 5 - Aerial view of Plaza Neuva and Carrettera del Darro

Vico in the last decade of the sixteenth century engraved by Francisco Heylan 1613 and Félix Prieto in 1795. This is the first representation depicting the city of Granada in a detailed, complete and accurate, anticipating in many years drawn the same type of other leading cities and it maintain its usefulness until the late XVIII century. In this representation it still possible to see the ruin of an arch that starts on the North bank of the river Darro and the original structure should be crossing the river having his second point of support on the South bank. (Fig.4)

Also today the relationship between the river and the city is still readable on the map: on the left there is the "Plaza Nueva" that spread over

Figure 6 - Aerial view of Bab al-DIfaf and the Banuelo

Figure 7 - Front view of the entrance of the Banuelo

the Darro River, which now runs underground, and founded in the Christian era.
From Plaza Nueva, Carrera del Darro is one of the most scenic street in Granada.
To the right of the River Darro, it is crossed by two bridges (Cabrera and Espinosa), which link Carrera del Darro with the neighborhood. (Fig. 5)
Situated near the Darro river, another strategic position is occupied by the Banuelo and the structure may be considered the prototype of the public Muslim bath.
Usually in the Arab cities the baths were situated near to the door of the city and near to an important street. What is curious in this area is that in this area there is a bath, a important street but not city door. (Fig. 7)
Just because of that contradiction, it was

necessary to deal with a survey campaign to compare historical data with the metric data. As the Bab al-Difaf, the choice to adopt a photogrammetric survey was done to allow an easy and quick approach to the monuments and its surroundings. The overall campaign produced a total of almost 3100 shots, all the shots were taken in raw format with a difference of three stops of exposition, using different wide- angle lenses stopping them down to have a convenient depth of field in each shot. All photos were then combined to create HDR images, to try to make the shadows flatter. (Fig. 7)

The choice of lens type was not simple because of the tight spaces inside: it was chosen a focal length of 28mm, which is the right compromise between field of view and the right ratio between quality on the edges and in the center of the photo. Because of the idea for the further post processing was aimed to the use a S.f.M. software, like Agisoft Photoscan, the new campaign has been directed to produce images with an overlap of about 30%.

The need to acquire a large number of details and at the same time to avoid occlusions, has required a division into groups of shots then be packed together inside the software workflow. The possibility to reference different group of pictures into a single alignment creates a basic condition to allow this kind of operation.

The group of pictures coming from the front and all the inside aerea of the Hamman, were aligned into an unique model.

The first step of the digital process, after the alignment of the photo and the construction of the sparse point cloud, has been the generation of a high quality dense point cloud, with a total of 43 million points (Fig. 8).

In this case, the high number of points makes it very complicated to manage and to visualize the data, and becomes essential to export the dense point cloud as .ply, ready to be edited in 3D System Geomagic Studio. With this software it is possible to improve the quality of the point cloud, with powerful

Figure 8 - Mesh generated from the dense point cloud with all the camera positions.

Figure 9 - Photogrammetry generated mesh with the texture coming from the shots automatically applied.

algorithms to simplify the data in a conjunction with an efficient noise reduction. Moreover, has been possible to close some holes, caused by occluded areas.

Once its finished the editing of the point cloud, the next step is to create a mesh, which was fixed the limit of 30 million faces. This result has allowed us to obtain a very good quality of 3D model, which makes possible a subsequent retopology of the model, ready for other types of works.

At the end of the process, the 3D model was imported back in Agisoft PhotoScan to apply the texture generated from photos (Fig. 9, 10 and 11).

The result of the survey combined with the study of documents, revealed that the Hamman of Granada, called “Banuelo”, is one of the most representative because of many factors: its good state of preservation and its considerable size allow well to take the suggestion that its plan fits in a perfect rectangle. A narrow doorway leads to a hall used traditionally as a dressing room. Next comes a long hall with dividers which served

Figure 10 - Render view of the main room of the Banuelo

Figure 11 - Render view of the main room of the Banuelo

as a cold room, from which an axial door leads to the warm room, the largest of all.
By the way, in the numerous studies dedicated to the baths Andalusian always predominate the architectural, archaeological or artistic aspects, and urban aspects are always treated superficially. For example, the supply and distribution of water in the city have always been important elements of the definition of urban spaces. However, from the analysis of many documents its possible to identify at least five important points in their urban implications.
Using the example of the city of Murcia, the first aspect refers to the distribution of the bathrooms throughout the urban area such as inside the Medina and in the periphery. The location of the bath in the city has some

Figure 12 - Plan view of the hypothesis of the defensive system

equivalence with the mosques, distributed in a homogenous way throughout the urban area.
The second is related to the constant presence of the baths next to the mosques, but some historians they have same doubt the cliche "Hamman-mosque" based on examples of Damascus, Baghdad and Murcia.
The third highlights is the closeness between the baths and a water course.
The quarter is the opportunity to place the bath near the gates of the city.
The fifth aspect highlights the preference for building sites close to roads of considerable importance, the system used for other public buildings, with the aim of facilitating access to larger numbers of people.
Obviously not all baths were located close to the city doors, it seems logical to assume that the baths for the outer districts located near the walls, were built near the city doors so as to better accomplish their dual function.
Considering the distribution of this Hamman in the city, the lack of mosques in the area, the proximity of to the city walls and the size of the bath, it is plausible to hypothesize the presence of a single complex with its own city door. (Fig.12)
These aspects are very important for the purposes of this research: the presence of an archetypal and so great bath, confirms that the typical model, with the entrance not in line with the main road, is certainly indicative of the presence of an important street, slightly away from the current one (Carrera del Darro).
Our research is also influenced by the remains of a Moorish arch supported by a large tower that is part of the old Moorish walls of Granada the "Bab al-Difaf" and from the aerial images it is possible to notice a system of ancient walls connecting the "Bab al-Difaf" structure to the main Alhambra fortress, this obviously gives even more meaning to those monument, opening further questions about the construction sequence and the overall urban system.
So, as we have hypothesized in previous workshops in Florence, it is possible to imagine the Hamman and the Bab al-Difaf as a part of a defensive system composed of a double door protecting the urban tissue, closing the flow of the river and defending the town from opponents coming along the banks.
Along with archival research, has been of fundamental importance the collaboration

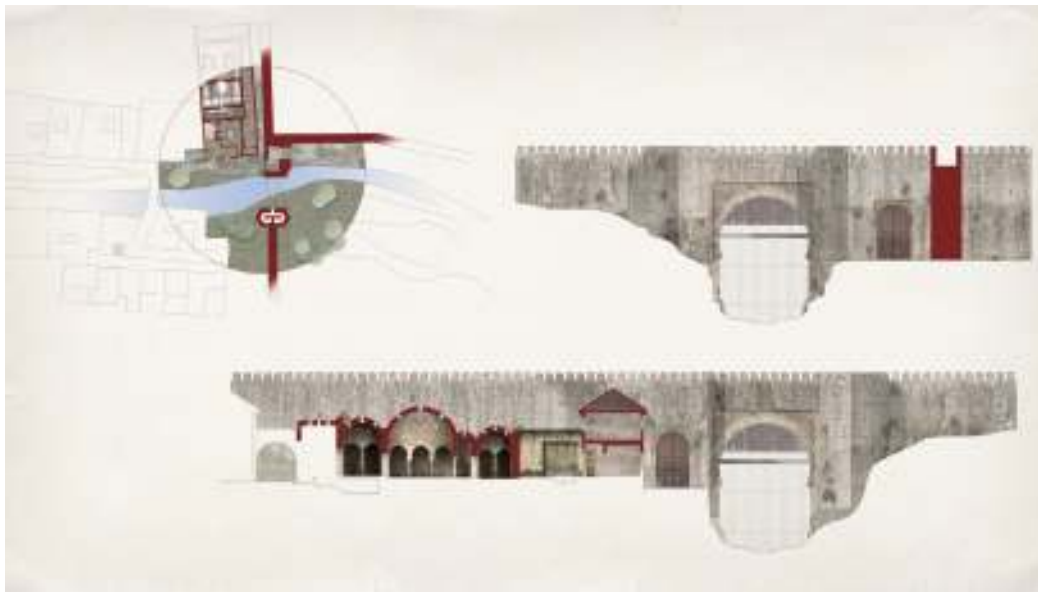

Figure 13 - Reconstruction of the access gate and of the banuelo.

with the LAAC (Laboratory Architecture and Archeology of the city) and in particular with Prof. Julio Navarro y Palazon and has been possible to identify a new morphological hypothesis related to the presence of the Arab bath in the area.

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ARN (UP)- ARNO RIVER AND ITS SEASONS: REVITALIZING THE BANKS THROUGH PERMANENT AND TEMPORARY INTERVENTIONS

Enrico Tomassini
Dipartimento di Architettura, Florence University, Italy

Abstract: Arn (UP) is a project dealing with the revitalization of the Arno river's banks within the municipality of Florence with a site specific approach. In fact, rather than designing the river as whole I considered a small section of it. The aim of the project is to, through a process-oriented-design approach, define a new design methodology repeatable in different contexts that considers as a priority the real uses thus the involvement of the real users in the design process itself.

Keywords: Florence, River, Memory, Design Methodology, Historical Landscape

Introduction

The relationship between Florence and its river started to change by the beginning of the 19th century, when Florence was interested by a rapid urban transformation involving both the historical built environment and the social fabric. With the arrival of the industrial revolution new emerging needs were claimed and with them the morphology and usage of the territory changed. At the end of the 18th century most of the commodities were transported through water-channels spread all over lands. Italy was still divided into many small states and Florence was the capital of the Gran Ducato di Toscana and its flourishing economy was based on the Arno river running through the city up to the sea. The Arno river was the most important and fastest way of transport for people and commodities until the firts railway line was inaugurated in 1848 by the enlighten Grand Duke of Tuscany, Leopoldo II. The cityscape along the river was stud by a numerous amount of production plants and little harbours both upstream and downstream.

Eventually we might say that the river was the centre of the economic life as much as of the social one. The Florentine people went to the river either to work in a leather production plant in a mill or to celebrate either an important city event yet to wet a baby as a wish of luck and fertility.

To sum up the river was the main stage of the urban life in all its features and forms until the II World War, when the social and urban pattern rapidly changed with the upcoming economical boom.

When It comes to talk about Contemporary Urban Riverscape Design, factors and processes that we must take into account are various and complex; even more when we have to deal with a such historically layered context as Florence is.

A multi skilled and tooled approach becomes sort of compulsory and unavoidable: to an anthropological and historical analysis of the tangible and intangible heritage must correspond a straight and up to today intervention. The case study I considered for the project was geographically placed at the edge of the old medieval walls in between two historical districts. Both the communities were historically bounded to the river in terms of urban, social and economical development. The target of my project was to develop a repeatable design methodology based on the observation of the real uses and of the landscape's peculiarities in place through the media of photography, video and audio-recording. The section's bank I considered, as case study, for the project was geographically

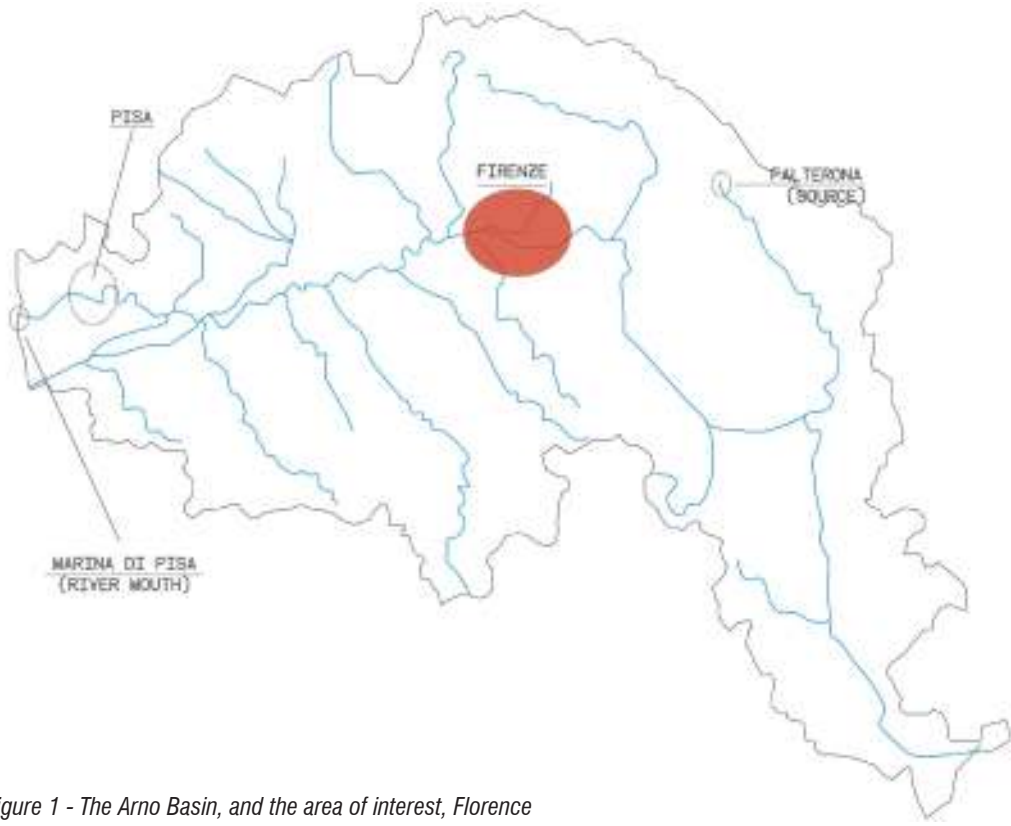

Figure 1 - The Arno Basin, and the area of interest, Florence

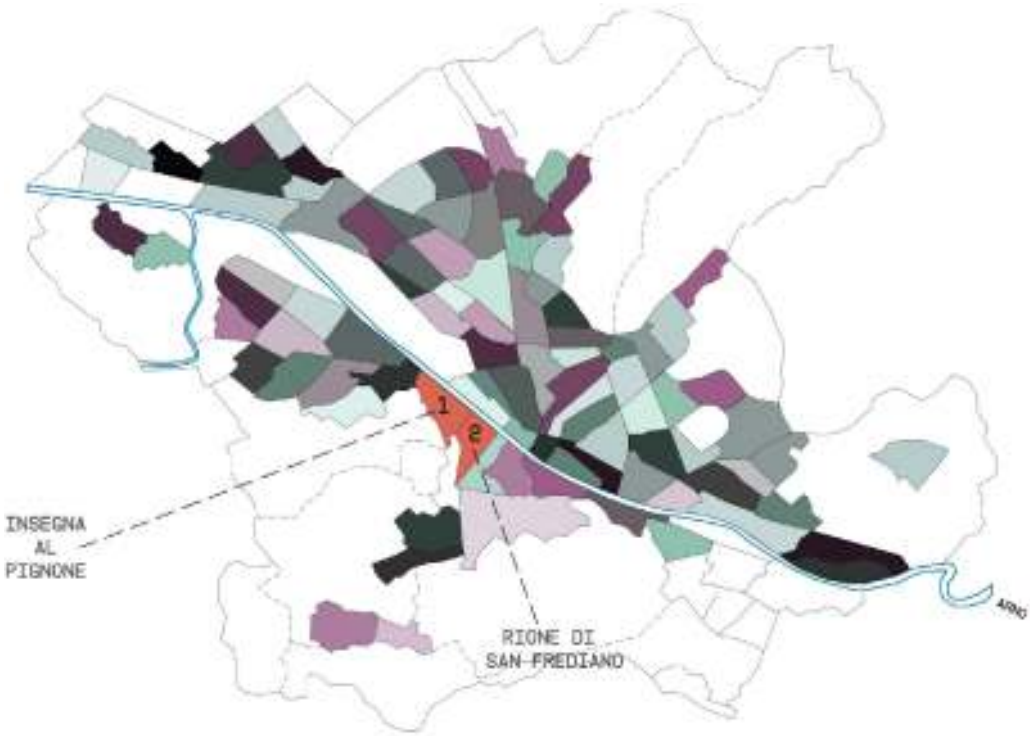

Figure 2 - Historical subdivision of the city of Florence in communities; Orange textured part the two communities of interest for the project.

placed at the edge of the old medieval walls in between two historical "communities". Although the two historical communities do not correspond anymore to the actual administrative partition of the city, divided today in five main neighborhoods, they are remarkably characterized for a peculiar urban pattern, architectures and social structure. Both "communities" flourished along and in a tight relation to the river. On the first hand the community of Pignone, where since the 16th century a fully-working harbour ensured the trading from Florence to the sea where Pisa was located, on the other hand the community of San Frediano of which many people were employed in leather production plants and mills built along the river.

Methodology

The method I decided to apply, throughout my research and design process, bounded together the first and the latter.

The target of the project Arn (UP) was to develop a design correlated to the real uses found during the applied analysis, therefore an analysis, mainly based on a qualitative approach, led through the means of photography and video. In order to fully understand and revaluate the area of my choice in relation to its historical and contemporary uses I conducted a binary research: on the one hand recording the real uses of today, and on the other hand collecting data on the historical real uses. The analysis of the real uses would then define, due to the process of research itself, the historical and contemporary development of the city, more specifically of the two communities bordering with the area of intervention, in relation with the section of the river considered for the project.

Consequently the analysis aimed to explore the relations running, in the present and past times, in between:

1 - the river and the city;
2 - the communities and the river;
3 - the two communities;
4 - the riverbank and the communities;

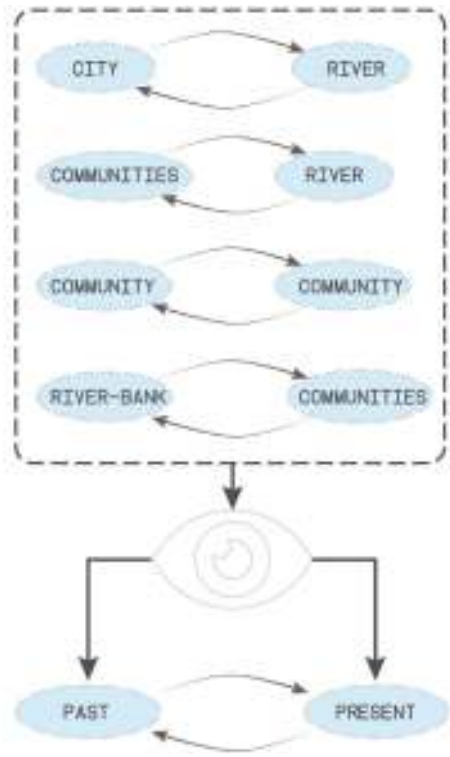

Figure 3 - Field of research

Hence, the analysis dealt with four main elements, correlated one another, that are the following in this order: the city, the river, the communities, the riverbank. The process I followed to cope with these elements was characterized by three main leading steps:

1) Defining Riverscape Design Guidelines in relation to the natural and anthropological processes;
2) Historical Analysis of the real uses;
3) Applied research in loco: contemporary needs and actual uses.

These three leading steps guided me to determine the final design proposal for the riverbank of intervention. Let's examine them in depth.

1. Defining Riverscape Design Guidelines in relation to the natural and anthropological processes

Over the last years water-channels in cities are attracting an increasing attention under the point of view of urban planning. Several municipalities in Europe give a

new importance to their water-channels in cities, according to a series of interventions proposed aiming to enhance the vitality and accessibility of Urban Riverscapes. According to this many design projects implemented tried to give a new centrality to these hybrid entities, through the revitalization of the reparian landscape within the cities. Rivers are the place where the natural environment and the urban context meet and define one another.

A river is to be considered into its complexity and involving in the design process different stakeholders and expertise is necessary, such as: engineers, urban planners, architects, landscape architects, naturalists and representatives of other disciplines if not also the residents of a certain urban area. Due to the multiple character of Urban Rivers, whatsoever project becomes an interdisciplinary challenge. Furthermore when with a certain design strategy We want to integrate a river within a preexisting urban context We must consider the priority of flood protection. Nowadays there are many successful examples of river´s restoration and revitalization to be inspired of. In fact It is fundamental to refer to such projects and regeneration processes of rivers and their banks, although each case of study is unique for both morphological and ecological characteristics and relatively to the systems of flood protection.

For these reasons it is essential to engage with Riverscape Design with the following objectives:

- reference to notions of various disciplines;
- the use of a multidisciplinary language;
- the comprehension of water-channels processes;
- the capacity to simultaneously consider ecology, flood protection and amenities.

1.1 The Hybrid character of rivers: The human intervention and relative problems

In cities the hybrid character of rivers become evident, in fact rivers are both artificial entities, due to supervised by men, and natural in relation to the reperian environment. Rivers in cities are spatially confined, infrastructures hydraulically controlled but at the same time an important place for city users free time, for both if they are occasional users or residents. Furthermore Rivers are linear ecosystems that connect cities and their territories. Rivers are bearers of a common cultural identity for different places situated along a same water-channel. The hydraulic monitoring and controlling of rivers internal dynamics after flood catastrophes caused a series of problems:

- the disappearance of many aquatic species both of plants and animals;
- pollution and deterioration of water quality;
- decreasing of city users thus of the activities along the banks;
- decaying of the flood plain due to the shrinkage of the river bed;
- important drainage work in order to improve the dredging without considering the ecological and aesthetic values of a place.

1.2 Interaction between ecology, flood protection and amenities: a process-oriented approach

For a complete and functional restoration of water-channels we must consider a process-oriented approach that considers a place peculiarities, therefore all biological and anthropological processes characterizing a river and its adjacent areas. Hence, to pursue this hard goal of restoring the Riverscape, three aspects are fundamental:

- Increase the space for the flow of the water;
- Increase the space for animals and plants;
- Increase the space for people;

In conclusion we must consider a river as a process due to transformed by natural and cultural processes. To think in terms of a process means thinking in terms of different options, strategic measures and possible spontaneous developments.

Figure 4 - Goals to be accomplished

1.3 The peculiar state of Arno River-Scape concerning the area of intervention

The area of intervention is characterized by a very high idraulic risk and it´s to be restored within the broader notion of "ecological corridor". The embankment´s span in the municipality of Florence is sometimes really narrow mainly in correspondence of the highly dense historical fabric.

As mentioned in the introduction the bank of intervention is placed at the edge of the old historical center.

2. Historical Analysis of the real uses

2.1 Historical Analysis: The river Arno Its centrality and Crisis

The Arno River has its source in the municipality of Stia (Arezzo´s Province), Tuscany hinterland, and It runs through Florence and then through Pisa where it emerges into the sea.

The Arno River has been a key factor for the choice of the foundation site of the city of Florence, back to the Romans Times, and it took place where the river span was narrower thus more fordable.

The Arno had been for centuries a commercial artery, a cluster of industrial activities and human beings of any sort swarmed along its bank. The River was a central source of livelihood for both economical and sustenance reasons, people used to work in industrial plants and fish along its side. Religiously speaking the river was personified as Marie and the folk used to carry out rituals connected with the idea of fertility thus generally speaking good fortune: either for a good harvest or a new birth. The number of boats floating was enormous in the 17th century and the Prince, Dukes and Lords of the city used to celebrate grandeur festivities on its water.

All of this It was true up to the contemporary times; the River played a central role both economically and socially speaking. Florence and Its river shaped one an other and the urban structure we know today it´s also the result of the relation running in between the two. The trades and activities that took place along its banks were countless and the amount started to decrease by the second mid of the 19th century when the Second Industrial Revolution led to the decline of the relationship in between river and mankind. In fact, when in the 1848 the first railway station, "Stazione Leopolda", was built, which linked Florence to the seaside, many harbours and docks, within the city, were torn down. Few years afterwards, in the decade 1850-1860, the very same fate affected the leather plants and mills built along the banks due to the new aesthetic needs requiring a nice walk and carriage lane along the artificial embankments. We must keep in mind the historical period in which these transformations were settled, the Risorgimento: few years by then Florence would have been the provisional capital of a young nation, Italy (1865-1871).

Although already during the 19th century the relation between river and city started to be lacking, a a substantial cultural detachment between the two took place in the 20th century by the end of the Second World War. As it is

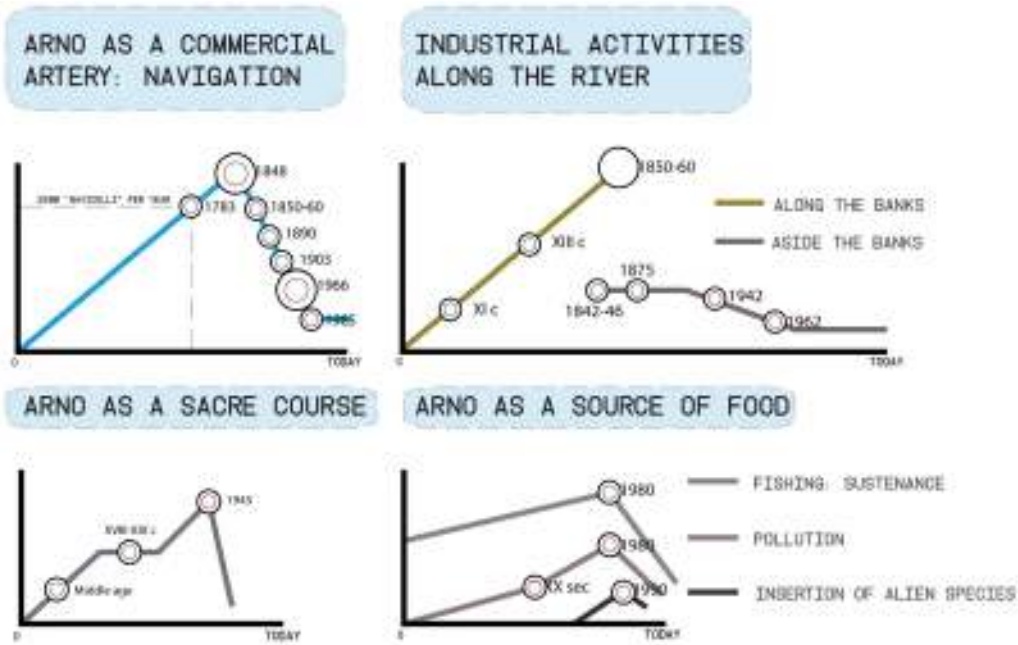

Table 1 - Arno as a commercial artery. Table 2 - Industrial activities aside and along the banks. Table 3 - Arno as Sacred Course. Table 4 - Arno as a source of food

told by many interviewees the River kept part of its central role for the city up the 1966, when Florence was dramatically flooded. By the way the complete abalienation was a gradual process that took place in between the 1945 and 1980, whether it was for the pollution or for the shift of the social fabric in historical quarters.

2.2 Historical Analysis: The two Communities and the River

The communities of San Frediano and of Pignone (bordering with the embankments of intervention) have the same historical and urban matrix, the so-called Community of Verzaja. Verzaja rose along the highroad Pisana on the edge with the countryside and since always had contacts with the river. By the 1050 there are already testimonies asserting the presence of a little dock along the river, in the same area. By the 13th century the Christian Order of Umiliati friars moved from Milan to Florence starting right away with the construction of Mills and Leather Plants Production, on the opposite side of the river, where today there is still the Church of All Saints. In the 1218 they built the second bridge of Florence linking the two sides of the growing city, that greatly contributed to the urban development of that area called then San Frediano, at the time still Verzaja.
Approximately in 1324, with the construction of the Third Wall Circle, the Community of San Frediano became part of the medieval city, that already counted an overall population of 80000 souls. The Third Wall Circle made the River Arno an integral infrastructure of the city and set forth the separation of the urban fabric that had featured the univocal relationship between San Frediano and Pignone, rooted in the community of Verzaja. Two centuries afterwards, in the 1529, the Lansquenet's siege cause the decision to declare the Community of Verzaja a non-construction area. Whereas, the urban pattern enclosed within the medieval walls kept developing as an unique organism, what was outside grew and formed independently. From the beginning of 18th century the Arno River was the center of all commercial trades towards the sea, the city and communities were tied to this centrality. Water-channels

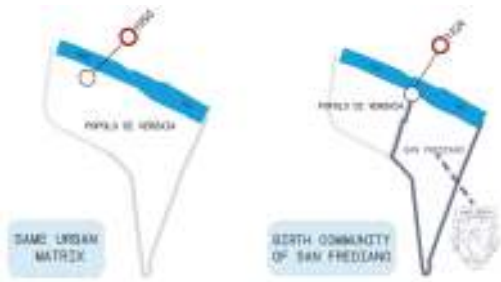

Figure 5 - The same urban matrix.
Figure 6 - The division after the erection of the third wall circle.

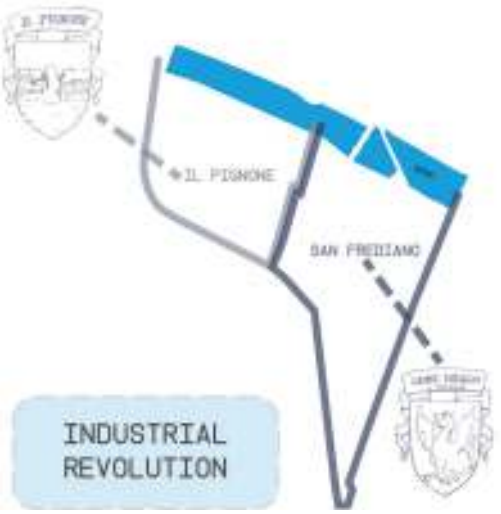

Figure 7 - Definition of the modern communities

became the main commercial route rather than terrestrial. A new quarter flourished outside of the walls replacing the old Verzaja. It flourished in relation with the river: from its harbour all boats set out to go to the sea. New people, mainly sailors, settled with their family in this area where still we can find architectural forms recalling us typical seaside settlements. The activities occurred onto the river are among those historical factors that determine the popular character of the two communities: San Frediano and "Il Pignone". With the arrival of the Second Industrial Revolution in the 19th century, many historical landmarks along the river, as for instance: old model industrial plants, mills and harbours had a steady loss of importance and they were mostly demolished. A new period was inaugurated with the construction of the gasometers and of the foundry in the area of "Il Pignone" in between 1842-1846. "Il Pignone" became the first industrial satellite in the urban constellation of Florence, all new production plants, in the city, were there. The production processes started to be influenced by the new technologies and means of production. It was at stake the complete reconfiguration of the old model of the medieval city, put now into discussion by

Figure 8 - The foundry "Il Pignone"

Figure 9 - Bird's Eye view of the area

an emerging industrial-wise economy that would rather use inland rails than variable and uncontrollable water-channels. The old dock, that for centuries served as a pivotal knot in the trading of commodities and human beings between Florence and the seaside of Tuscany, was gradually substituted with the branded new railway station opened in 1848. The communities thus their population grew

and shape in relation to the river, most of the labors and activities were enacted in relation to the stream of water running through the city, for centuries. The gradual loss of importance of the river in favor to a more industrialized urban structure brought an important change into the societal fabric of both communities.

A further and important change was carried out when the foundry of "Il Pignone" was moved onto the outer-skirt of the city in

interested mainly the areas facing the river. Right after the end of the war all the Italian peninsula and so Florence were affected by a compelling economical boom that once again molded the relationships in between the city and the people.

In the 1966 Florence was hit by a tremendous flood that interested the city on a large scale. Both the communities existing building heritage were seriously damaged. A considerable amount of the people living

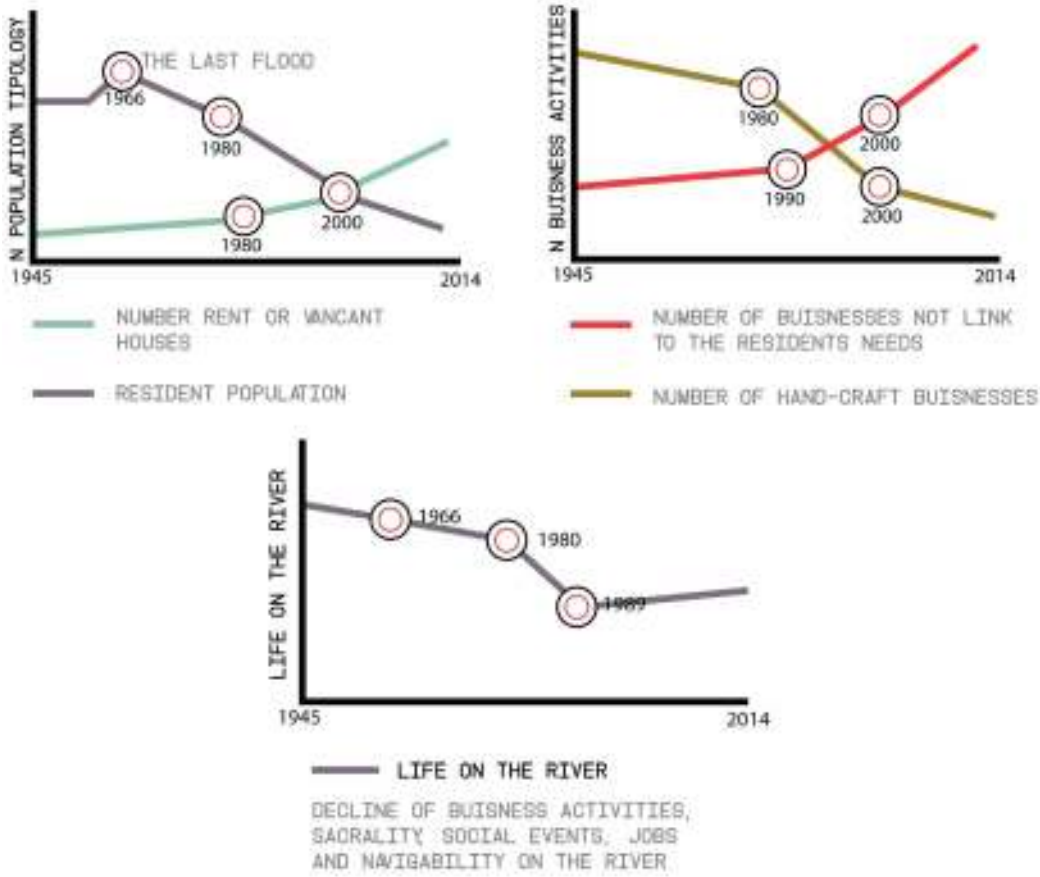

Table 5 and table 6 - The shift in the social fabric of the communities. Table 7 - The dramatic tendency on life of the river in the context of the city of Florence

1942. A period of time that strengthen the popular sentiments of the two communities, where most of the population belonged to the subaltern working class. In between 1942 and 1945 Florence was dramatically bombed and the reconstruction period

on the ground floors and underground floors were compelled to move out of the area due to high cost of restoration, nevertheless the river kept for other twenty years a key role for what concerned recreational and sports activities. But the first stone was thrown and

inevitably the complete abelenation between the city and the river started.
The economical, cultural and social change that Italy was undergoing greatly influenced that relations, once running, in between people and their territories, a society that for centuries had been rural was turning into a modern-urbanized society. The folk heathen beliefs and rituals often linked to natural elements gradually were not anymore exercised; rivers were not anymore used as navigable streams of water and last but not least river and generally speaking public spaces lost their social functions in favor to a more individualized society.
In conclusion we might say that the two Communities and the River Arno transformed simultaneously and together, it was not an one direction movement but two parallel interweaving tendencies. Therefore, revitalising the intervention´s banks means to retie all those links that existed between the urban context and the river in a contemporary way; via responding to all unexpressed necessities of the residents and of whom daily attend the banks of interest. In order to do so, I had observed the contemporary uses and the landscape features for several months, through the means of photography, video-recording and interviews of both active or passive users.

3. Applied research in loco: contemporary needs and actual uses

3.1 A general overview on the methodology of real uses

Looking for the analogies and differences in between historical and contemporary rituals that take place along the River Arno, I started to search for the connections that today are between the city and the river, in particular the ones in between the communities and the embankment of intervention.
I equipped myself with a Reflex Camera (Canon 60D) and a tripod to start shooting snapshots and videos both of the people attending the area and of the landscape with its qualities and deficiencies, for I wanted to understand the dynamics characterizing this part of the city. We might say that the camera and the tripod had been for me the first tool to become familiar with the place and even to draw up friendships. Afterwards by going there regularly in the search of the perfect light for the shot, I started to get to know local actors who did not merely pass their free time there, along the river, but they were engaged in the maintenance and care of the place by their own will.
Firstly, I met Giuliano Gargani that in remembrance of his father, the Arno´s poet, is used to go weekly to the embankments where he grows a garden of roses. Step by step new characters claimed their role along the thread of the story the place had to tell. Each actor I found on my way of this gradual exploration gave me a new insight enriching my imaginary therefore I decided that to understand the place I must have understood what were the needs and desires of these persons living the place day by day. I began to interview them one after the other.
Secondly, to a first list of actors found among the users of the place I added a second list composed by the ones who live at the margins of the area of intervention. Between these new actors I took into consideration in my qualitative research there were the residents and civic representatives of the communities of San Frediano and “Il Pignone”. The reason, leading me to interview them, was for to understand how their personal bound to the River Arno changed and if there had been ever one.
Lastly, the results of the qualitative research were, in my opinion, astonishing, ranging between: the ones telling me about the *“pumpkiner”* who used to cycle around the communities with a pumpkin filled of fresh Arno´s fishes up to the 80’s; to the ones who told me about the *“Arno Dictator”* who used to sell parcel of lands along the river with not formal ownership up to the 90´s. For convenience I categorized my “real uses observational method” into three main categories:

- Observation of the landscape
- Observation of real Uses
- Interviews

In conclusion, the "real uses observational method" aims to define an innovative repeatable process/oriented/design approach that through an on field observation of the main factors and actors of a specific context is able to propose the most suitable design solution in order to improve the usability and interaction between users and landscape.

3.2 The methodology of real uses

Video documenting, audio documenting and photography to understand the conditions of thing of a place thus its dynamics. The research was structured on a three levels juxtaposing one another.

-Firstly, the observation of real uses in order to define the real uses and the typologies of users. The typologies of real uses vary in accordance to the urban context and help defining the needs of the users for to improve usability and accessibility of a space. Also, It helps defining two types of users: active and passive; the first are the ones who interact with the space modifying the landscape, the latter are the ones who exercise a role in space by their temporary staying.

-Secondly, the observation of the landscape in order to understand its main characteristic therefore its spatial structure, physical aspect and perceived image. It would lead to understand what are: the landmarks and pre-existences, the natural processes, the flora and fauna and the morphology. It would help to understand the relation with the bordering urban context thus with the residents and the users both active and passive.

-Thirdly, once defined who are the passive and active users interviews to all the social actors of interest in relation to the uses, the landscape and the urban context.

The active users are to be involved in the project whereas for the passive users we must think how to improve the usability of the space starting by their interaction within it.

3.3 Outcomes of the method on the area on interest

1) Firstly, the observation of real uses allowed me to define before hand all those activities that occurred within this specific urban river-scape of interest. Activities of passive users as it follows:

- Place of contemplation and stillness;
- Leisure and free time;
- Sports: climbing, jogging and exercises
- Fishing both agonistic and hobby
- Walking the dog
- Barbecuing
- Spending time with friends and family
- Illegal Parties

Figure 10 - Fishing in the area

Secondly, the observation of real uses allowed me to individuate those actors playing an active role within the landscape, the ones, as previously said, who have a prominent role in the interaction with the space.

2)The observation of the Landscape helped me defining what sort of landmarks, criticalities and biotope were there.

The landmarks, I found, were:

- prominent historical landmarks
- temporary public art landmarks

The criticalities, to which one would correspond

Figure 11 - Historical Landmark, Cestello Church
Figure 12 - Public Art by Il Sedicente Moradi

Figure 13 - Missing access, people jump or climb

a well-thought solution, I found were:
- Missing access: Users climb
- Walkability and no maintenance
- Dirt and lack of cleaning: anthropic pollution
- Area to be deratted: rats dangerous for banks and people

The biotope was characterized by:
- the presence of avifauna determining a good bilogical status
- the variation of the seasons therefore the variation of the water level

Generally speaking the observation of both real uses and landscape helped me understanding the perceived image that is linked to the location of the area of intervention that is placed in between two different communities for their history and morphology.

3) Interviews were a result and a correlate procedure to the observational phase. The interviewees were found on field in relation to the river and the urban context. They mainly tackled the recent history of the area and the tie that each interviewee had with the river. So as it follows:

The River, active users:
- Embankment´s cleaners: the ones who engage in the maintenance and enhancement of the area on their own choice. Their relation with the river is rooted in the gradual historical detachment between the river and the city. They strongly contribute to bring a new significance and redefining the role of the river stripped of its previous functions.
- The Artist, Lorenzo Barbieri, works as a sculptor with organic material. He installs sculptures illegally and creates new temporary landmarks. Over the period I conducted my research he installed two different sculptures in the area with which users started to recognize and engage themselves. Both sculptures were carried away by the rising of the water, in the period of most intense precipitation.

The Urban context, passive users:
- Residents of the two communities. The ones who I interviewed were both private citizens and owners of shops of which the former function was to sell fishing equipment. Through their words they

advocate my point thus the fact that the river and two communities were strictly bounded up to the 80's. For instance, the fishing shop I went to It was changing its function to the selling of fitness tools. The number of fisahing shops shrunk dramatically in the last 30 years. The residents of the area feel uncomfortable going to the river and rather spend their time in other spaces.

- Representative of the civic society. The priest, who represents the community of "Il Pignone" tells how over the last decades the resident population halved and how new comers, mainly immigrants, are substituting the old population. Historically the christian community within the borough had a pivotal role and contribute to the common sense of belonging to a certain area. Others representative denounce how many primary services have been dislocated in other areas or how it is planned to do so. It is also carried out how the area of San Frediano is predicted to be partly pedestrianized, thing that could be critical for the residents and a touristic-wise urban transformation tool.
- Real Estate. Interviewing the real estate agent aimed to address the questions of whom is renting or buying houses in the area. The way he answered the questions confirm the fact of how most of flats are located and smaller amount bought by international costumers or upper-middle-class members who normally live in countryside bud decide to buy a flat in the inner city. This phenomenon underline the shift within the social fabric that has been characterized for centuries by a popular social body and that now goes towards a new commuter and international locators driven real estate market.

The interviews were a basic tool to understand the most recent historical transformation in the social and urban structure. The two communities featured, up to 30 years ago, a craftmanship driven economy and a coherent popular social fabric that transformed according to the changes taking place due to the rise of the cost of living and a new services oriented economy where restaurants take over workshops.

3.4 The methodology of real uses: conclusions

By the results gathered through the applied analysis it´s clear how users and whose uses are linked to the form and features of the landscape. Most of the problems found are due anthropological non-taking care of the space or non-usability and accessibility of the space. In conclusion, what is needed is:

- Improvement of the usability:
New accesses, powering (potenziamento) of the preexisting informal paths and areas where some activities are carried out.

- Taking into consideration the necessities expressed by the interviewees
Improvement of the landscape to augment the perception of safeness of the residents along the bank.

- Involvement of the active users
The embankments cleaners, as I called them, expressed the will to pursue their activity and broaden it to a larger amount of citizens. It would help rebuilding a tie in between the river and the urban context.

- Improvement of the biotope
Through the maintenance exercised by the active users and through the insertion within the project of re-naturalization areas.

The Project Proposal

The area of interest is the embankment in between the "Victory Bridge" and "Vespucci Bridge" on the left side of the river. The project is inspired by the principles of river-scape design thus the increase of space for the flaura and fauna, the increase of space for people and the increase of space for the flow of water. It aims to be a project that

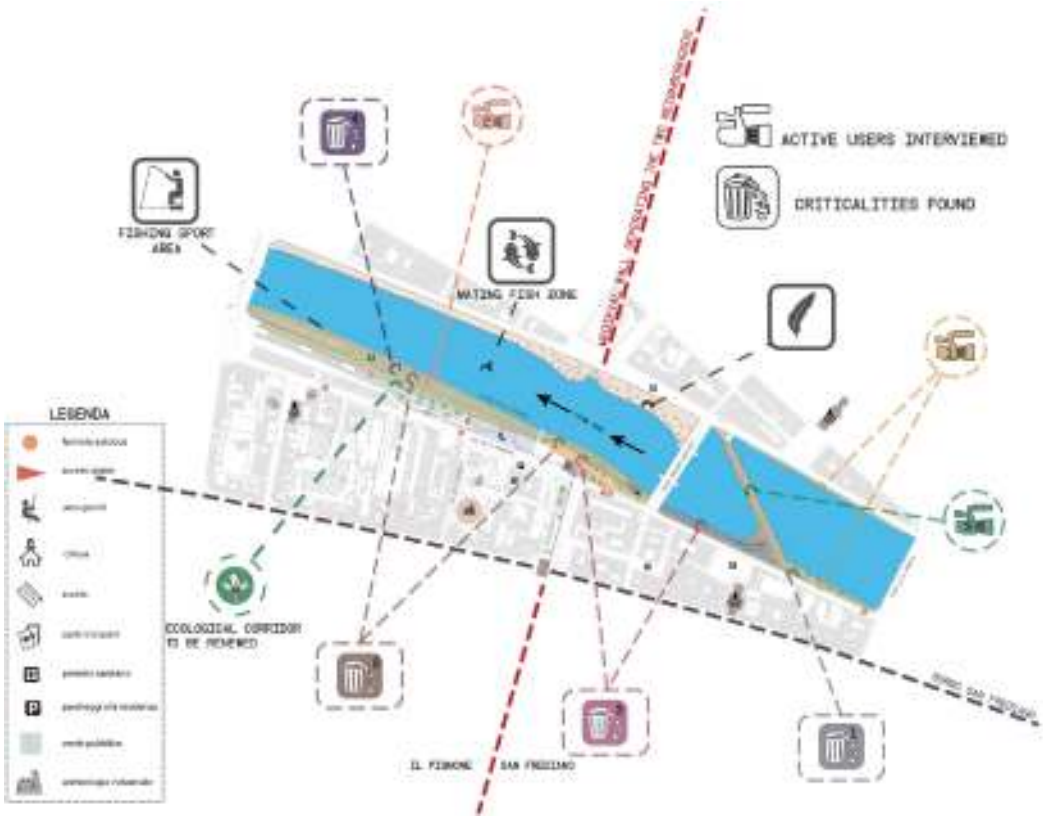

Figure 14 -Map of the applied research

encourages the users to interplay with the space. It aims to leave enough margin for spontaneous developments linked both to the users and the natural processes.

The key word is flexibility thus the flexibility that characterizes the different traits of the banks designed for what concern: the typologies of activities that the user can exercise, the protection system and the flexibility of the ecological intervention and management. A general goal is the improvement of the site under all possible sides with regard to: all uses and costumes of whom normally live the area today, the results of the applied analysis and the reintegration of the area of intervention within the urban context.

Furthermore the proposed design aims in recreating a tie between the city and the river thus drawing closer the residents of the community to the area of interest. Generally speaking the project is the outcome of an applied research methodology that tackles with the idea of redefining a bound between citizens, built and natural environment in cities: as they are the three main compounds in the understanding of city planning and city making.

According to the variation of the water level over the seasons the design is built on several layers that correspond to different possible uses during the year. When season varies the water level varies thus the uses. The enhancement of the usability and accessibility is traced out through the monitoring of users behaviors so that where users stepped or jumped to access and sneak through the area there it is where the project outlines take form.

Envisioning new possibilities in the space is ensured within the frame of possible spontaneous developments triggered by the very same future users acting in the space. It fosters an imaginative design where the user is free to enact its personal role side by

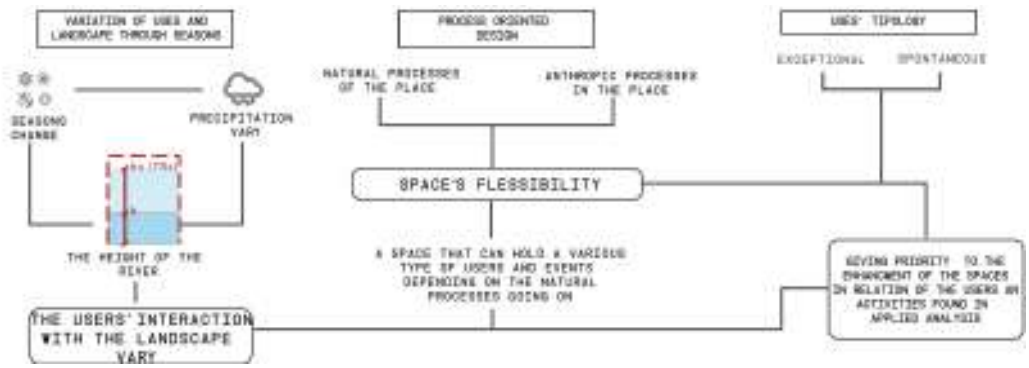

Figure 15 - The leading principle of the project

Figure 16 - View on the side of San frediano

Figure 17 - One of the main access from San Frediano

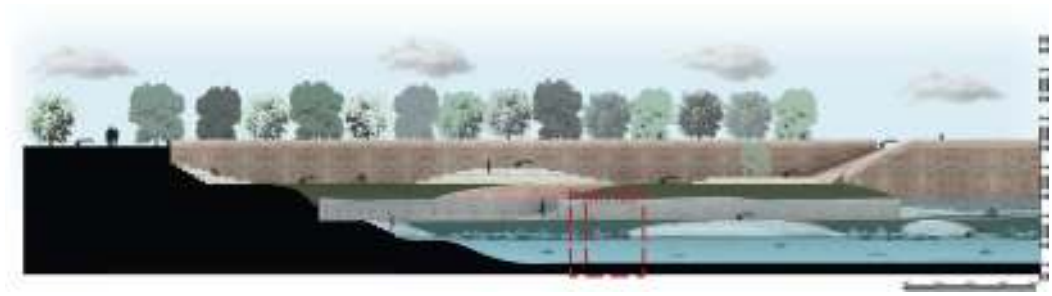

Figure 18 - Cross-Section of the embankments. Different levels and accesses consider the seasonal variation

Figure 19 - The fishing and spectacle area on the side of the community "Il Pignone" renaturalization areas and bicycle lanes

side to a recreated natural environment in a complex over-layered historical city context as Florence.

To sum up, the final design was a mixture and an expression of different needs and uses that I met and observed, an attempt to dovetail the historical imaginary and the contemporary urgencies.

The active users were involved in the project and the usability of the place was improved in relation to the identified real uses and

the natural river processes. Thanks to this relatively small-scaled project I wished to propose again the historical centrality of the river shifting it up to the contemporary times, rituals and dynamics. A possibly repeatable method that considers real uses as potential strategy for urban regeneration in historically formed urban environment.

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HUMAN-ENVIRONMENT RELATIONS IN BUILT HERITAGE AND URBAN PLACES, PRESENT AND PAST

James Dixon
MOLA (Museum of London Archaeology), London, UK

Abstract: This paper introduces two perspectives on human-environment relations mediated through architecture and ways in which archaeology can engage with the. The first half of the paper looks at case studies drawn from contemporary post-industrial architecture, specifically recent projects by Gehl Architects and Snøhetta. These buildings, explicitly sitting at the intersection of humans and the wider natural environment, are contrasted with an archaeological examination of public space that has the potential to change how that term is used in policy and debate. The second part of the paper focuses on the architecture of Kongjian Yu and introduces the potential for contemporary post-industrial architecture to change how we interpret historic buildings and built landscapes.

Keywords: Environment, Post-industrial, Gehl Architects, Snøhetta, Turenscape.

Site-Specificity: From Archaeology to Architecture

The ideas outlined in this paper were inspired by a series of papers at the World in Denmark conference in Copenhagen in 2014 (ign.ku.dk). At this conference, a series of keynote papers at the beginning focused on outlining the concept of post-industrial architecture and giving global examples of best practice. To an English archaeologist, the phrase 'post-industrial' suggests the re-use of factories and other industrial buildings after their primary functions have ceased; literally post-industrial. There is a large body of work in this field from across a number of different disciplines. In the words of the architects presenting at the Copenhagen conference and in architecture and design more widely in northern Europe and the USA, the term post-industrial means something different. Here, the reference remains to the period of time after the decline of industry, but is not directly a narrative of re-use. Post-industrial in this sense means, effectively, people-focused rather than machine-focused. So, in this set of papers on post-industrial, people-centred – even, it was suggested, distinctly Nordic – architecture and urban design, there was a lot to learn about the relationship between people and the built environment. In particular, the focus was on the creation of built spaces to enable certain kinds of relationship between them, whereas in the other sense of the term, we might think of the post-industrial as having to do partly with the management of existing person-space-object relationships and the mitigation of the loss of industry, post-industrial architecture as outlined in Copenhagen is more connected to the new and to reclamation.

These theories of practice in post-industrial architecture and urban design connect strongly to contemporary archaeological approaches to urban space. Archaeology is developing new ways of analysing contemporary urban landscapes that move beyond the description of historic objects and buildings towards modes of analysis that try to understand ongoing change; history being made. There is a clear way in which this kind of archaeology can be of use to architects and planners, specifically in helping better understand the places they want to work in and change. Archaeology brings, among other things, micro level analysis and a focus on object-person relations that can make new and changing

places better for the people who will use them. Ways of doing this will not be discussed in great detail here. Instead, this paper will examine a number of architectural approaches to creating certain kinds of human-environment relationships that could have some impact on how archaeologists approach those contemporary urban spaces in which they try to work. Short case studies will be presented, examining selected works by Jan Gehl, Snøhetta and Turenscape, each of which has a slightly different conception of what that relationship is and can be, and how to enact it. Using these case studies, the paper will attempt to make some conclusions about what a different archaeological engagement with post-industrial architecture might be. Finally, the paper will briefly turn to what the implications of this perspective might be when we try to understand more historical buildings and landscapes.

Gehl Architects

Gehl Architects (and Jan Gehl himself) are well known across the world for large people-focused schemes like the cycle system of Copenhagen, but also for important, influential publications such as Life Between Buildings and Cities for People (Gehl 2010; Gehl 2011). Here, I would like to draw attention to two small projects that are of interest; Market Street in San Francisco and a project reimagining car-parking spaces.

The first project is based along Market Street in San Francisco, one of the city's longest streets and one generally understood to be unpleasant due to a combination of business and relatively dull streetscape. Gehl's project here sought to change perceptions of the street by changing people's engagement with it, slowing it down and creating opportunities for people to interact, both with each other and with the built environment. They started a design competition to develop 'Living Innovation Zones' in ten places along Market Street. Also described as 'outdoor science exhibitions' the Living Innovation Zones are intended to punctuate the unpopular street with interactive spaces (Risom 2013). One, The Whispering Dishes, provides an excellent example of the aims of the project and its success. The Whispering Dishes is a pair of sound mirrors set some distance from each other on the pavement, allowing two people to talk to each other across space despite speaking very quietly. They attracted a lot of attention when installed and have the desired effect of not just making people stop and interact, but of appearing novel and attracting attention. What is important to note here is the relatively small scale of the intervention. The cost is relatively low, but the installation and landscaping required are minimal, the sound mirrors effectively being two sculptured benches set at a particular angle. We can appreciate here the importance of the micro-scale intervention and of simplicity.

Another Gehl project that might speak to similar concerns is the set of works the firm has done creating public spaces that fit within existing traffic spaces, notably parking places (GehlArchitects 2010; www.parkingday.org). Again focusing on the small scale, these projects demonstrate acts of reclamation of industrial (vehicular) space in the name of people. The insertion of people, or the making of a space available for pedestrian use, fundamentally alters the nature of the relationship between people and the built environment. The planners will use language such as that the space becomes friendlier. We can also see however that in more deeply analytical terms the reclamation of part of an industrial zone does not just gain extra physical space for people, it removes part of the control that that physical space has over them and they slow down, maybe even stop. Then they talk to each other and we have a different world. The importance of these very small interventions cannot be over-stated. As we will see when we come to discussion of the archaeological perspective on this kind of planning, it is often the small scale, or detail, that serves to undermine the dominant narratives of what a certain kind

of place is or should be. Gehl Architects demonstrate this in a much wider range of projects than can be presented here as some time spent on their website will demonstrate.

Snøhetta

Moving from street space to individual buildings, the work of the Norwegian architects Snøhetta is of great interest. Snøhetta, like Gehl Architects, try to work at the intersection of people, places and environments in ways that are highly innovative. A good example is provided by the Norwegian National Ballet and Opera in Bjørvika, Oslo (Snøhetta i). Here, the human-environment relationship is expressed in a number of ways. Firstly, this is clearly a human creation, the angled building on the water's edge within a disused dock. To connect the building more securely with the surrounding natural landscape, the architects sought to create the building's lines in harmony with the lines of the surrounding hills. Thus, the building, although clearly not a natural object, partly mimics, partly respects the natural surroundings of its site. Secondly, the roof and rear of the opera house is a public space. Opera is, of course, not affordable for everyone, so the interior of the building is not necessarily an ideal public space. However, the building is made accessible to the maximum possible number through the use of its roof and outdoor spaces as it slopes down to the water. Here, we have the third expression of the human-environment relationship. With the public space extending down to touch the water, there is a real, physical relationship between people and the natural (albeit a disused industrial dock). In the winter, when the water freezes, the ice reaches the opera house and breaks up on the hard slope. The building co-exists with the natural environment in a number of different ways. On one hand, it provides a both accessibility (the public space) and a boundary (the ice breaks on the slope). The boundary is fuzzy. In parts of the year people can inhabit to the water's edge with little thought for what goes beyond. In the depths of winter, much of the public space is rendered out of bounds by nature. With the conscious emulation of the lines of the hills added, we see a building that is not just creating human space within the industrial – as in the case of the Gehl Architects projects outlined – but one that makes a space for people to exist within nature, within the wider natural world, in a way that does not necessarily privilege the humans. It is perhaps important to note that the Norwegian National Ballet and Opera is the first stage of a larger regeneration project in Bjørvika and that the nature of development expressed in it has potential to have wider ramifications if it extends to other new developments in the area in the future.

Figure 1 - Norwegian National Ballet and Opera, Snøhetta (By Oikema 0 (Own work) [GFDL (http://www.gnu.org/copyleft/fdl.html) or CC BY-SA 4.0-3.0-2.5-2.0-1.0 (http://creativecommons.org/licenses/by-sa/4.0-3.0-2.5-2.0-1.0)], via Wikimedia Commons)

Other Snøhetta projects display a similar concern to mediate, reflect and emphasise the relationship between humans and nature. The Norwegian Wild Reindeer Centre Pavilion, for instance, also consciously reflects in its shape the curves of the mountains that surround it in the Dovrefjell National Park (Snøhetta ii). Its 'furniture' is a pine form incorporating seating and a suspended furnace provides heat. Seen within its wider landscape, the pavilion is clearly not natural, yet it is not wholly unnatural. The form and materials used, as well as its function as a space for environmental education, create a human-environment relationship similar to

that we see at the Norwegian National Ballet and Opera.

Figure 2 - Norwegian Wild Reindeer Centre, Snøhetta (By Lars Rogstad (Own work) [CC BY-SA 3.0 (http://creativecommons.org/licenses/by-sa/3.0)], via Wikimedia Commons)

The King Abdulaziz Centre for World Culture in Saudi Arabia continues the theme and provides another take on the relationship (Snøhetta iii). Here, the landscape of the new development is topographically more subtle, but the building has a naturally-inspired form, that of a series of stones, the central one standing on its end. The landscaping surrounding the building is divided into two; a 'Lush Garden' and a 'Moonscape', these reflecting in one space the internal (within or near dwellings) and external landscapes of the region.

With these developments we have moved away from micro-interventions into somewhat larger projects. However, we see a distinct kind of human-environment relationship being promoted by the architects and reflected in the buildings they have built. As described above it has a number of different levels. At one end, the built forms emulate and take inspiration from natural forms, aiming to 'fit in' with them to some extent. At the other end, the buildings facilitate certain kinds of contact with nature and the natural environment which would not occur if the buildings were not there. In all three cases, the natural environment is allowed partly to permeate the built form, albeit only occasionally, in a way that is a long way from the average house. We can take lessons here on how the new, the clearly contemporary, can become a part of more historical natural environments without having necessarily to rely on the 'juxtaposition of old and new' argument so common in urban development.

To Archaeology

What does archaeology have to do with it? The contention of this short paper is that archaeology can both learn from and contribute to post-industrial architectural design of this kind. It can learn from it by expanding the range of relationships between people and their environment(s) that are available for analysis. In these examples, we move from the small to the large scale, often within individual buildings. Contemporary archaeology in particular has not generally focused on human-nature relationships, having generally taken more interest in the interrelation of people, objects and built spaces. If we can develop better understandings of human relations with the natural environment, shown here at the point of creation, we might incorporate these into deeper understandings of the urban environments we study as well as the rural.

However, it is not necessarily a harmonious relationship and archaeology can also serve to critique this kind of post-industrial design. One example of how comes from Cricklewood in north London. Here, in 2013, a public event took place in the street aimed at discussing the perceived lack of public space in Cricklewood, where a new public space might be made, and how to get it. I took part as a contemporary archaeologist who has worked in the past on developing new ways to understand urban landscapes within the planning process. I took an alternative view, the correctly archaeological view in my opinion, that before I accepted the lack of public space that was the premise of the event, I needed to investigate for myself. I found, of course, that there is a lot of public space in Cricklewood, it just doesn't look like

the ideal public space in the heads of those who have recognised the lack. For instance, near the railway is a gable-end of a terrace with lots of names scratched into it. The band of names is about 1 m wide, with none above or below it. The fairly low height and amount of names suggests children of a certain age over a long period of time, for instance the oldest children in the local primary school or the youngest in the secondary school. This is a public space.

Figure 3 - Graffiti on wall, Cricklewood, London (Photo by James Dixon)

I saw too that many local people sit on a grass bank outside a particular shop as it faces towards the station and you can see when your friends are coming. This is a public space. Behind a bush I saw a homeless sleeping site. This is a public space. We see a contrast here. When what makes 'good' public space is centrally defined, we cannot find any. If we start by looking at what people do in local places, we find a lot. Here, archaeological investigation locates public spaces, but through analysis of them arrives at a different definition of what public space is. What the analysis suggests is that there is useful public space that is not accessible to everyone. Further it suggests that there is useful public space that is not accessible all of the time. Both of these refine what public space is and go completely against some of the principles of accepted best practice in public space design, which would always aim for accessibility to all at all times.

I would argue however that the inclusive, archaeological definition and identification of numerous public spaces says a lot more about how people act within distinct local environments than the insertion of a bland, grey forum space ever would. In the children's hangout or the homeless sleeping space, do we see more instructive human-environment relationships than we would through analysing pedestrian traffic through a new open square? I suggest so.

The archaeological critique here is an interesting one because it is explicitly critical on grounds of quality. It is also explicitly archaeological, as opposed to the more familiar heritage-based critiques that might focus more on design or content. The example of Cricklewood says not only that the employed central definition of public space is incorrect, a mere fact given the evidence, but would go on to suggest that a new public space based on the central definition would be defective, a kind of lowest-common-denominator and not reflective of the existing public spaces of the area defined through analysis, perhaps even actively (though probably not intentionally) excluding the user groups identified.

Overall there is a strong connection here between contemporary archaeology and post-industrial architecture and design, at least insofar as both are concerned with identifying, creating and sustaining particular kinds of relationship between humans and their wider environments. They share too – archaeology in its critique and architecture in its actions – the recognition that the point of creation, a future-thinking space in the present day, is a place to act, a place at which a difference can be made.

Between Contemporary Post-Industrial Architecture And Historic Buildings

In the final part of this short outline paper, I will turn around and discuss briefly that post-industrial architecture and archaeology that looks to the past. The first section will outline the historicist perspective and inspiration of the Chinese architect Kongjian

Yu of Turenscape and the second will ask the question of how we might use his ideas to question our own understanding of buildings in the past as well as the present.

Kongjian Yu and Turenscape

Yu's work has always been based around the notion of deep form, in particular what he terms 'configurative deep form', the ecological infrastructure surrounding and pervading a space. In particular he has identified a series of historic forms of agriculture, each of which creates a different kind of relationship between humans and the environment, and he has tried to use as the basis for his contemporary people-focused designs (Kongjian and Padua 2007; Saunders 2012).

In Yu's analysis, there are four different forms of agricultural practice. 'Cut and fill', represented perhaps by one person digging a hole to plant a tree, Yu sees as being the most purposeful, the form in which the human is most involved, the relationship with nature most direct. 'Frame and access' – we might think of a vineyard – we see characterised by the installation of built forms to enable natural growth. It is, for ease of access, necessarily of human scale and as it involves construction, is necessarily and clearly transformative. Third, 'irrigation and fertilization', a relatively sophisticated agricultural method, notable for its reuse of human waste and other by-products of life. It can take a long time to become established and successful and, in Yu's words, can help 'mend broken natural cycles'. Lastly, 'grow and harvest', this related to some of the other forms, but a mode in which the balance shifts from consumption to production. It is still, however, firmly regulated by natural rythmns. With the rapid growth of urban areas in China, Yu identifies a loss of knowledge of these agricultural forms and the way that they had historically mediated much of the relationship between humans and the environment in China's past. He also identifies the ways in which a number of these forms have become codified – even perhaps parodied – in the architecture of formal Chinese gardens, reducing the human-environment relationship to something merely symbolic. It is this problem that Yu, and his practice Turenscape, aim to address in much of their work.

An example of his work in practice comes from Qinhuangdao Red Ribbon Park. Here, former wasteland adjacent to an industrial zone was redesigned into public parkland. The large park is connected throughout by a red curvilinear form that people follow or sit on. Although not including human manipulation of the natural environment as in Yu's agricultural models, we see here the re-installation of nature into an area in which it had been intentionally removed (although in its former state, it was being slowly reclaimed by flora and fauna as is all space). The eponymous red ribbon is introduced as the lightest of obvious human presences in the space. On one hand it enables human interaction with the park by creating a walking route for people to follow and places to stop and sit. On the other, it controls that interaction by being the only clear human intervention throughout most of the park, the lack of others perhaps dissuading people from straying too far from it. Again, we see here a human-environment relationship that is mediated by architectural intervention, yet attempting as far as possible to work within and respect boundaries between the two.

Another example, more explicitly agricultural, is the Shenyang Jhianzu University Campus. Here, the grounds of an architectural school were redesigned. Turenscape took this as an opportunity to put their ideas on human-environment relations into practice. In the new design, as architectural students are working, researching or socialising, they do so among functioning rice beds. They are regularly harvested, but students can also pick rice as they work. Here, the idea of proximity to nature, natural rythmns, agricultural production and architectural inspiration are brought together, not only in the Turenscape landscaping, but in its

aspiration to inspire architectural students to certain ways of thinking and working in what we might consider a relatively 'soft' way. The human-environment relationship here is as we have seen before; enabled by architectural design but with clear boundaries that leave nature its autonomy. The architectural students cannot guarantee a successful rice harvest.

Types Of Archaeological Space

Clearly, there are ways in which contemporary archaeology can both enhance and critique work of this sort. There is, though, a potential impact on more traditional archaeological perspectives on the past, specifically dealing with historic buildings and urban landscapes. This is largely a departure point for future research so I will not dwell on it. Rather I will ask questions.

Do British cities show a similar, systematic shedding of agricultural identity as Yu identifies in China? Can we see it in the archaeological record? Can we develop a methodology for investigating changing human-environment relationships in historic architecture that meaningfully works through all time periods? Would that approach be limited to certain kinds of building? Could this archaeological analysis have any meaningful impact on architectural design and planning in the present day?

There are a lot of places in which this research could start. Three worth mentioning briefly here are boundaries, buildings and farming. With the first, in the UK at least, it is simple enough to trace the historic boundaries of town and countryside (physically at least; the last gardens before the fields). Cartographic analysis can be combined with archaeological data to examine whether urban fringes like this have distinct identities and how they change over time, leading to an appreciation of how that boundary exists in relation to places inside and outside the boundary and thus past the simple existence of human-environment relationships in the past to a focus on how these relationships are created, mediated and sustained. Next there are buildings. It is somewhat obvious that architecture has evolved over time to a point where the emphasis is more widely on controlling or excluding it than it would have been in prehistory.

However, what would be interesting to trace would be the points through especially medieval and post-medieval history where this relationship was defined and enacted as we moved between timber and brick/stone architectural traditions. Timber buildings are clearly more mutable (to a point), so how human-environment relations are codified through the transition would be interesting to explore.

Lastly, there is the existence of urban farming. It exists in the present day, but there were urban dairies in London only 100 years ago, perhaps less. Historical research and mapping would be a useful addition to this potential research to chart the locations and networks of these nodes of agricultural intervention into urban space.

Conclusions

To conclude, I ask whether there is such a thing as a fundamental relationship between humans and the environment, or between people and place, that corresponds to that promoted by Gehl, Snøhetta and Yu? I think there is, at least insofar as people appear to appreciate places that are created for them as opposed to places that are created to contain processes and into which they are merely, grudgingly in some cases, admitted. There is more to it than simply creating open space or building new parks. Architectural design has a strong role to play. As we see in the examples above, human-environment relationships are not only enabled but bounded, not an act of control as such, but, I think, as a mark of respect and as a recognition of the necessity for nature to retain its autonomy as we live within and beside it.

It is interesting though, not to merely recognise this, but to investigate these

instances of that relationship being created and directed. Archaeology has a lot to add to the process and the debate that surrounds it and as my work in this area continues, I hope to be able to bring together the two different sides of what I have outlined in this paper.

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MILAS, TURKEY: CANCELLING THE TOWN TO EXTRACT THE MONUMENT? THE CASE OF THE HEKATOMNOS' TOMB

Anna Frascari, Angela Mancuso
Dipartimento di Architettura, Florence University, Italy

Abstract: In 2010, the fortuitous discovery of the existence of the proto-mausoleum of Hekatomnos, as a result of the grave robbers thefts, has highlighted a very important funerary and monumental complex. This tomb, coming first of the construction of the Mausoleum in Halicarnassus (belonged to Mausolus, son of Hekatomnos), completely redefines the historical evolution steps in the Karia of the IV century BC; it also upgrades our knowledge of this kind of buildings (and in particular of the Mausoleum in Halicarnassus), thanks to its good state of conservations, both from the architectonical and sculptural point of view. Once understood the significance of this discovery, as important to require the inclusion in the list of UNESCO World Heritage, the local and national Turkish authorities take the control of the situation, starting the archaeological excavations and a recovery planning for the area.
This study will focus on the management of the site preparation steps and on the execution of excavations in relation to urban change on the district of Hisarbaşi hill; moreover it will concern the methodologies used and the tips relating to the documentation of the various activities.
Furthermore this study will analyze the management of the media communication of the excavation procedures, through the comparison with another important archaeological discovery: the Amphipolis Tomb in Greece. The most important developments of Amphipolis excavations have taken place in 2014 and were brought to the forefront by the national and international media means.
The aim of this analysis would be to make an overall consideration on the consequences of the Milas management of the archaeological findings, identifying the differences, the points of convergence, the strengths and weaknesses of these two excavations campaigns.

Keywords: Hekatomnos, Excavations, Amphipolis, Heritage Management, Public Relations.

Historical Introduction

The contemporary city of Milas in Turkey, is located on the ruins of the ancient Mylasa, that was the capital city of the region of Karia and it is dated back to the VII century BC.
The region of Karia seems to had been able to maintain a certain independence from the central government, and this in particular during the first half of the I century BC, when it was governed by the Hekatomnids. From 391 and until 377 BC the Karia was ruled by Hekatomnos, who was not only satrap of Karia, but he also controlled the city of Miletus. He seems to have been fascinated by Greek culture, but remained loyal to the Persian king Artaxerxes II, and from the religious point of view, remained devoted to the beliefs of the Karians people. His son Mausolus, better known for the realization of the Mausoleum of Halicarnassus, between 370-365 BC. moved the capital city to Halicarnassus, the contemporary Bodrum, and there he reigned until 353 BC.
Nowadays, only a few archaeological remains, both Hellenistic and Roman, have arrived to us from Mylasa. One of them is the Gümüskesen Mezar, a Roman tomb dated back to the I century BC, with an architectonic structure inspired by the Mausoleum of Halicarnassus and the Batalı Kapı, one of the gates of the destroyed defensive system of the city, from the II century AD.

Introduction to the Artistic Background of the Hekatomnid Dynasty

The cultural background of the Hekatomnid period was characterized by a mixture of different artistic and architectonic styles

coming from Persian, Hellenistic and Karian traditions. However the result was not just a style dominated by the influences of the nearby cultures, but it is the result of a transformation that happens in a society in which the circulation of different cultural baggage through a creative interaction, produces an autonomous culture.
According to some researchers this mixture is intentional and is aimed to create a "public image" of the dynasty, with a constant-evolving and independent culture. From this political situation Karians took advantage to emphasize the cultural unity of their country; for example the funeral manifestation of this unity was the erection of monumental memorials to honor the dead, trying to build something more durable and innovating the design, never abandoning their traditional elements.

The Hekatomnos Tomb at Hisarbaşi: the discovery

In 2010, in the city centre of Milas, some illegal excavations were found in an area with other archaeological remains, underestimated until that moment and not properly safeguarded, as in the years, many houses of different architectural significance had been built on them. This block of houses, already in 2010 go through a state of abandon with many building crumbling, even the most architecturally interesting.
The Turkish police have managed positively to recover some of the stolen goods, moreover the damage caused by the hunters entering the funerary chamber, to structures and decorative walls, were very huge.
The local administration has acted to demolish, in a rather determined way, the minor buildings that occupied the archaeological area, freeing the entire stone structure.
An hypogeum sepulcher was found inside a superstructure identified earlier as a temple, later proved to be originally a mausoleum dating from the IV century BC, and then attributed to Hekatomnos (Fig. 1).
Even if the building is reduced to be a part of the original (it has been used in time as a quarry for other constructions), the tomb chamber has preserved the large sarcophagus, hiding it until 2010. The disastrous actions of the thieves luckily not damaged the sculpted sides of the sarcophagus, allowing to open a new view to this ancient past.
Some years after the discovery, the Central Laboratory of Restoration and Conservation of Istanbul, commissioned the University of Tuscia of surveying, producing a photographic documentation and an evaluation of the state of the works and, of the final restoration of the wall decorations and of the sarcophagus located in the burial chamber.
It is well known that we use the word "Mausoleum" to indicate a monumental tomb and that this derives from Mausolus,

Figure 1 - A view of the excavation area at Hisarbaşi, Milas.
(Copyright: O. Balamir. https://www.flickr.com/photos/balamir/8399172354).

so finding the tomb of his father creates a very interesting study condition, both for architectural and history of art aspects.
Moreover if one compare the drawings and hypothetical reconstruction of the Mausoleum of Halicarnassus, no longer existing, and the artistic production of Greece and Karia in the same period (IV century BC), will find same analogies also with the Mausoleum of Hekatomnos.
The comparison between these two structures, erected 50 years apart from each other, permits to have more certainties, more truths about the hypothetical reconstruction of the Mausoleum of Halicarnassus, that for centuries has represented an important reference point for architects, archaeologists and art historians that, visiting this area of Turkey, evaluated this building as one of the Seven Wonders of the Ancient World.

The excavation program seen from the "outside"

Starting from the great historical, architectural, artistic and cultural importance of this discovery, we present a peculiar analysis of the excavation program and communication management, from a completely external eye. This because the information collected and showed until this point are made during the survey operations (in which University of Tuscia and University of Florence were involved) and personal academic searches, but people and tourists outside of this academic system can't find a way to go in depth of this theme due to a lack of information and of a constant dissemination program.
Carrying out an attentive research, some news on these archaeological discoveries can be found, even if there are no institutional websites that explain completely the phases of the excavation operations. The only reliable sources are online journals articles

Figure 2 - The ortho-photo of the archaeological area in Hisarbaşi, Milas.
(Copyright: Google Earth, www.google.it/maps)

and the historical ortho-photos from Google Earth and, finally, just brief descriptions on the website of the municipality.

As people outside of the academic system or the municipality can't find easily a way to get informed on the topic, the intent of this study will be to show what kind of information one can find on the web and in what kind of websites. So if until now the information reported are taken from in-depth academic studies, after this kind of introduction to the theme, the study will proceed with just the information taken from the web.

Observing the aerial photo taken in 2010 (Fig. 2), it is possible to notice that on the superstructure is still present a column visible for its shadow only. At present days some studies explain that this column is a roman votive monument dedicated to Menandros and it has nothing to deal with the tomb monument.

Moreover appears clear that this part of the district of Hisarbaşi still have all the buildings present on the area before the excavations. The district, located in the historic center of the city, includes several buildings erected with the traditional forms of the area. Some residential buildings are already abandoned, while for others we only see the remains.

Watching a photo of the column found on the web (Fig. 3), it is possible to have a view on the situation of the funeral monument before the discovery in 2010, when it was considered to be the remains of a Roman temple. The area next to the podium was set up with benches for a rest, while on the podium one can see some buildings, one of them probably has been used by thieves to enter into the burial chamber.

The Menandros column is clearly visible and is surmounted by a stork's nest. This is in fact a historic site of nesting grounds for storks, and for this reason the area of the monument is called by local people UzunYuva, in Turkish language.

After becoming aware of the extent of archaeological discovery the local administration has proceeded to the

Figure 3 - A picture of the Menandros Column. (Copyright: http://www.arkeo-tr.com/milas-uzunyu-vada-bir-anit-mezar.html)

expropriation of buildings, in large part houses, built above the mausoleums platform and throughout the area bordered by the Temenos terrace wall. Later many of these buildings were demolished in order to proceed with the archaeological excavations of the area that have brought to light the entire perimeter of the proto-mausoleum of Hekatomnos.

In the aerial photo of July 2011 (Fig. 2), we can see an intermediate moment of the demolitions and it is visible also the deeper excavation, which was made near the column of Menandros, to restore the entrance to the burial chamber from the outside of the monument.

Later in 2011, when the interest on the area was increasing and the necessity of a musealization was manifesting, the Muğla Sıtkı Koçman Üniversitesi launched a competition with the aim of designing a temporary roof for the excavations. The competition was called "Milas Mausoleum Uzunyuva ArcheoPark - Protective Roof Contest"[1] and it started on the 22nd December 2011, addressing undergraduate students and encouraging new and creative ideas. It is possible to read that the "aim of the contest is to protect the rich Cultural Heritage of the country, by ensuring the accessibility to the public of archaeological sites". The roof to

be designed has to have the dimension of 35x36mt and it is expected to be used for minimum five years and then removed for the permanent musealization, and it has to protect the mausoleum from the climatic conditions. For this event, the University provide the participants a 3D model (Fig. 4) that shows the area in an exhausting way, with the excavations, the column and the surroundings houses and trees.

One year later, in April 2012 the funerary monument has been nominated by the Delegation of Turkey to be included on the list of UNESCO World Heritage sites, but at present days it is still in the "Tentative lists". On the UNESCO[2] website it is possible to consult the text of the request that explain the importance of the artistic value of this ancient monument, for its peculiar design connected with the Mausoleum at Halicarnassus.

Observing the aerial photo, taken in 2013 (Fig. 2), we can state that the temporary roof, protecting the building from rainwater infiltration has been built above the mausoleum. The perimeter of the crepidoma[3] surrounding the monument has been, to this date, completely freed from the houses that were still present on the West side.

It is also possible to see that other demolition has been made in the South-West area. These buildings were leaning on the Temenos wall and on the archaeological remains found here that are from the late Roman period. Also these findings have been covered by a temporary roof.

In December 2013 it is known that the excavation around the burial chamber and its recovery interventions are carried out by the Istanbul Restoration Conservation Center Laboratory and saw the collaboration from an Italian team.

The excavations and recovery are not finished yet but the restoration of seven buildings in Uzunyuva was almost complete. We have also some generic news of a project of a museum center in the area, that will be located in the restored buildings of the area.

Realizing a table of the definitive state of the demolitions, we can observe that all the buildings on the proto - mausoleum were removed except the room from which you can go down into the burial chamber.

This room will never be demolished to protect the entrance and because there can be housed technical facilities for the burial chamber.

The continuation of the excavations has seen the re-emergence of the crepidoma composed of seven steps which runs around the whole perimeter of the building. Excavations have expanded in time due to new Roman archaeological remains that have been found in the south west.

At the end of our web-searches it's important to notice that was impossible for us to find any photos of the restored interiors of the burial chamber of the proto-mausoleum.

Attending the lasts online report, works are going to be completed on 06.16.2014, but today, after more than a year after, we are still not sure of this information, as any kind of documentation as has been provided for the web diffusion.

A last important reflection regarding the archaeological area in Hisarbaşi has to be made on the methodology used for the organization of the excavation campaign. In fact, before the demolitions there aren't any certainty about a survey of the previous configuration of the area of Hisarbaşi. If this hypothesis responds to reality, their approach to the excavation has caused the loss of a number of information about a significant part of the historical city centre of Milas, and with it also a part of the identity of the original place has been lost.

Figure 4 - The 3D model provided by Muğla Sıtkı Koçman Üniversitesi. (Copyright: N. Oğuz Özer)

The "www-searching" results: aim, data-collection and comparative analysis

The previous information were all collected from the web to represent synthetically the most significant data about this archaeological finding. This can give an idea about the medium level of knowledge that a careful search on the web can provide on this important discovery.

These considerations are inspired by some search we have done previously to realize others academic studies and deepen our knowledge regarding the place of interest, from every point of view.

During our search we noticed that the information are fragmentary and often repetitive over time for the natural exchange of information between websites even of different types. The pictures that accompany the texts are also of small size and quality and do not give the chance to get an overall comprehension of the monument and of the area. We could not find a site directly attributable to the archaeologists that brings news from the excavation even if it's possible that exists only in Turkish language (in fact our research are all made in English).

Regarding the technical information available, which may be of interest to scholars, archaeologists and conservators, we found only the basic information for the university competition previously explained. Therefore exists the possibility that the information about the site have been deliberately kept confidential to avoid further problems of additional looting of the area.

In order to analyze the reason for this relatively low amount of specific information we decide to make a comparative analysis with another similar case of an archaeological discovery, making for both of them the same type of search and comparing the results from the point of view of coherence to the subject (quality) and quantity. We choose to make the search on Google.com and to analyze the first 30 results to simulating a first approach to the subject.

About Hekatomnos, the quick search was made using the keywords "Hekatomnos tomb Milas", that appears to us the words that can better express synthetically our subject.

Looking to the diagram (Fig. 5), we can summarize that "not inherent", "news and reports" and "social" information constitute the biggest part of the results. We can observe that there are only more than a few "blogs" notices on Hekatomnos, but "technical news" and information about the "future musealizations" project are outnumbered.

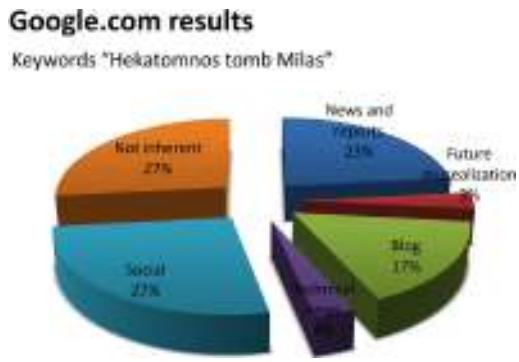

Figure 5 - Diagram of the web-search results. (Copyright: Anna Frascari, Angela Mancuso)

In order to draw conclusions regarding the management of the media communication of the excavation procedures we develop a comparative analysis with another important archaeological discovery: the Amphipolis Tomb in Greece.

We choose to compare these two archaeological discoveries because of their temporal and geographical proximity and for the similar historical importance of them. Surely it's important to highlight the different origin of the discoveries: due to thieves, but not casual at Milas and well organized through excavations and studies, taking place since 1964, in Amphipolis.

Note on the Amphipolis tomb

In Amphipolis, Central Macedonia, there is an ancient tomb discovered on the hill of Kasta, in northern Greece in 2012, after many years of studies. The grave, first entered in August 2014 is dated at the last quarter of

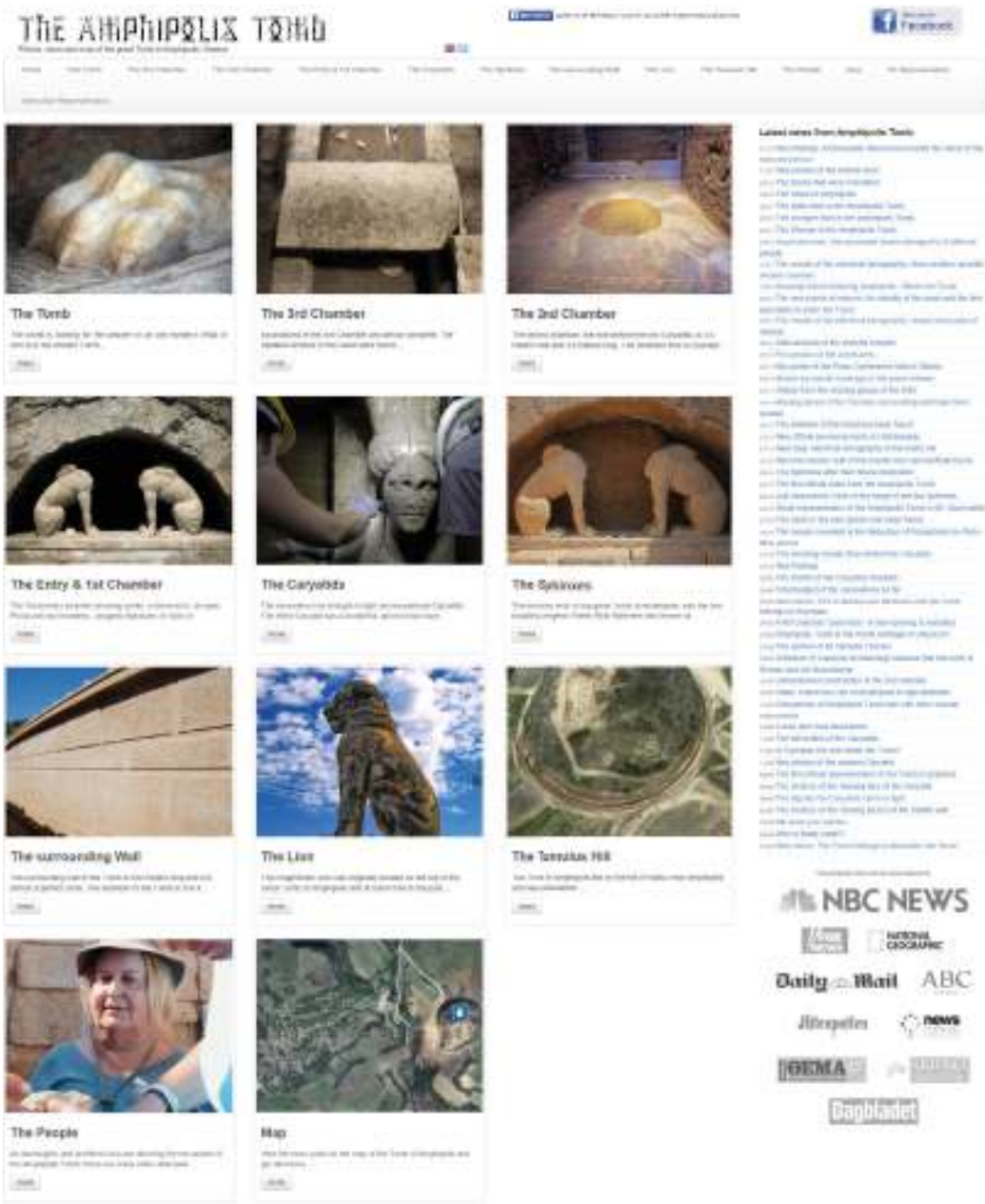

Figure 6 - The Amphipolis Tomb website, homepage. (Copyright: http://www.theamphipolistomb.com/gate)

4th century B.C., and it is the largest burial monument ever discovered in Greece.
These two archaeological findings are both very ancient, geographically close one to each other and they are been discovered almost simultaneously; so they are comparable for the use of social media and networks in the same area of the world. Surely it's important to highlight the different origin of the discoveries: due to thieves at Milas and well organized through excavations and studies taking place since 1964 in Amphipolis (Fig. 6, Fig. 7).
The discoveries of Amphipolis are constantly communicated and updated by a net of sources: websites, social network pages and many on-line international journals featuring this topic. If one tries a search on the web about "Amphipolis Tomb" on Google.com

Figure 7 - The Amphipolis Tomb.
(Copyright: http://www.theamphipolistomb.com/gate)

the first two results are constituted by the official website and the official Facebook page. These two sources are completely exhaustive about the topic, so we have not the necessity to continue searching.
On the official website of Amphipolis[4] there are a great number of information and photos about all the aspects of the archaeological discoveries, disposable for viewing, for examples: details of the sculptures, images of archeologist at work, 3D reconstruction, news about new items found, chemical analysis on materials and finding's, and so on.
The site is characterized by a simple menu, an English version and the possibility to comment the articles and share them. In addition to the website, the archaeologists staff also manage a Facebook[5] page where they publish the website updates. The Facebook page has been operating since August 2014 and is followed by 47.996 people[6]. In conclusion we can affirm that the approach to the media communication used by the archaeologist of Amphipolis is up to date and it make possible to follow the work processing and the findings even from the outside and from distant places and countries, creating also a certain emphasis on expectations and the possibility of intellectual speculations.

Discussion and Conclusion

Considering the Amphipolis media approach, some reflections on the Milas situation can be done. The two main questions are about why these two approaches at the media communications are so different and why they choose to act in this way.
It is undeniable that an efficient communication of the results could provide the mission with an international resonance and also with ever increasing interest from the public throughout the world, considering the large spreading of social communication systems in the last ten years.
Moreover an efficient communication of the results is a good starting point to improve expectations about future tourism and funds to continue excavating, studying and recovering. This type of dissemination can provide interesting international collaborations in the excavation process and so it can create a network of knowledge optimal to sustain and carry on the program with demonstrate experience.
Moreover the cooperation between the excavation team and some members of the local administration, could provide remarkable reflections on what happen to the inhabitants of the area during a long time process comprehending studies, excavations, demolitions, musealizations, reconfigurations of urban environment and renovations on the urban historical context.
Involving the inhabitants with visits to the monumental complex or public meetings on the topic helps to create a sense of unity and pride on their origins; in addiction can also encourage insights into the history of their own city, on its evolution, importance and connection with nearby cities. Reflecting and maybe answering to the question about what is the better choice, can lead us to some conclusions on the Hekatomnos excavation campaign. An efficient communication of the results let the working team to improve expectations about future tourism and funds necessary to continue excavating, studying and recovering. To obtain this kind of attention is necessary to attract the attention of the public, with an international resonance.
Moreover conservation of monuments imply for first the respect of the urban setting, in which the monument is located, to prevent

the loss of its original environment. This respect is strictly linked to the production of a congruent pre-excavation documentation, that in case of any necessity of going back to the original context is essential. At this moment of our research we do not know if the survey campaign of the original configuration of the area has been conducted or not, because we cannot find any information about it.

At the end of our discussion we can realize that experiences on past excavations are not always used to be a model to do better in the future. In fact it could be desirable to give more information to the scholars and to the inhabitants, before to make such a big change in a portion of a city center. Saving the major monuments and re-configuring the urban setting where they were located and integrated, could have as a result the isolation and the loss of the original environment of them and it could be not the only choice.

Discussion and reflections on this theme is a good way to try to act in a different and better way, preserving the possibility to transmit to new generations a complete documentation and so giving the possibility to elaborate proper analysis and considerations.

The geographical area here presented is rich of different layers of historical remains. In the next years, or months, other archaeological excavations could start. Having guidelines of similar cases all over the world is a strategic starting point to carry on the works in the most useful way, both for population, monuments and urban historical context preservation.

Acknowledgement

In 2012 the DISBEC (Dipartimento di Scienze dei Beni Culturali) from the University of Tuscia was commissioned by the Directorate General of the Ministry of Culture of the Republic of Turkey to plan and test solutions for restoring the tomb recovering the damages caused by the thieves to the mural paintings. The unit from the Dipartimento di Scienze dei Beni Culturali, University of Tuscia operating in Milas in February 2013 was composed by: Maria Andaloro (coordinator), Paola Pogliani, Silvia Borghini, Gaetano Alfano. The survey of the mausoleum of Milas was conducted by a unit of the Dipartimento di Architettura, Florence University, the unit was composed by Giorgio Verdiani and Carmela Crescenzi. The object of the survey was comprehensive of the main building, the surroundings areas and the system of subterranean chambers. The first data treatment and the alignment of all the scans were done by Giorgio Verdiani and Anna Frascari. Post processing of the data were operated by Giorgio Verdiani, Anna Frascari and Cristina Menghi. A special thank to Maria Andaloro for proposing the significant challenge of the Hekatomnos Tomb and to the Turkish authorities for their involvement and active participation in making possible to operate in the area.

Notes

1 - http://www.mimarlarodasi.org.tr/index.cfm?sayfa=yarisma&sub=detail&bid=97&mid=97&tip=D&Recid=522

2 - http://whc.unesco.org/en/tentativelists/5729/

3 - In classical Greek architecture is the platform of three or more levels on which is erected the super-structure, forming a series of steps

4 - http://www.theamphipolistomb.com/

5 - https://www.facebook.com/amphipolistomb/?fref=ts

6 - Last update on November 2015, the 25th

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DESIGNING CONTESTED HERITAGE WITHIN THE SACRED CONTEXT. THE ΑΧΕΙΡΟΠΟΙΗΤΟΣ MONASTERY, CYPRUS

Alessandro Camiz
International Centre for Heritage Studies, Faculty of Architecture, Design & Fine Arts,
Girne American University, Cyprus

Abstract: The analysis of the Αχειροποίητος monastery shows the superimposition of different buildings: a domed church with a central plan, built in late Byzantine times over the ruins of an early Christian basilica, enlarged by the addition of three successive narthexes, and therefore transformed into a longitudinal basilica. The name Αχειροποίητος, literally "made without hands", referred to a sacred icon hosted therein. A walled enclosure surrounds the church and contains the monastery, which developed in subsequent phases, with different additions, demolitions and restorations. We outlined the formation process of the complex, from the V cent. Basilica, to the transformation of the monastery into military barracks in the 1970s, as a premise for the restoration project. Recently the Department of Antiquities assigned the monastery to the Girne American University for its restoration and it is urgent to accomplish some statical interventions. The management of this site, hence the political situation of northern Cyprus, represents an interesting case study on the *contested* heritage issue. Nevertheless, the heritage management in Cyprus, for the complex political situation of the island, bears more difficulties than in other UE countries, but we should consider that every heritage site has someway a *contested* character. An architectural project was experimented, according to the typo-morphological approach of the Muratorian Italian School, based on the principle that new buildings should be the continuation of the old ones, without imitating them, but following their formation process, as the last step of an ongoing process. We did not conceive the new architecture as an object contrasting with the context, but following the full understanding of the processual transformations of the site, it was possible to design the new addition to the monastic building as a *living organism*, in conformity with the sacred context.

Keywords: Urban morphology, Architectural Design, Architectural Heritage, History and Theory of Architecture, Restoration, Laser scanner survey.

«We heard him say, "I will destroy this Temple that is made with hands, and within three days I will build another made without hands."»

Mark 14:58 (KJV)

Παναγία Αχειροποίητος:
a brief history of *Lapithos*

The complex is located in the outskirts of *Lapithos*, an urban settlement on the north coast of Cyprus, documented until the seventh century when, following the Syrian raids in Cyprus, the inhabitants abandoned it settling in other sites uphill. In 653 Abu 'L-Awar, leading a Syrian army, sacked Cyprus. *Lapithos* was the last stronghold of the invasion and after the destruction of its walls; it capitulated following an agreement to trade gold and silver in change of the life for the inhabitants (Hill 1940, p. 285). It was probably at this time that someone buried the *Lambousa* treasure to save it from the invaders (Fig.1). In 655 AD, a bishop of *Lapithos* named Eusebius is documented, in the same time also Eulalius is quoted as bishop of *Lapithos*, with an uncertain date. The urban area of *Lapithos* has undergone some archaeological searching in the past, John Myres excavated the acropolis in 1913, and some of the fragments that are now in the monastery derive from these findings, like the several mosaics now inside the southern building. Here is today still visible the base of a statue of the emperor Tiberius, with a Greek inscription, dated 29 AD, that was originally placed in the gymnasium of

Lapithos (Dittenberger 1903, n. 583, pp. 274-275), (Fig. 12). The name Αχειροποίητος, literally made without hands, in the first phase of the church, was connected to an icon "made without hands", so probably one of the numerous images of Christ or of the Virgin that are referred in history. There are other churches sharing this same name, including one in Thessalonica (built in 470 AD), and another one in Constantinople (built in 463 AD), both belonging to the Abramites. The name survives to this day through several misspellings, and we should consider it as an example of intangible heritage, testifying the history of a building conceived, and therefore named, to host this particular sacred image. The headquarters of the *Lambousa* Bishop, one of the fifteen Bishops in Cyprus until 1222, were hosted in the monastery. Between 1556 and 1558, Leonardo Donà, a Venetian patrician belonging to the Corner family, visited *Lapithos* and found therein «lettere et sepulture di Christiani»[1]. An Italian document dated 1573 (Palma di Cesnola, 1877, p. 19), listing the Greek churches in Cyprus, includes the monastery with a different spelling. «Il patriarcha greco di Hierusalem, li monaci del Monte Sinai greci, detti Iueri, la Badia di Manchana, & quella de Cuzuuenti, di Antrio, di

Figure 1 – The marriage of David, silver dish from the Lambousa treasure, VII cent. AD, Archaeological museum, Nicosia, Cyprus (photo: A. Camiz, 2015)

Santa Napa, di Acrotiri, Agheropiti, di Enclitra, & alti e greci Badie, che non mi sovengono per hora». In the literature review, we outlined some of the different transcriptions of the name, such as «rich convent called Acropede» (Pokocke, 1738 and Cobham, 1908: 261), or «Saint Acheropeto» (Drummond, 1750 and Cobham, 1908: 298). The place-name of *Lapithos* survived throughout the middle ages,

Figure 2 – Photo of the front view of the church.(A. Camiz, 2014)

and it is quoted in a document of the end of the XV century (De Mas Latrie, 1855, p. 510) describing the land properties in Cyprus.

Lo Baliazzo di Lapitho, casali sottonominati, videlicet;

Casal Lapitho
Casal Vasiglia
Casal Pifani
Casal Margi
Casal Steffani
Casal Chiendinari
Casal Petomeni
Casal Strumbi
Casal Mirtu
Casal Cambili
Casal Carpassia
Casal Clepini
Casal Arasi
Casal Sambra Tumucchi

Summa casal n. 14

In 1469, the area of *Lapithos* is documented within the belongings of John Flatros. «Son bourg s'appelait Lapithe, et estoit plus peuplé que ny Lemisse, ny Paphe, ni Famagoste.
Il avoit aussi les bourgs de Sainct Demetrie, Piscopion et autres jusques au nombre de vingt-quatre, entre lesquels estoit celui de Chite, que la seigneurie de Venis a depuis vendu à Ziam ou Jehan Flatre». (De Mas Latrie, 1855, p. 242).
The site became an army barrack in the 1970s, and some parts were added, like the showers and the toilets. Following the analysis of the masonry types, it was possible to outline the Monastery and Church construction phases.

V	century	Basilica
XI	century	Church, Catholicon
XII	century	Church, first narthex
XIII	century	Church, second narthex
XIII	century	Northern wing first level
XIV	century	New Apse
XIV	century	exonarthex
XV-XVI	century	Northern wing second level
XVIII-XIX	century	Southern wing

Table 1 - Proposed building phases of the Monastery and Church.

The reconstruction of the formation process of routes and settlements in the area of the monastery is one of the premises, following the Italian school of urban morphology, for the design of an addition to the monastery. On the northern coast of Cyprus, a main mountain ridge goes all the way from the East to the West; from this main ridge, secondary ridges descend towards the sea organizing the slope in a readable territorial organism. Only with the full multi-scalar understanding of the urban, territorial and built organism, it is possible to design an architecture conceived as the continuation of the ongoing process. The contemporary design is conceived not as opposed to history, but rather as a continuation of the past into the future.

Reading and designing the area of Lambousa-Karavas

The International Center for Heritage Studies was been established at Girne American University in August 2012 to bring together scholars and practitioners, and support a comprehensive approach to the study of heritage. The affiliates are academics in the fields related to heritage studies (such as architecture, restoration, history, and archaeology) working at local, national, and international levels. The research centre's mission is to host researches and studies on heritage, in Cyprus and abroad, with particular focus on Architectural Heritage. including history, survey, documentation, restoration and design. During the international workshop "Reading and designing the area of Lambousa, Karavas", held at Girne American University in 2014, we started different researches on the monastery: the laser scanner survey of the whole complex with the cooperation of Prof. Giorgio Verdiani (Fig. 3-7), the documentation of mosaics, *spolia* and wooden artifacts, the study of the different historical phases of the monastery, the design of a museum to host the *Lambousa* treasure, the design of a garden, and the design of an addition to the monastic building. The international workshop was essential for the wider

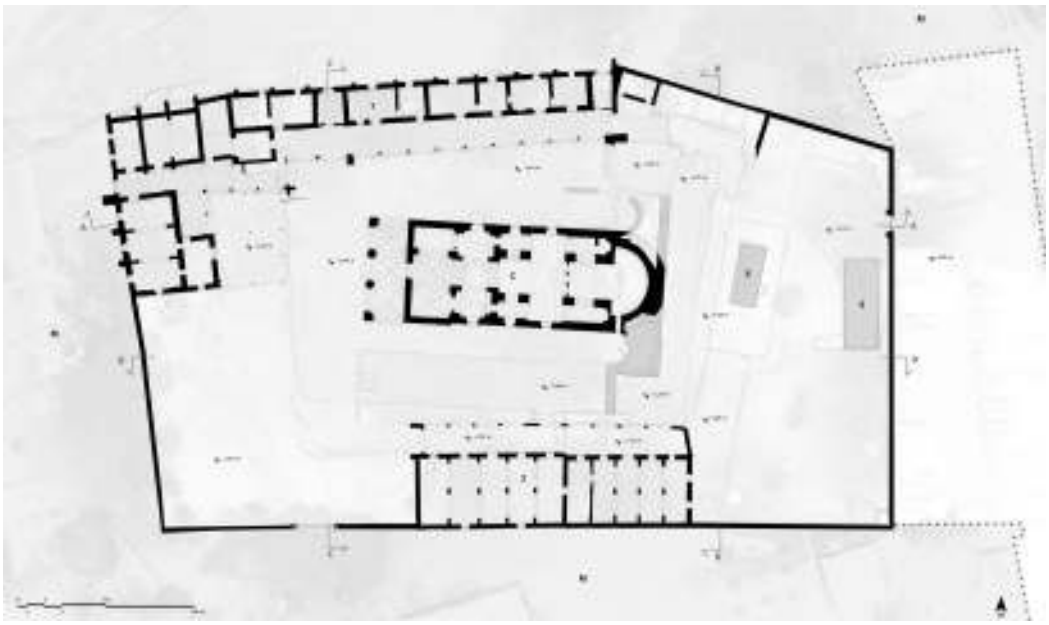

Figure 3 – Carmine Canaletti (2015), Digital survey, plan of the Monastery, Lettura e progetto dell'area di Lambousa-Karavas, Cipro, rapp. G. Verdiani, co-rapp. A. Camiz, Università degli Studi di Firenze, Scuola di Architettura, Laurea Magistrale in Architettura 4/s.

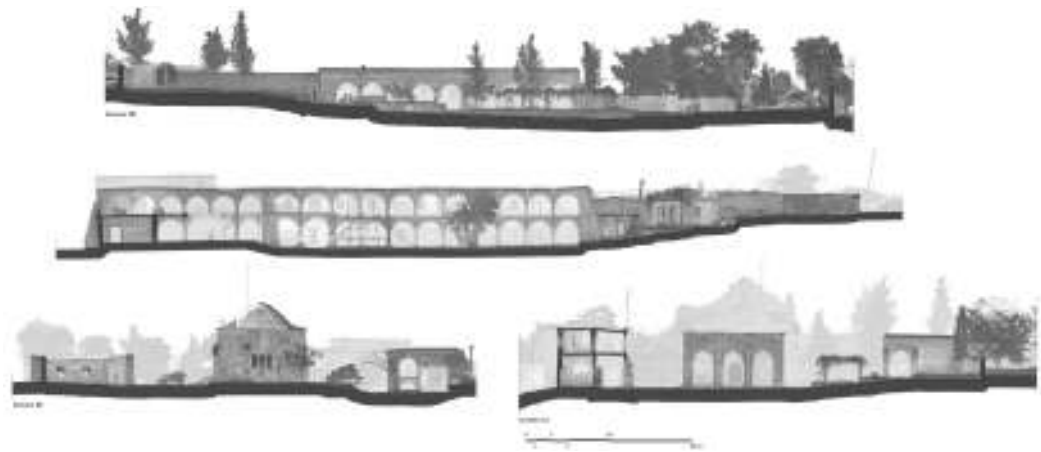

Figure 4 – Digital survey, internal elevations and sections of the Monastery, Lettura e progetto dell'area di Lambousa-Karavas, Cipro, rapp. G. Verdiani, co-rapp. A. Camiz, Università degli Studi di Firenze, Scuola di Architettura, Laurea Magistrale in Architettura 4/s.

international cooperation framework and an essential prerequisite for the preservation and continuation into the future of the monument together with the UNDP and the Technical Committee for Cultural Heritage in Cyprus.

Urgent provisional interventions are necessary

In the Northern Monastery building, at the second level, the third column from the West is dangerously leaning, the column base is not properly supported, and is about to fall (Fig. 8, 9). The arches and the wall above are dangerously leaning outward, and both the slab and the roof are severely damaged. In the same position, a joint between two different construction phases is clearly visible, causing in time progressive displacements of the columns. Three different

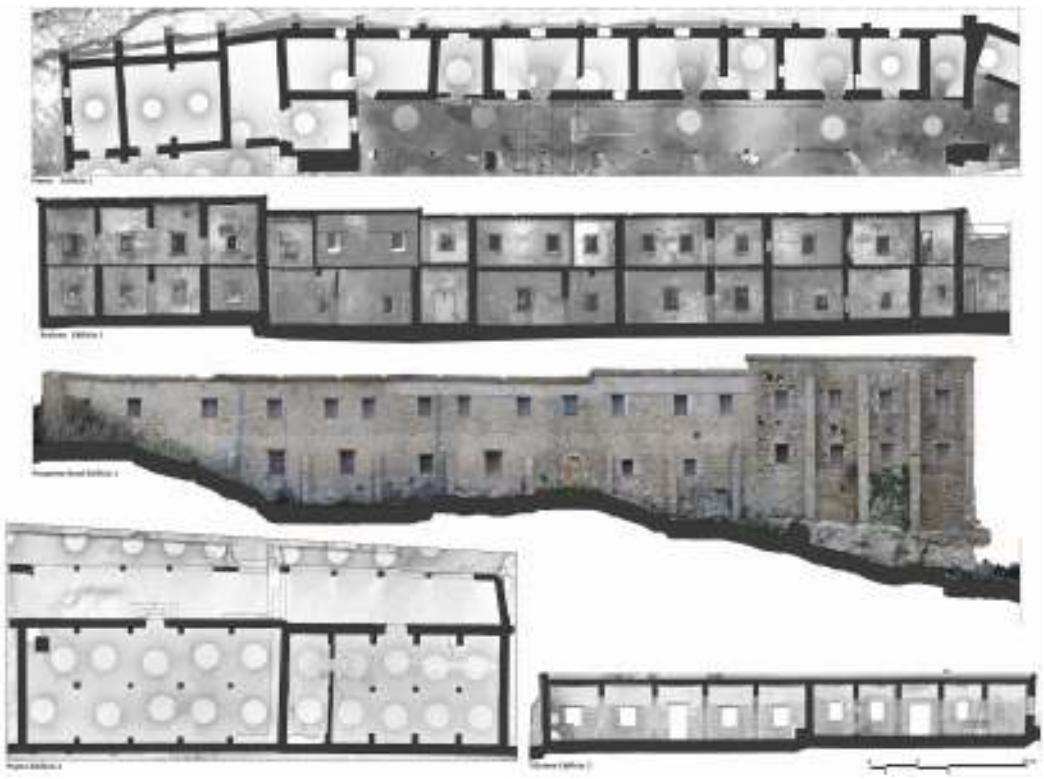

Figure 5 – Carmine Canaletti (2015), Digital survey, external elevations and sections of the Monastery, Lettura e progetto dell'area di Lambousa-Karavas, Cipro, rapp. G. Verdiani, co-rapp. A. Camiz, Università degli Studi di Firenze, Scuola di Architettura, Laurea Magistrale in Architettura 4/s

restoration operations were accomplished in the past on this part of the building to prevent the columns from leaning outward. The last intervention, consisting of a metal scaffolding, is preventing this very column to rotate off its axis. The scaffolding has moved in the years, so the displacement of the column base has increased and is continuing to grow, causing the rotation off the vertical line of the column, and a severe risk for the building. An intervention to prevent the column from moving further, and eventually to push it gradually, with the two supported arches, in its original position, and the restoration of the slab below and the roof above is highly recommended with great urgency.

Architectural design as the continuation of an ongoing process

The use of an archaeological site as a compositional model for experimental contemporary architecture provides precious materials for the design process: the site becomes preeminent, and consequently we cannot relegate the ruins in the background. We can affirm that the restraints imposed by the archaeological area enhance the uniqueness of the resulting composition. «When Sklovskij, the great Russian esthetician, coined the term *ostranenije* - estrangement - to indicate how the de-contextualization of a piece of literature – but in general of any artistic element - causes the alteration and often the increase of effectiveness of that text, he had not considered the reverse process: how important is, for the meaning and evaluation of a work of art, the maintenance of its context» (Dorfles 2005). Similarly, the re-establishment of the fundamental relationships between the monument and its context is the prerequisite for a correct contemporary design. Teaching architectural design focused on archaeology is essential in

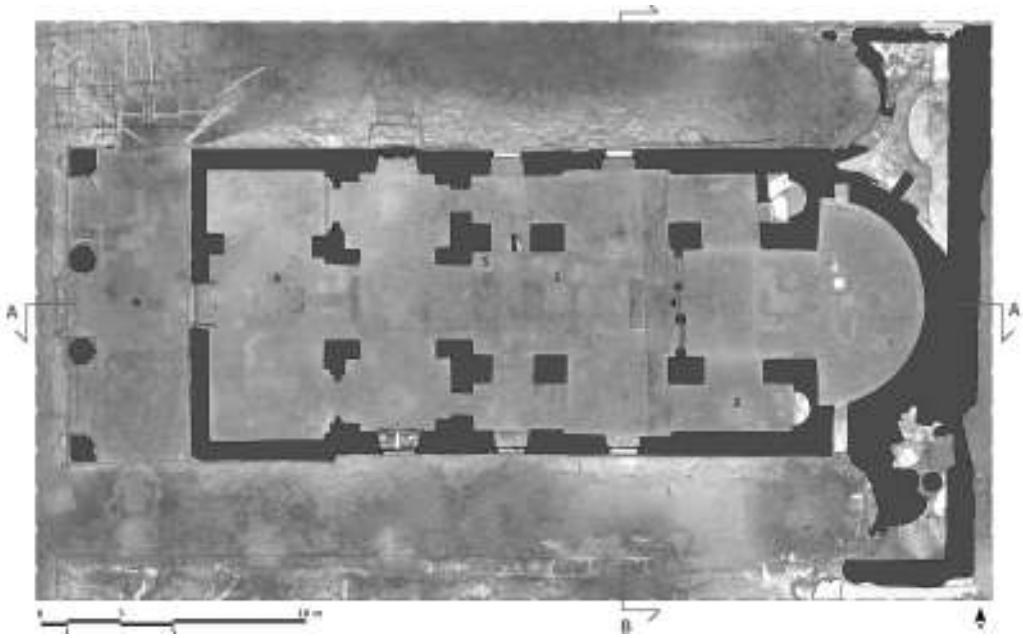

Figure 6 – Carmine Canaletti (2015), Digital survey, plan of the Church, Lettura e progetto dell'area di Lambousa-Karavas, Cipro, rapp. G. Verdiani, co-rapp. A. Camiz, Università degli Studi di Firenze, Scuola di Architettura, Laurea Magistrale in Architettura 4/s

Figure 7 – Carmine Canaletti (2015), Digital survey, elevations and section of the Church, Lettura e progetto dell'area di Lambousa-Karavas, Cipro, rapp. G. Verdiani, co-rapp. A. Camiz, Università degli Studi di Firenze, Scuola di Architettura, Laurea Magistrale in Architettura 4/s

Cyprus where ruins bear a relevant symbolic value: for the students the ruins become the living testimonies of a forgotten past. Several educational experiences have shown that architecture students, in the face of a ruin, assume a reflective attitude that forces them

Figure 8 – The scaffolding is holding in place the leaning column, urgent intervention is required (photo: A. Camiz, 2014).

Figure 9 – The scaffolding is holding in place the leaning column, urgent intervention is required (photo: A. Camiz, 2014).

to consider the *context*, in this case the *archaeological context*, as an integral part of the architectural design process. Often architecture students cannot understand ancient architectures, and therefore they are pushed to question their real subject expertise. They are indeed concerned about the ruins, since these belong to architecture, although old and abandoned, but cannot really deal with them. In other words, the relationship with the archaeological context triggers students' particular attention and leads them to consider the place and the artefacts that were there in the past as a single organism. The mental process of understanding the relationships between different parts of an ancient building facilitates the transposition of these relationships to the contemporary design of a *living organism*. Most difficult for an educational project within an archaeological area, is to transmit the choice of a *quiet poetic*: a compositional process based on the dialectics between foreground and background. If the main subject of the composition are the ruins, the proposed new architecture should assume a background role, cautiously avoiding any desire to emerge as an independent form. This composition exercise becomes crucial in contemporary architecture, where the research seems dominated by *striking figures* rather than by the silent construction of architectures in continuity with a still *ongoing process* (Strappa 2014). Designing within an archaeological area, we should also consider the absence of a given frame or limit. In the ordinary design process, the frame is determined by the property limits, and inside this frame, the architect usually displays his compositional figures. An archaeological project

Figure10 – Students are analysing different types of masonry during the workshop (photo: A. Camiz, 2014).

instead overlaps different frames, one given by the excavation perimeter, the other by the limits of existing public and private properties, another one comes from the limit of urban areas, the perimeter of archaeological restraints is very important, and finally the perimeter of the ancient architecture and its pertinence. In these cases, architects should design their composition within a complex framework, and not as a single meaningful subject. If the project normally consists in the elaboration of an architectural figure within a given frame, in this case the design exercise consists rather in the development of a complex system of frames inside an existing framework, the archaeological site. Usually ruins look like an incomplete figure, a partially obliterated picture, and herein the project should develop an

Figure 11 – Prof. G. Verdiani operating the laser scanner in the church. 2014 Workshop (photo: A. Camiz)

Figure 12 – Emperor Tiberius' statue base with a Greek dedication inside the Southern building of the monastery (photo: A. Camiz, 2014)

independent relationship with the past avoiding any historicist mimicry.

The correct way for an architect to walk on a *classical soil* is to design the limit of the ancient site as a contemporary place. In addition, the design of an architecture within the ruins highlights the sustainability of pre-capitalist architecture, which can be opposed to most contemporary architecture. From Vitruvius to Alberti, from Michelangelo to Bernini, the *envois* of the *Prix de Rome*, Schinkel, Louis Kahn, Le Corbusier, Libera and Quaroni, most important architects have dealt with archaeology within their work: archaeology offers a catharsis for contemporary architecture; it is not a place where to bury *ancient or modern* repeatable styles. Designing the space between the city and an archaeological site therefore provides some educational tools to guide future designers even in small historical centers (Strappa, Carlotti, and Camiz 2016). Herein the same *silent poetic* and balanced relationship between foreground (historical context) and background (contemporary project), can reasonably be replicated and experienced with the specific purpose of reconstituting a formal relationship between the context and the contemporary design process.

Different design groups, coordinated by the writer, have adopted a general strategy specification to design some small projects; all the proposed interventions

Figure13 – Abdul Rahman Rachdi, Walafrid Strabo's Hortulus in the Acheiropoietos Monastery, Cyprus, (ARCH371-Landscape Design, Asst. Prof. Dr. Arch. Alessandro Camiz, Girne American University Faculty of Architecture, Design and Fine Arts, Fall 2014).

follow the sustainability, and the design principles defined by Cesare Brandi, i.e. reversibility, *recognizability*, compatibility, minimal intervention and the partial image reintegration. (Brandi 1963). The project completes the formation process of the anti-nodal Eastern special building as the monastery complex is. The ancient monastery is here considered as a living organism, to be continued with a new addition, the project therefore, using contemporary materials such as steel, stone and wood, replicates the same measure of the bays of the monastery so to develop the addition. The elevation of the new composition was designed to extend the fundamental lines of the ancient monastery: ground line, base, elevation, connection and conclusion lines are continued in the new composition, strictly avoiding any *mimesis* of the ancient buildings, and continuing the same organism started with the construction of the ancient church. The nodes where the new architecture encounters the old buildings are the crucial part of the design operation. The addition completes the living organism of the monastery, avoiding strictly any kind of aesthetical contraposition. Neither touching the old building, or bearing loads on the old walls.

The new building is thus recognizable as another part and a different piece of a composition that shows even today an unitarian character. The continuity is so expressed also in the distributive system of the complex, granting full accessibility to all the parts, even for people with disabilities. (Fig. 14-18).

Landscape design as the continuation of an ongoing process

Within the workshop, different definitions of landscape were compared, the one given by the European Convention of Landscape, «an area, as perceived by people, whose

character is the result of the action and interaction of natural and/or human factors» (EU, 2000), and that provided by Emilio Sereni, «the form that man, in the course and for the purpose of its agricultural production, consciously and systematically gives to the natural landscape» (Sereni, 1961), (Camiz, 2011). The discussion questioned if the landscape design should be a conscious material transformation of a living organism, or an aesthetically oriented manipulation of an in-animated object, and then proposed strategies for the education of conscious communities that can guide the transformations so not to follow only speculative interests. Following these premises we conceived a garden within the monastery of Acheiropoietos, inspired to Walafrid Strabo's poem. The *Hortulus* was composed in Latin in the IX century using hexameters to describe the monastic garden of Reichenau. In the poem, 23 different plants are described. These same plants were chosen as a living model for the project. The project uses wooden floor and flowers beds with a self-sufficient irrigation system and green hedges, demonstrating how it is possible to design a contemporary garden, following a medieval model, in an archaeological site, according to the analysis of Urban Morphology, and the principles of restoration described by Cesare Brandi: i.e. recognisability, compatibility, reversibility, minimum intervention. (Brandi 1963).

This enclosed medieval garden was designed to host, in one part the twenty-three plants described in Walafrid Strabo's Hortulus, and in the other part, a garden dedicated to mint plants. Both of the two parts of the garden were designed, using sustainable materials and very simple technologies, so to propose a possible solution for a compatible, reversible and recognizable design within the site of the ancient Monastery.

The continuation of the existing path of the portico was outlined as a system of matrix, implantation and connection routes, so to dispose the flowerbeds containing the plants

Figure 14 – Franklin Edeki, Addition to the Acheiropoietos Monastery, Cyprus, (ARC302-Architectural Design Studio IV, Asst. Prof. Dr. Arch. Alessandro Camiz, Girne American University Faculty of Architecture, Design and Fine Arts, Summer 2015)

Figure 15 – Franklin Edeki, Addition to the Acheiropoietos Monastery, Cyprus, (ARC302-Architectural Design Studio IV, Asst. Prof. Dr. Arch. Alessandro Camiz, Girne American University Faculty of Architecture, Design and Fine Arts, Summer 2015)

Figure 16 – Franklin Edeki, Addition to the Acheiropoietos Monastery, Cyprus, (ARC302-Architectural Design Studio IV, Asst. Prof. Dr. Arch. Alessandro Camiz, Girne American University Faculty of Architecture, Design and Fine Arts, Summer 2015)

in a way that simulates the formation process of an urban tissue within the monastery.

The result is a continuation of the formation process of the monastery that enhances the site and its history, without imitating the past. (Fig. 13)

Figure 17 – Franklin Edeki, Addition to the Acheiropoietos Monastery, Cyprus, (ARC302-Architectural Design Studio IV, Asst. Prof. Dr. Arch. Alessandro Camiz, Girne American University Faculty of Architecture, Design and Fine Arts, Summer 2015).

Conclusions

None of the proposed projects are meant to be built in reality, but they conceived as the experimental application of a theoretical method. The proposed method, based on the careful examination of each context and its history, recovers the rules of the transformation from the analytical reading of

Figure 18 – Franklin Edeki, Addition to the Acheiropoietos Monastery, Cyprus, (ARC302-Architectural Design Studio IV, Asst. Prof. Dr. Arch. Alessandro Camiz, Girne American University Faculty of Architecture, Design and Fine Arts, Summer 2015).

the formation process of the artifact. Through a project, not intended as an *impromptu* academic exercise, but rather as a design experiment, we intend to suggest to the local authorities some possible interventions in the area of the Monastery. The projects represent diverse topics, such as the reintegration of the image, or that of the construction of the margin, but they are all, in different ways, set on the transposition of the Brandi's principles of restoration to the architectural composition. All proposed projects are reversible, recognizable, consistent, and based on the minimum intervention, but finally the resulting picture certainly does not belong to the domain of the restoration itself, but rather to that of architectural composition in archaeological area. In the analysis of the formation process of the monastery, the contribution of urban morphology and architectural typology was essential, so to develop analytically the proposal of an addition to the monastery as the continuation of an ongoing process.

Notes

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THE URBAN DEVELOPMENT OF ANCIENT VALENCIA'S NORTH-EAST CORNER THROUGH THE EVOLUTION OF ITS CITADEL

Santiago Lillo Giner
Universitat Politécnica de València, Spain

Abstract: The missing Citadel of Valencia has been since its inception a milestone in the scope of the defence infrastructures that had been part of the city walls for over five centuries. Its presence has deeply conditioned the urban development of the eastern sector of the city and its relationship with the maritime quarters and the approaches to the sea. Around one of the towers of the Christian wall were built with the passage of the centuries the different buildings and defensive infrastructures that have been configuring a space originally designed to custody the arms of the Generalidad and finally to barracks to house the troops. However, the demolition of the building will not be held until the second half of the twentieth century, as a result of the confluence of various causes aggravated by the continued growth of the city and the consequent development of new neighbourhoods around the perimeter of the old wall, which would cause the loss of the strategic condition that had characterized this fortified enclave since its inception. The main goal of this communication is the study, based on the analysis of the various documents and historical planimetry, of the evolution of the north-eastern sector of the Christian walled city of Valencia through the relationship of the Citadel with its surrounding environment and the way in which the numerous interventions that the building has sustained throughout history are influenced the urban development of the modern city.

Keywords: Citadel, Valencia, fortification, urban evolution, city walls.

Introduction

Valencia has been a walled city since its founding. Its urban development, like so many other fortified cities, has always been conditioned by the presence of its surrounding walls. Its neighborhoods, historic center road layout and even the urban planning of the *Ensanche* are remnants of a historical heritage that not even the disappearance of the wall canvases has been able to modify (Fig. 1). The original *Casa de Armas*, known as the *Ciudadela* later on, was part of the defensive infrastructure of the city since its inception. Given its strategic location at the easternmost point of the Christian walled enclosure -allowing control of the access from seaward- it became a fundamental component for the defense of the city for over four centuries (Fig. 2).

The existence of the ensemble of buildings which comprise the fortified Citadel covered a broad time period, which extended for over more than four centuries.

As a result, it has been considered necessary to approach its study on five different stages allowing us to expose, in an ordered and more precise manner, the different interventions that altered both the building itself and its immediate surroundings throughout history. The stages that have been established do not respond to a uniform time distribution, but attending to certain actions that have decisively influenced the building, significantly altering its configuration, use or morphology.

Preliminary stage (1356-1543)

The tower popularly known as the *L'Esperó* Tower occupied the easternmost corner of the fourteenth century wall at the point where the wall canvas, which runs parallel to the river, diverged from it and turned sharply toward the southwest (Fig. 3).

This was the first construction of the building ensemble known as *Casa de Armas* or *Casa de Municiones* (Fig. 4). Thus, it constituted the origin of the fortified enclosure around

Figure 1 – Different stages of the walled enclosure of Valencia

which the different defensive infrastructures that made it up were successively arranged. Some authors attribute its origin to the Moorish domination period, in which it would be part of the defenses of the ancient *Balansiya* as an advanced watchtower on the road between the fortified enclosure and the sea. However, various circumstances lead to the conclusion that its existence was linked to the construction of Christian walls being built to strengthen the walls' canvases at the points where the rotation of two successive stretches made them more vulnerable, as did the *Santa Catalina* Tower in the western corner. In this period, the layout of this section of the wall differed from the one that lasted until the second half of the nineteenth century, as we can deduce from Guevara's planimetries and subsequent ones that can be found at the Municipal Archives of Valencia dating from 1496 and from references by the historian Escolano. The original canvas originated from the *L'Esperó* Tower almost perpendicular to the wall stretch originating in the convent, to then meet the *Portal del Mar*, where it turned and went toward the *Portal de los Judíos*.

However, part of this stretch of wall would last, going unnoticed as an integral part of one of the buildings of the Citadel until its final demolition in 1956.

Figure 2 - Naumachia y parte de la ciudad, vista del colegio de S. Pío V (detail). 1755. Carlos Francia. Biblioteca municipal

Fig. 3 - Vista de la ciudad. Primera Parte de la Crónica General de toda España, y especialmente del reyno de Valencia. 1546

Figure 4 - Vista de la ciudad (detail). 1563. Anthonie Van Den Wijngaerde

Development stage (1543-1574)

In 1543, concerns about the threat posed by an attack on the capital by the Ottoman navy, the stretch of wall extending between the *L'Esperó* Tower and the *Portal de los Judíos* was renewed by building a new canvas with a more regular layout than the preexisting

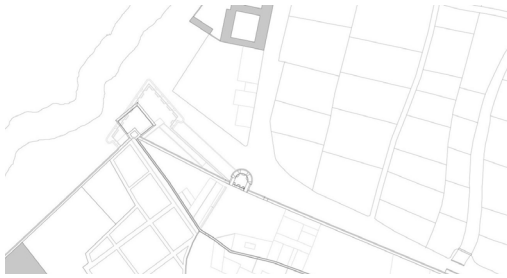

Figure 5 – The triangular space between the new canvas of the wall and the old one

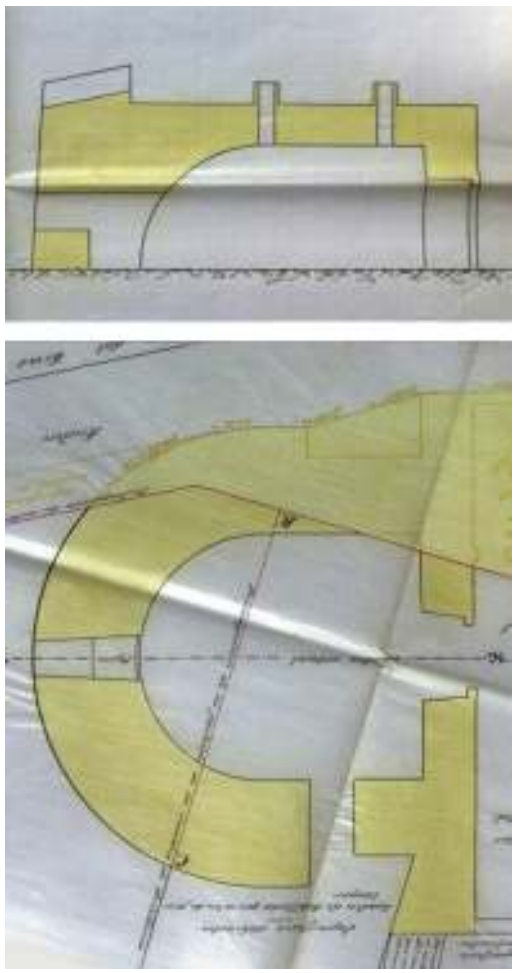

Figure 6 - Proyecto para demoler el torreón del cuartel de la Ciudadela. Long cut and ground floor. 1901. Francisco López

one, which nevertheless remained. In this new canvas, a new portal was opened.

Thus, a triangular space between the two walls was generated, which served as a zone for controls of goods arriving from the port (Fig. 5)

To protect this new portal, a semicircular bastion was built next to it and attached to the new wall. The assignment was carried out by the engineer Joan de Cervelló.

The bastion's semicircular shape, its low height in relation to its floor plan dimensions and its vaulted structure encompassing the building in the type of fortification is referred to as "of transition", which was characteristic of the first half of the sixteenth century (Fig. 6).

In 1544, the field master Pedro de Guevara outlined a project of provisional defenses surrounding the city's walled perimeter (Fig. 7). The project proposed the fortification of walls by constructing ravelins and bastions of canonic layout in towers, entrance ways and bridges.

This floor plan is the first planimetric representation of the city of Valencia known to date, although it does not incorporate the urban road layout inside the walls, only its outer perimeter. Its walled enclosure, completely surrounded by a moat and other elements, is considered by the author of strategic importance, such as the Turia riverbed, its five historic bridges and the Royal Palace on the opposite bank of the river. In collaboration with Cervelló, the works corresponding to the eastern section of the wall were held where other interventions on the *Portals de Ruzafa* and *de los Judíos*, the *L'Esperó* Tower were fortified with a first bastion built with provisional materials. This bastion suffered serious damage just two years later as a consequence of the 1546 flood, which caused extensive destruction in the area.

Renaissance stage (1574-1707)

By the year 1570, during the reign of Felipe II, there was a revived interest in the fortification of certain strategic coastal cities, among them the capital of the Kingdom of Valencia, facing the threats of the Turkish army and the Moorish rebellion.

Thus, on July 5th, 1574, it was agreed to build the *Casa de Armas* and a bastion next to the

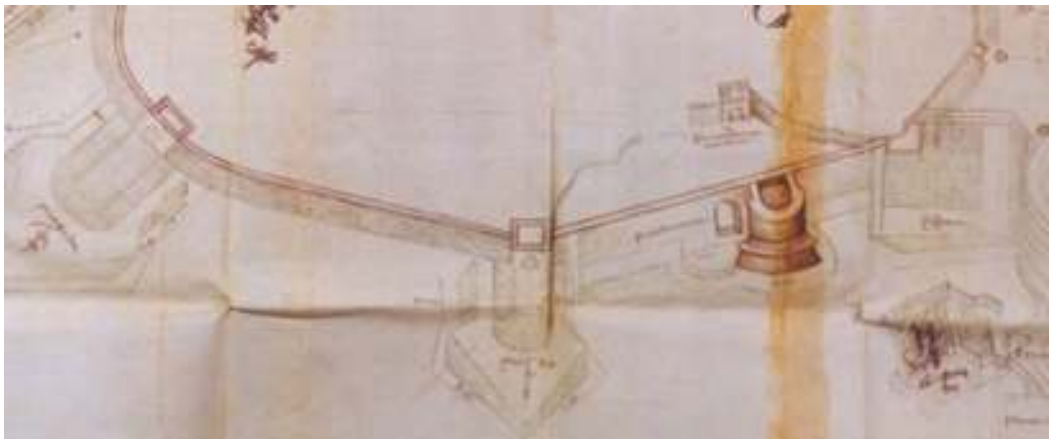

Figure 7 - Proyecto para la fortificación de Valencia (detail). 1544. Pedro de Guevara

city walls (Fig. 8). This bastion, located at the foot of the *L' Esperó* Tower, was certainly the most characteristic of all the constructive elements integrating Valencia's *Casa de Armas* military complex. Despite being in close contact with Italian engineers such as Antonelli, the Valencian Government chose to entrust planning to the master carpenter Gaspar Gregori.

The bastion of the L'Esperó Tower had an asymmetric layout with respect to the bisector of the angle formed with the wall to which it was attached, so its canvases had different lengths. To build it, it was necessary to modify the path of the wall between the *Portal del Mar* and the *L' Esperó* Tower, which followed a straight path, as depicted on the said plane by Guevara and suggested by the shape of the wall on one side of the *Portal del Mar* bastion, according to which it is appreciated that it was modified after its execution.

The capitulation signed by Gregori also included the construction of buildings aimed to the storage of necessary weapons for the defense of the Kingdom. The project was completed with other stays such as tank warehouses, stables and accommodation for the corps of guards.

While canonical type citadels were usually projected attached to the walls, interfering in its layout and with a separate geometry, in Valencia, the shape of the *Casa de Armas* fortified enclosure came about in response to

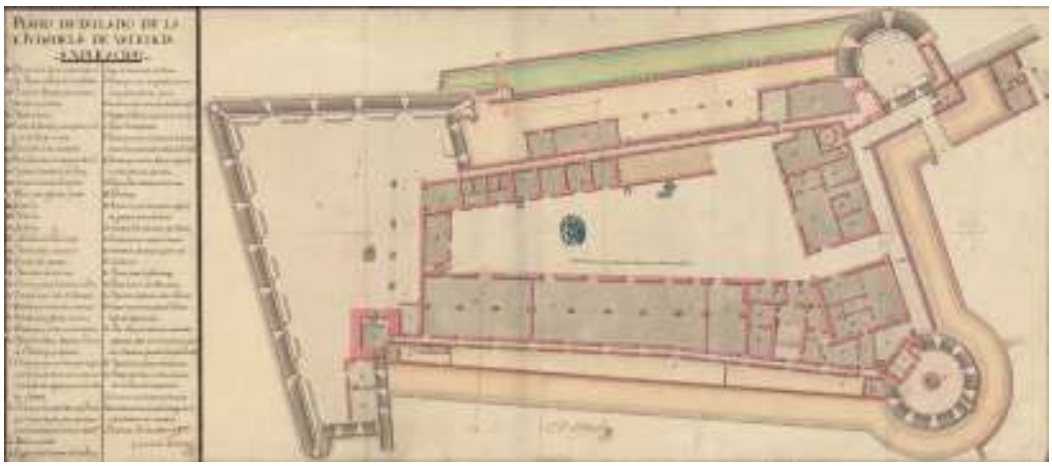

Figure 8 - Plano detallado de la Ciudadela de Valencia. 1777. Balthasar Ricaud

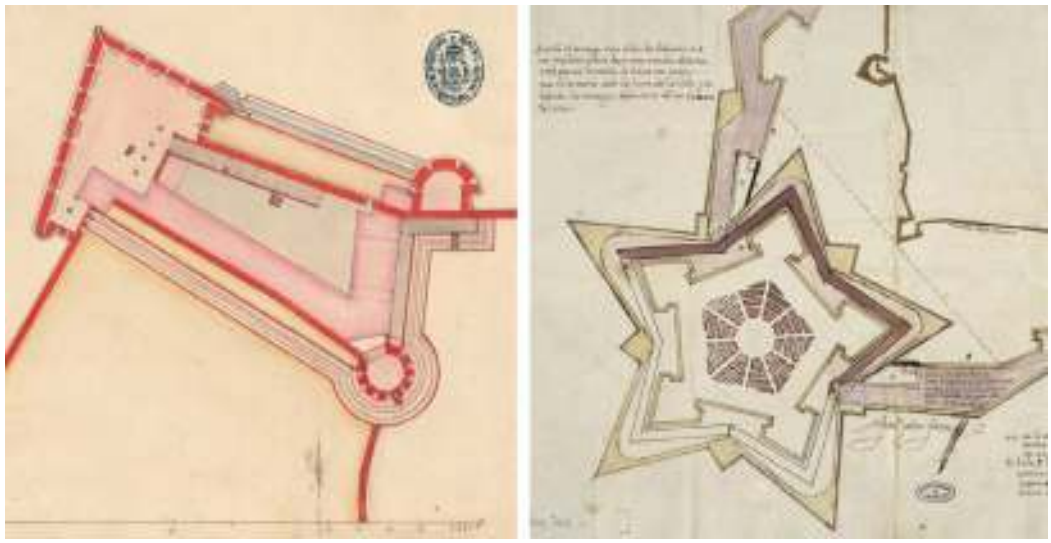

Figure 9 – Citadels of Valencia and Pamplona. 1707-1764

local conditions of the place and preexisting elements (Fig. 9).

However, since fortification tracings used to be planned from "outside-in", interior quarters and barracks had to be fitted inside its perimeter.

Then, it stands to reason that in the case of Valencia, the bastion and the walls were traced in the first place, and the *Casa de Armas* necessarily had to adapt to the remaining plot left between the original wall and the wall modified with the Gregori bastion.

The *Casa de Armas* was executed in two phases. In the first, which began in 1574, the shorter building of the enclosure, which closed the perimeter, was constructed.

Attached to the wall, works to build the access ramp to the main bastion began. Next to the main building a small outbuilding designated for storage was constructed, as

Figure 10 - Valentia edetanorum aliis contestanorum, vulgo del Cid. 1704-1738. T. V. Tosca- J. Fortea

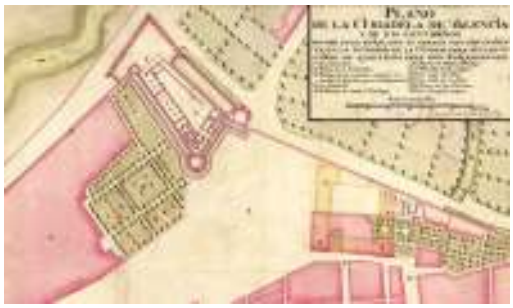

Figure 11 - Plano de la Ciudadela de Valencia y de sus contornos. 1724. Antonio Montaigú de la Perillé

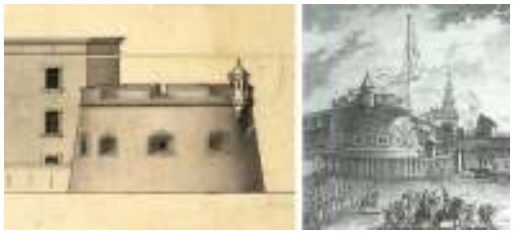

Figure 12 – Elevation and perspective of the new tower. 1724-1809. Antonio Montaigú de la Perillé - Tomás López Enguídanos

Figure 13 - Plano del ex. Convento de Sto. Domingo, su huerto, Ciudadela y campo del remedio de la ciudad de Valencia. 1847. Vicente Casanovas

indicated by the 1584 capitulations.

The second phase of works, concerted in 1585 by Joan de Ambuesa, consisted of the expansion of the buildings built by Gregori in the previous phase.

The site finally decided on for its implementation was practically the only one possible: the space between the first phase buildings and the L'Esperó Tower, along the old stretch of wall that ran from this to the first *Portal del Mar* and that would be used as a load-bearing wall.

Bourbon stage (1707-1846)

One of the first actions carried out by the Bourbon army after its entry into the city following its victory in the battle of Almansa, was to occupy the premises of the *Casa de Armas* and starting the renovation works that definitively changed the appearance of the building and its immediate surroundings. The goal of the new government was to transform the space into a fortified enclosure on all fronts in order to defend the city not only from possible external aggression, but also to protect the new authorities against its own citizens, who had demonstrated against the new Bourbon monarch.

The first actions carried out were aimed at opening up the space outside the walls opposite to the eastern façade in order to

Figure 14 – Images testifying the evolution of the surroundings of the Citadel

Figure 15 – Citadel and new artillery barracks elevation. 1909

increase the security perimeter around the building (Fig 10).
Specifically, the stays of the neighboring Convento del Remedio closest to the *Casa de Armas* and the partition walls were demolished.
Additionally, a stretch of the old wall running from the *Casa de Armas* and the alley known as the Xerieta were demolished as well, including the ancient *Portal del Mar* and the housing and customs building annex.
These actions led to the opening of a large space in front of the southern façade which represented the origin of the current Glorieta garden and the Porta de la Mar square (Fig. 11).
On the western corner, a circular plan tower was built using materials from the demolition. This new defensive element, which closed the security perimeter of the enclosure, became the symbol of the repression the Bourbon government imposed on the Valencian people (Fig. 12)
Many of the plans made mostly by French engineers of the eighteenth and nineteenth centuries belong to this period.

Modern stage (1846-1956)

Demolition of the walls and the *Portal del Mar* in 1868, along with the expansion of the new *Ensanche* districts, represented the starting point for the process of transformation of a space limited up to that moment, similar to the one occupied by the *Ciudadela* and its surroundings. The destruction of the Remedio convent, located in front of the eastern wall, was the first of the changes that certified the beginning of this process, followed by the continuous urban transformations of the adjoining southern façade areas (Fig. 13).
In turn, the military complex responded by adapting its exterior enclosure and partially amending its buildings (Fig. 14).
Numerous works aimed at expanding the space needed to meet the growing demands of the War department were carried out.
New barracks were constructed, such as the project by Vicente Lassala located outside the walls opposite to the *Llano del Remedio*, or the artillery barracks, which implementation required the demolition of the circular tower built in 1707.
The design of the façade of neogothic style, inspired by the Lonja building, is attributed to architect Manuel Cortina (Fig. 15).
With the renovation of the current street *Navarro Reverter* and demolition of the *Portal del Mar*, it was made necessary to permanently open the path obstructed by the tower, as this was an important foundation of the road network.

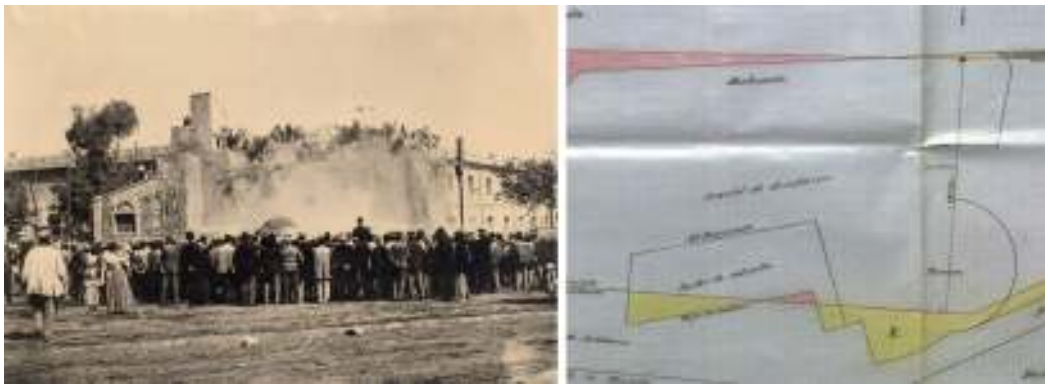

Figure 16 – Demolition of Citadel's baluard. Permuta de terrenos y nuevas alineaciones. 1901. J. Martínez Aloy

Figure 17 - Adaptación del cuartel de artillería de la Ciudadela a la plaza del Marqués de Estella. 1927. Francisco de Castells

On September 18th 1901, after great public outcry, demolition of the *Portal del Mar* bastion began. The plots it occupied were part of a plan that included the rectification of alignments of the *Santo Domingo* quarters and the *Ciudadela* block and the land swap with the City Council (Fig. 16).

In 1927, a new project was drawn to adapt the barrack's façades to the lines of the *Marqués de Estella* square since, despite the chamfered corner, the road space intended for circulation was too narrow (Fig. 17).

The project consisted of demolishing most of the buildings of the old *Casa de Armas*, so that the new line outside the concave façades adapted to adjust to the alignment of the square.

In 1929, engineer Francisco Roldán drew a second draft of the project amending some aspects of the previous one. With this new solution, a single façade unified the front oriented to the *General Palanca* street and the *Marqués de Estella* square among the *Artillería* and *Llano del Remedio* barracks.

The new façade adopted the same pattern as the *Cortina* Quarters.

The result conferred the building an external image of unity, somewhat contradictory to its internal configuration while allowing full urban integration.

The Citadel's barracks ensemble reached its final stage as the result of the addition of several buildings set around the original outbuildings, filling residual spaces and trying to visually unify their façades along the lines of the formal academicism of the times.

With the disappearance of the walls and the change of use, the building began a process of validity loss which was aggravated by the expansion of outlaying neighborhoods and

Figure 18 – The plots after the demolition. 1957

an increasing demand for spaces required by the army. All these circumstances led to the demolition in 1956 of the Citadel's barracks ensemble, including the *Artillería* barrack, the *Casa de Armas* buildings and the old sixteenth century stronghold (Fig. 18).

On March 21st of that same year, a land auction to sell the plot was held, and years later the land was occupied by the houses which still remain today and that have since, permanently erased the memory of what once constituted Valencia's Citadel.

The disappearance of the Citadel thus joins that of many other key heritage buildings like the *Palacio Real* and the *Casa de la Ciudad*. These three emblematic structures embodied the headquarters of military power, royal power and civil power. With them, we lose not only part of our heritage, but also a part of ourselves.

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STATE OF ARCHAEOLOGY IN ARCHITECTURE AND CITY PLANNING – REFLECTIONS ON TWO CASE STUDIES IN FINLAND

Liisa Seppänen
University of Turku, Finland

Abstract: Finland is a country, which is more noted for modern architecture and design than archaeology and history before the WWII. The history of this sparsely populated area is long, but the urbanization of the country was a quite late and slow process compared with other European countries. The urbanization of the present-day Finland started in the early 14th century with the establishment of Turku in the southwest coastal area, which at that time was part of the Swedish realm. By the mid of the 15th century, the number of towns in this eastern part of the Swedish realm was six. Today, four of these towns (Turku, Rauma, Naantali and Porvoo) do still exist inside Finnish borders and they are using their medieval history in branding and identity making when needed, but what is the value of archaeology and history in other, younger towns of Finland?
In this paper, I am presenting two towns with different backgrounds, history and branding and discussing how archaeologists have contributed in the development of the town and how archaeological information is used and presented in today's townscape. The other town is Turku, which is the oldest town of Finland with a long tradition of archaeological excavations and a strong local identity built on the history of the town. The other town is Lahti, which is the youngest town of the modern Finland established in the turn of the 20th century and noted for industry and winter sports activities. Facing the prevailing situation enables us to ponder upon the question how we could integrate the past into the future and collaborate more intimately together in order to create townscapes which have their own identity formed as a result of past events and achievements of previous generations.

Keywords: Finland, Lahti, Turku, archaeology, townscape.

Urban excavations in Finland today

In Finland, urban excavations are generally carried out in advance of or simultaneously with construction activities, land use or development projects of other kind. Excavations based purely on research are very rare and exceptional. For example, in Turku, there have been c. 590 urban excavations or archaeological fieldwork investigations by now. (KL 2015; PIHLMAN & KOSTET 1986:68–117.) Only a few of these have been conducted on a research base only. One of these excavations was carried out in 2005–2006 when the city of Turku financed excavations conducted by the local city museum in the vicinity of the cathedral in order to find out the foundation time of the town. (AINASOJA ET AL. 2007.) Furthermore, a few excavations in a small scale have been carried out in the archaeological–historical museum Aboa Vetus & Ars Nova since its opening in 1995 in order to offer the public a possibility to see on-going excavations as a part of the museum exhibition and activities.

There may be great differences between different excavations depending on the town, the organization responsible for the excavations and different parties involved in the project including individual archaeologists and their way of carrying out the project. Traditionally, the National Board of Antiquities has been responsible for most excavations excluding the ones carried out in Turku, where the excavations have been conducted mainly by the local city museum until now (The Museum Centre of Turku). Since 1994, the Aboa Vetus & Ars Nova -museum has conducted its own excavations inside the museum. Furthermore, few excavations have been carried out by private companies. Today, there are 18 parties practicing

archaeological fieldwork and conducting excavations in Finland. These parties include both organizations (National Board of Antiquity, museums and universities) and private companies of different size. Besides, there are 14 organizations and companies who are specializing marine archaeology and excavations underwater.[1]

According to the prevailing procedure, prior to construction activities the developer consults with archaeologists working in the local museum or National Board of Antiquities, who are responsible for archaeological and cultural heritage of the area. Officials give a statement related to the developing project and its effects on the cultural heritage of the area and define the level of archaeological investigations if there is a possibility that the cultural layers are affected by the developing actions. If archaeological investigations are needed prior to the developing project, the developer is responsible for arranging the actions required in the area. The developer may decide who will carry out investigations and on what terms. Unfortunately far too often, the decision is based on the costs only and it is not unusual that the selection criteria (the lowest prize) is already mentioned in the request for offers. This means that the archaeologists who might have the best experience and knowledge of the area and period in question are not necessarily chosen for the job. Furthermore, this means that excavating archaeologists are esteemed as a sort of cultural clearance team, who come to collect the finds and document the features in the area where the cultural layers are going to be destroyed due to developing activities. This practice does not give these archaeologists many opportunities to participate into the planning of the construction project or the developing project in the area. Normally, the plans for the construction, development of the townscape and future land use of the area are already made when archaeologists come to the picture to carry out excavations in order to "clear" the area from the remains of the past. After the excavations, they release the area for the development and continue with the analysis and reporting of the data, store the finds and documents to the archives and hope that some day somebody would have resources, time and money, to continue with the research and publication of the case. Consequently, the role of archaeologists is easily encapsulated to carry out the excavations only as obligated by the Antiquities Act.[2] Archaeologists transform the history of the site into texts, numbers and pictures, disconnect the information and material evidence from where it was formed and take it into museums, archives and storages. Clearance is done and development may go on.

Turku – the oldest town of Finland

In Finland, it is probably hard to find a person who couldn't name of the oldest town of the country. The city of Turku, which was

Figure 1 – Despite destructions, the cathedral of Turku looks pretty much the same today than it did at the end of the 15th century. (Copyright: Lasse Andersson)

Figure 2 – The medieval Turku Castle is greeting the visitors of Turku by the sea c. 3 km away from the cathedral. Today the surroundings of the castle are dominated by activities and buildings related to shipping and docks.
(Copyright: The author)

Figure 3 – The medieval market square of Turku is no longer the heart of the city. Usually, the square is silent with only odd passer byes. In summertime, it is packed with people during the medieval markets organized since 1996. Another time when the market is attracting people is during traditional Christmas markets and on Christmas Eve when the official Declaration of Christmas Peace is announced from the balcony of the building on the right of the Old Town Hall.
(Copyright: The author)

Figure 4 – Ruins of the "lost city" can be admired already in the entrance and cafeteria of the archaeological-historical museum of Turku.
(Copyright: Markus Kivistö)

founded according to the present knowledge in the turn of the 13th and 14th century, has actively branded itself as the oldest town of Finland with the longest traditions in urban culture and the oldest still surviving medieval monuments, the cathedral and the castle, as one of the main attractions of the city (Fig.1 & 2). (About the foundation and early phases of Turku e.g. PIHLMAN 2007, 2010; SEPPÄNEN 2009, 2011.)

However, for the one who is visiting Turku and is unaware of the history of the town, it can be quite difficult to comprehend at the first sight that this is the oldest town of Finland and once was the cradle of urban civilization and the scene of important historical events. The only still surviving traces of the medieval town can be found around the Old Market Square, the shape of which has probably remained the same more than 700 years by now (Fig. 3). From the square one can walk along the medieval Convent Street (Fin. Luostarin välikatu) to the archaeological-historical museum (Aboa Vetus) where one can see the remains of medieval and post-medieval buildings unearthed in the early 1990s (Fig. 4).

The present layout of the town was created after the big fire of Turku in 1827, which destroyed c. 75 % of the town without sparing even the cathedral from the destruction. However, one area on the outskirts of the town was saved from flames and has been preserved as an open-air museum (Luostarinmäki Handicrafts Museum) presenting the life-style of that area and skills of the craftsmen of the pre-industrial period (Fig. 5). In the centre of the town, one can find another museum (Qwensel House), which has preserved the atmosphere and milieu from the 18th century.

One can find still buildings from the 19th and early 20th century in different parts of the town although the town was heavily modernized after the WWII. Demolition of old buildings and erecting the new ones was active between 1956 and 1985. In the most fervent year of modernization, even up to 400 old buildings were pulled down, which gives us some perspective to the rate of change that the town experienced in the decades of fervent development. (KIVISTÖ 1999).

Since the late 19th century, historians and

archaeologists have been involved in the development of Turku whenever construction activities have required excavations and documentation of remains that need to be removed. Normally, archaeologists haven't had much to say about the construction plans, which have been made and realized without considering the possibilities of integrating the archaeological evidence of the past with architectural creations for the future. There is one major exception which deserves to be mentioned again: The Aboa Vetus & Ars Nova –museum, which was established as a result of archaeological excavations in the area which was meant to be storage for contemporary art owned by a private collector, Matti Koivurinta and his foundation. The remains revealed in the rescue excavations in the area were so large and remarkable that the National Board of Antiquities started negotiations with the owner of the area about the preservation of the remains in situ. With the financial support from the ministry of Education and Culture the decision was made to save the remains and the archaeological-historical museum was built on site. The art, however, can be admired in the museum too, in the building that was erected on site in the 1920s. (SARTES 2003)

The situation was somewhat different a decade earlier on the other side of the river. Construction of a new building complex with a hotel and a cinema theatre launched archaeological excavations in an area, which was inhabited since the 16th century. Excavations revealed buildings, a graveyard with more than 600 hundred deceased and remains of a masonry church dedicated to the Holy Spirit. (KYKYRI 1985; LAAKSONEN 1984, 1985; PIHLMAN 1994) The construction works were realized as planned, but some of the remains were preserved in situ. Today one can find the remains of the church in a private chapel that was built to contain the remains of the church as well as the skeletons of the deceased.[3] One can find some remains of

Figure 5 – Luostarimäki Handicrafts Museum offers a glimpse to the life of outskirts of Turku as it was before the fire in 1827. (Copyright: The author)

Figure 6 – Past and present in harmony?Archaeological remains unearthed in the 1980s are roofed within a grocery store today. Probably, most of the customers are not aware of the history of the place and do not pay any attention to the remains surrounded by the merchandise. (Copyright: The author)

the buildings in a grocery store next to the chapel too, if one only knows what to look for (Fig. 6). Some of the artefacts, which were found during the excavations are presented next to the chapel, outside of a restaurant with a text informing the people that there has always been the restaurant in this place what these fragments are proving for. In 1998, there were large excavations in another part of the town c. 150 meters south from the cathedral next to the present-day Hämeenkatu street. The plot belonged to the Åbo Akademi University, which wanted to build a new main building on site. Excavations revealed about 100 constructions from the Middle Ages and an abundance of different kind of find material. Today, one can find some information about the excavations in a small exhibition made in the entrance hall of the building.

These examples demonstrate that archae-

ology and history are visible in Turku today if one knows where to look for it. One can experience the discoveries of archaeology in the museums (in situ and open air –museums) and in the glass cases inside the new buildings erected on site where the finds and remains were excavated. However, the past discovered in excavations is not visible in the townscape of today and does not communicate with the present. Furthermore, the idea of urban archaeology is mainly limited either to protect and preserve archaeological heritage underground or to excavate it away and thus enable the development of the area.

Figure 7 – The idea to represent the general layout of the excavated village with plot borders and buildings by altering different kind of paving was not realized because of accessibility. Symmetrical squares and straight lines create harmony to the market square today. (Copyright: The author)

Lahti – "the youngest city" of Finland

The other case study represents a different kind of town in the southern part of Finland c. 160 km northeast of Turku. The town of Lahti was established in 1905 as a follower for the village of Lahti with situated in the area since the 15th century. The historical records of the earliest phases of the village are very few and archaeological excavations conducted in the area have not been able to reveal much evidence of the medieval and post medieval village. The village started to flourish at the end of the 1860s and early 1870s with the construction of the railway, which attracted industrial activities and people to the area. On the 19th of June 1877 the village was destroyed in a big fire nearly completely and thereafter the negotiations and actions were started for establishing a town of Lahti (AIRAMO 1999:53–54; HASSINEN 1999, 20–21; 32–35; TAKALA 1999: 41–45).

Lahti is the youngest of the "old towns" of Finland established before the period of modernization. The town has actively branded itself as a business city of Finland and a capital of winter sports activities and competitions. In general, the city of Lahti is not combined with history or archaeology, although the region of Lahti represents the oldest inhabitation of Finland dating back to 9000 AD. However, there is one event, which is highlighted in the history of the town: the civil war in Finland in 1918, which

Figure 8 – Artwork on the western end of the market square frames a statue of a young woman. (Copyright: The author)

in recent decades has become a target of active research after several decades of national unification, silence and suppression (TAKALA 1998; 2004:175).

In 2013, Lahti was highlighted in the field of archaeology, when the market square of the town became a target of the biggest urban excavations in Finland so far with an area of c. 12 400 m2. The reason for excavations was a construction of a parking lot on two floors underneath the square. The target of excavations was the village whose remains had been covered under the market square ever since the fire in 1877. The excavations were organized by the local museum, Lahti City Museum. The archaeologist of the museum had negotiated and agreed on the conditions and plans of the excavation projects with the city planners, architects and developers responsible for the project. After the plans were made, a team of archaeologists, including me as a supervisor

Figure 9 – Information about the village and excavations is available at the Lahti City Museum on text boards. (Copyright: The author)

Figure 10 – Contents of the unique animal grave on display at the Lahti City Museum. The grave contained horse's skull and some other bones and a skeleton of a giant snake together with an assemblage of finds, which date the grave to the early 20th century. (Copyright: The author)

for the excavations, was hired to carry out the excavations in six months tied in with the preparation and construction of the parking lot. The excavations resulted in abundance of information about the last phase of the village prior to the destruction in the 1870s. Remains of several houses, outbuildings, yard constructions, wells, plot borders, and two roads were discovered.

During the excavations, we collected all find material from the whole sequence of the area. The material from the 16th to the 18th century is quite limited and the majority of the finds comes from the late 19th century contexts. All in all, there is c. 1408 kg of find material from pins to two bombs, the last-mentioned related to the events in 1918. The finds include lots of glass and ceramics, textiles, metal and wooden objects of different kind and waste material related to the production of different objects. The assemblage of finds gives information about the material culture, way of life, clothing and contacts of the people and of the early industrialization of Lahti. They all open important aspects to the life of the people and history of the village, but still we needed to think whether that information was important enough to be stored and archived and as consequence only 14 % of the finds were evaluated worth archiving.

During the project, I presented some ideas how the archaeological data and material could be used and presented on the recreated market square in form of art works or symbolic expressions for the memory of the village, which preceded the town. (SEPPÄNEN 2014) The ideas remained unrealized and development of the area was completed according to original plans. Today, there is no trace or tangible memory of the village and history neither on the market square nor inside the parking lot under the square (Fig. 7). Artwork made by Jan-Erik Andersson, an artist from Turku, has been erected on the other end of the square together with a playground for children and exercise possibilities for the young and old alike (Fig.8). The ones who are interested in the history and archaeology of Lahti, can visit the local city museum where some of the

Figure 11 – A model presenting the village of Lahti in 1870. (Copyright: Lahti City Museum / Hassinen 1999: 34)

material is displayed with information about the excavations (Fig. 9 & 10). The 19th village of Lahti is presented in a model that was made some years before the excavations. The model is based on a map presenting the village in 1870 (Fig. 11). Another model in 3D was made in spring 2014 in collaboration with the students of Lahti School of Applied Sciences and the team of archaeologists working in the project. The model represents the shop from the end of the 19th century and its surroundings.

Views, values and memorization

"History is more or less bunk. It's tradition. We don't want tradition. We want to live in the present, and the only history that is worth a tinker's damn is the history we make today." - Henry Ford 1916 (LITTLE 2007:13).

The famous quote above by Industrialist Henry Ford dates back to one hundred years, but we can still encounter his viewpoint, when we need to justify and reason why the past matters and why the work of historians and archaeologists is important and worth financing. At least I have used and heard phrases like 'Understanding the past helps us understanding the modern world, where we come from and why we are in this situation were we are at the moment' and 'What we know about the history, how we understand and value the past affects our decisions and ideas about the life and future today'. With our justifications we are connecting the importance of the past with the society of today and decisions made for the future. However, in practice, archaeological and historical research does not have much relevance when the plans and decisions which are made for the future society. Only then when the plans and development projects are contradicting the protection of cultural heritage archaeologists and other professionals involved in heritage management are consulted for solving the problem. Depending on the view, past can be considered as a problem or potential. Regardless of the view, past is an integral part of identities, whether we are talking about the human identities, national identities or identities of different places, towns and states. Places and humans alike reflect past experiences, circumstances, events, appreciations, destructions, ambitions, ideas and hopes for the future. The way we pay attention to the past, understand the past, transforms us and changes our conceptions of life affecting the way we experience the surrounding world in a smaller and larger scale. Consequently, understanding and experiencing the past is important. The past shapes the identities of towns like it shapes our identities creating the continuum where the past affects the future, which becomes present reflecting the past, which does not exist anymore as it was when it was present.

If there are difficulties in understanding of the role of the past in real life and in real places, how can we expect that for those people the history would be significant in contemporary life and in physical environments? When past is viewed equal to the museums, living in the museums, does it has connection to the present beyond the museum? We create the past – whether that is in the museums or beyond the museums, displayed in glass cases or experiences and sensed in the townscape. We create the past with interpretations, images and memories. According to Alfredo Gonzáles-Ruibal (2013:15) archaeology is a technology for producing (material) memory. Archaeology produces images and cannot exist without interpretations. By producing material memory, archaeology produces also public memory. But only for those, who are able to view it and to whom it is presented as a creation of the past by the ones who are holding positions to recreate the past.

Creations of past as well as present, places of different kind, affect public memory. Paul Shackel (2003:11) has expressed that public memory is more a reflection of present political and social relations than a true reconstruction of the past. As present

conditions change socially, politically, and ideologically, the collective memory of the past will also change. When politics and future decisions are made by people who consider the past as an important part of the identity of the town and basis for its development, it is likely that this will change the role of archaeology in city planning in Finland, too. However, archaeologists have a possibility to affect the views and values of the people by sharing the information, explaining the significance of the history and increasing the understanding and interest for the past. It is our duty to build bridges between past, present and future.

These bridges can be made tangible in many ways in townscapes as well as in landscapes. Some places, periods and events are publicly memorialized in the form of art, architecture or even with the help of archaeology. Medieval Turku was memorialized in Aboa Vetus –museum by preserving the ruins, which today create images and memories of different kind. Also, the village of Lahti was remembered in the museum, whose personnel create the past of the village with the views and interpretations they had about the past. Memorialisations of the place or event may transmit selected and interpreted information about the past, but more importantly, they reflect the conceptions and ideas, which were there when the memorialisations were created. However, integrating the elements of history into present is not only creating the memorialisations of the past. It is building an identity, unique identity, which each place has of its own.

Notes

1 - http://www.nba.fi/fi/kulttuuriymparisto/arkeologinen_kulttuuriperinto/arkeologisten_kenttatoiden_tilaaminen
2 - http://www.finlex.fi/fi/laki/ajantasa/1963/19630295
3 - http://www.benitocasagrande.fi/?page=19&lang=1

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FROM *PORTA ALLA CROCE* TO *PIAZZA BECCARIA* THE EVOLUTION OF FLORENCE FROM CITY TO CAPITAL

Silvia D'Andrea, Gianluca Belli
Dipartimento di Architettura, Florence University, Italy

Abstract: The object of this paper is the study of an area in Florence, the *Mattonaia* Quarter, with the intent to analyze its transformation after one of the fundamental events in the history of this city: namely the proclamation of Florence as Capital of Italy in 1865. In the end, the analysis will reconstruct the quarter through a graphic representation and the construction of a three-dimensional model. The result will be a "photograph" of the area in two separate moments: 1855, just before the master plan designed by Giuseppe Poggi started expanding the city, and the years following 1870, as the work progressed. *Piazza Beccaria*, once known as *Piazza alla Croce*, is particularly studied because it is the focal point of the transformations made by Giuseppe Poggi. This reconstruction is based on the analysis of several fonts, among them being historical maps, documents and drawings by Poggi, photographs and landscape paintings by artists from that period. Thanks to this information it was possible to make graphic reproductions of the entire area. They enabled the distinction of the documented parts from those which are fruit of a procedure of deduction and hypothesis because of lack of detailed information. We can see the transformation of this area, from an expanse of vegetable gardens, fields and gardens, surrounded by the streets of the quarter border and to the North by the ancient walls, almost like a rural area, in an extension of the city center, with a dense mesh of new roads which creates a series of blocks built for residential use. Following the demolition of the walls and the creation of Viali di circonvallazione by Giuseppe Poggi, the city of Florence opened to the outside, including a large amount of neighboring communities and expanding its borders in a consistent way, turning from city to Capital of Italy. Finally, two plastic figures were constructed by means of a 3-D printer to the scale of 1:1,000 which reproduced the two situations of the *Mattonaia* Quarter. This method maintained the differences described by using a different level of definition in the 3-D model.

Keywords: *Piazza Beccaria*, Giuseppe Poggi, *Mattonaia* quarter, Florence, 3d printing.

The *Mattonaia* quarter

The area of interest in this process of reconstruction is the *Mattonaia* quarter, located north-east of Florence (Fig. 1), bordered on the north by the ring road Viale Giacomo Matteotti, originally occupied by the walls, up to *Cimitero degli Inglesi*, where once was the ancient *Porta a Pinti*. This way *Borgo Pinti* is the northwest border. From *Borgo Pinti* to *Piazza Beccaria* the neighborhood is bordered by *Via dei Pilastri*, which continues with the *Borgo la Croce*, crossing *Via della Mattonaia*, which originally extended only in the north of the district. After work on the enlargement of Florence has been stretched to the south, overlooked by the market of *Sant'Ambrogio* and the complex of *Santa Verdiana*. It wanted then to extend the area of the analysis also in this block, to highlight the development of *Via della Mattonaia* and changes in neighboring spaces, still important for the city.
The edge of the area is *Via dell'Agnolo*.
Taking analysis in various historical documents, such as plans, drawings, paintings and photographs, we tried to trace the evolution of this neighborhood, up to the situation closer to changes in the project of Giuseppe Poggi.

Fonts, Hystoric maps

First, the search began with a series of historical maps from the late '500 to the mid-800. The first map that was consulted

is 1584 by Stefano Buonsignori. It is about a perspective view, which has already provided some important information about the shape of *Porta alla Croce*, the walls, the subdivisions in gardens and courtyards, as the various elements of fortification towers and ramparts. The drawing reproduced with remarkable fidelity buildings in their elevation. It is a true geometric construction, where streets and squares are drawn according to their proportions in horizontal projection, while the elevation is reproduced in perspective.[1]

In the plan it can be seen as the neighborhood was bounded in part by the walls, interspersed with gates and towers, including *Porta alla Croce* and *Porta a Pinti*. The neighborhood appears underdeveloped, with an expanse of fields and orchards in the interior, and bordered by a series of houses and buildings, with their courtyards, on *Borgo la Croce* and *Borgo Pinti*. Already present in this map are the monasteries of *Santa Verdiana* and of *Santa Teresa* and the whole of *Sant'Ambrogio*, some of the elements still the most representative of the neighborhood. The current *Cimitero degli Inglesi* is represented as an accumulation of land, next to *Porta a Pinti*.

The following maps, like that of Francesco Magnelli and Cosimo Zocchi of 1783[2] and that of 1832, processed using the cadastral surveys during the rule of Ferdinand III[3], show the development of the area. Are clearly visible here the complex of *Santa Verdiana* and *Sant'Ambrogio*, and the convent of *Santa Teresa*. The square outside *Porta alla Croce* is in this case named "Market Square of the beasts", which confirms the original function of the square. Besides the definition of the map in all its parts, the most important fact that it is able to derive is the structure of *Porta alla Croce* next to which are represented two elements, which represent a given entirely new up to this moment. Thanks to some drawings and other documented sources, it was possible to see that they are two loggias, built by

Figure 1 – Map of Present Florence: in red we can see the Mattonaia quarter.

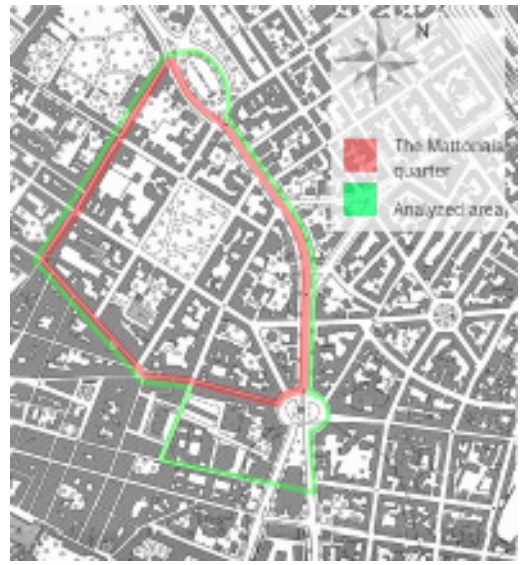

Figure 2 - Map of present Florence: in red we can see the outline of the Mattonaia quarter, in green the added part.

Paolo Veraci in 1818[4], used to the functions of the cattle market.

In addition to these, other two elements appear on the inner side, probably the two guardhouses entered by Luigi Cambray Digny in 1813, and from the square outside a sort of entrance to the door, consisting of a parapet and stone elements, presumably used to coaching. The map closer to the state of the district before the works of Poggi, is that of 1855, by Giuseppe Pozzi. It is just from this map that have been drawn more information for the purposes of reconstruction of the area, since it was assumed that in the period between 1855 and 1865, in which it is drawn up the Giuseppe

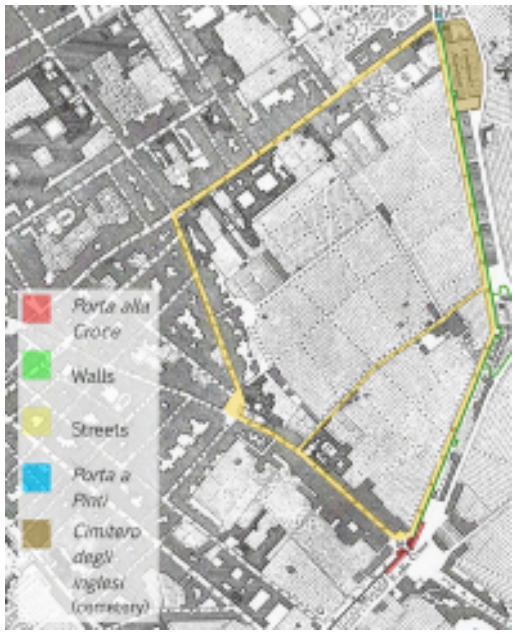

Figure 3 - Giuseppe Pozzi, map of the city of Florence, 1855. Scale 1:5.700 . (Copyright: Istituto Geografico Militare, Florence).

Figure 4 – Map of Florence, 1873. (Copyright: Istituto Geografico Militare, Florence).

Poggi's masterplan, the changes have been quite minimal and therefore negligible.
As for the reconstruction of the state after the changes, it was decided to reproduce a situation that describes the construction phase, during the works,

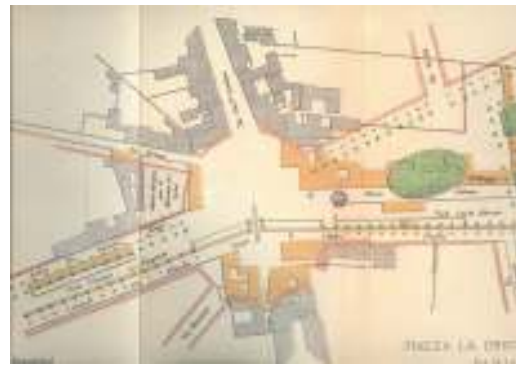

Figure 5: drawing by Giuseppe Poggi's collaborators, showing a superimposed between the state of the square before the intervention of Poggi and the state of the project , scale 1:2.500. In yellow we can see the demolished buildings, in red the new project, in grey the building not be demolished. (Copyright: Giuseppe Poggi, Sui lavori per l'ingrandimento di Firenze 1864-1877. Florence, 1882).

then in the 1870s. It was made this choice because the area in subsequent years has expanded so prolonged and substantial that it would be a long a period of time with a quantity of elements difficult to manage. For the study of this second situation we used the map of 1873, by Military Geographic Institute, by comparing the data with the drawings and the plans of Poggi and always taking into consideration the current state of the district.

Fonts: Drawings, paintings and photographs
Giuseppe Poggi and his colleagues have produced a series of drawings about the project that are very clear and helpful in understanding the transformations, along with numerous paintings and some photographs of the time, which were a very important source to understand how was the city before the works, both in the most general but especially in the detail of the individual elements. For example, the design of the square showing a superimposed between the state of the square before the intervention of Poggi and the state of the project, was the starting point to identify individual buildings demolished and those who remained, the streets and

Figure 6 – plant of Piazza Beccaria with highlighted buildings to be expropriated, based on certain fonts, and their properties.

boulevards, and the shape of the square. We were confronted with this design the plan of 1855 by Pozzi and from there things have gone from general reconstruction to details.
According to available sources it was made a distinction, crucial to the graphic rendering, highlighting all the buildings in which documentation was available, compared to others in the area of which we had no clear informations.
Of some of these elemens it was possible to obtain data complete enough, even with the directions of Poggi regard to the portion of the individual stable to be expropriated, paintings, plans and sections. For the others the information were obtained from the data most approximate values, such as for example only some maps or only some perspective drawings, which are however served to reconstruct the number of levels, the size, the building type, some of the facades, the function. As for all the other buildings of which it was not possible to find information, especially the state before the work, they have adopted rehabilitation operations based on a process of deduction and hypothesis. In *Piazza alla Croce* and on *Borgo la Croce*, for example, knowing that the destination was mainly residential buildings, it was assumed that the buildings were homes, establishing size, number of floors and roof shape fairly

approximate according to the type of adjacent buildings or surrounding. Instead along the way to the outer wall toward Arno, where some documents indicated stabling and storage, it was decided to lower buildings and larger.

Depending on the type of reconstruction buildings were divided into: TYPE A, TYPE B and TYPE C.

In the study of the buildings during the work, however, the procedure was based mainly on the observation of the current situation in the area, assuming that many of the buildings built in those years have remained virtually the same, keeping even here a distinction of what is certain and what it is only suggested. Another document that gave a general idea of what was the square before the work is, in fact, the report Sui lavori per l'ingrandimento di Firenze, where Poggi details the area, providing some details about the types of buildings, on the slope of the land, on the use of the square, on the intentions and motivations of the project and especially with regard to the next state in the work. In particular, it has been taken as a point of

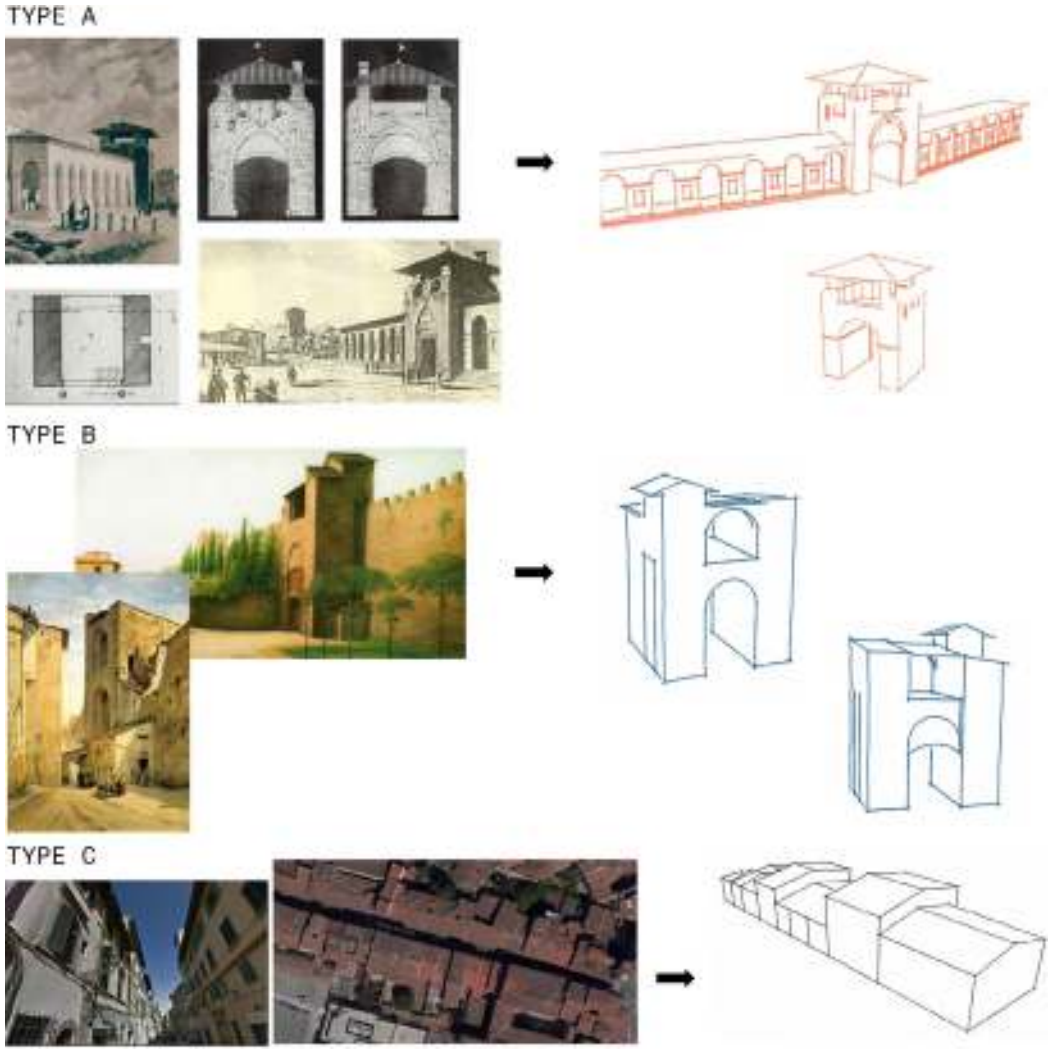

Figure 7 – Some examples of reconstructed buildings, divided in TYPE A: higher number of fonts and more precise informations, so more details and higher level of definiton of graphical representation; TYPE B: lower number of fonts and less precise informations, so less detail and lower level of definition of grapical representation; TYPE C: no fonts or not enough informations, so basic and simple representation.

Figure 8 – Photograph of a part of the Mattonaia quarter during the works, 1865-66. (Copyright: Archivio Storico Comunale di Firenze, Florence)

to *Zecca Vecchia*[5], along the street outside the walls and along the way inside the walls, which is superimposed on the state before the work and status of the project, and a number of cross sections, more or less equidistant from each other that cut the strip of land between the street inside the walls and the outer, dissecting the walls, from *Porta a Pinti* to *Porta alla Croce*.

As these drawings in scale, have provided accurate data on the height of the walls in that stretch and the inclination of the ground, in addition to the shape of some ditches and

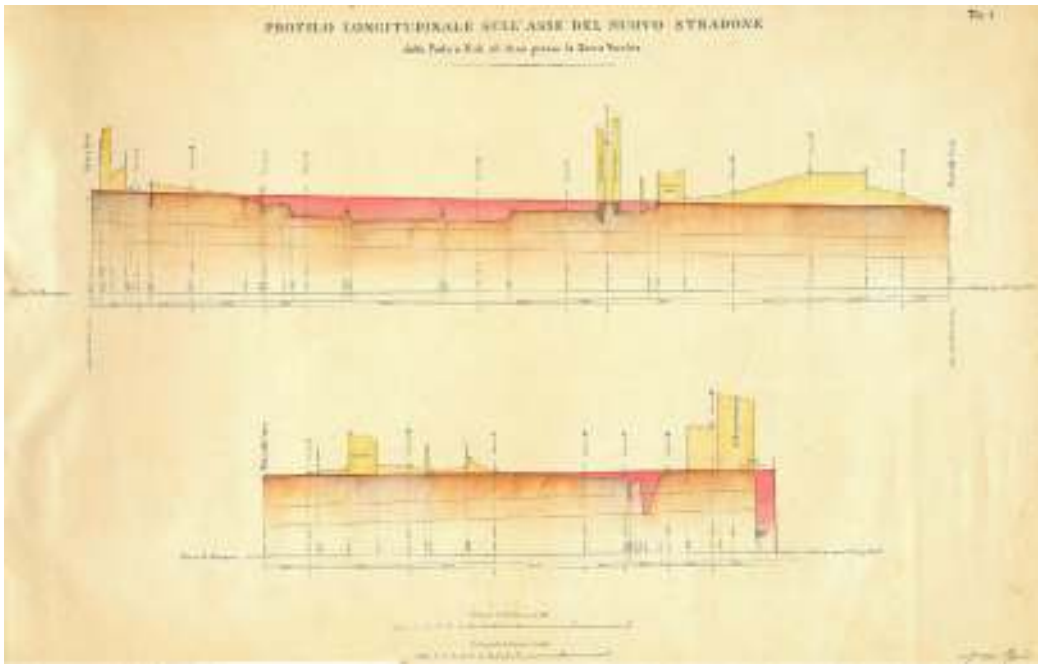

Figure 9 – One of the Giuseppe Poggi's drawing that shows two longitudinal sections along the walls from Porta a Pinti to Zecca Vecchia. (Copyright: Archivio Storico Comunale di Firenze, Florence)

reference for the general reconstruction of the district during the work a photo of 1865-66, showing one of the first buildings built by *Società Anonima Edificatrice*.

As regards the ground, the situation before the project was very different from as it is today, and thus had to reconstruct a very irregular and bumpy ground. To do so, the only accurate source used were once again the designs of the architect. Some of these show longitudinal sections respectively along the new boulevard from *Porta a Pinti* build up near the walls. Crossing the data of the various sections, both longitudinal and transversal, it was rebuilt fairly accurately the strip of land occupied by walls and two-way internal and external, who would later become the space for the new avenue. Furthermore, in the drawings are also present paths that indicate the inclination of the new road, so it was possible to reconstruct the ground after the work, always making a comparison to the shares of the level curves of the area in the current state.

The *Mattonaia* quarter before the works

The *Mattonaia* quarter around 1855 was an underdeveloped part of the center of Florence. It was inserted at the edge of the old town, that was well established and widely built, towards the walls in the north east of the city. You can see from the historical maps contrasting density of buildings in the center of the city against the expanse of gardens and courtyards gradually you get closer to the walls. In particular, the district had a series of terraced buildings along the streets that bordered or *Borgo la Croce*, *Via dei Pilastri* and *Borgo Pinti*, who appeared the least built, with some buildings interspersed with courtyards, and that led to one of the two access doors to the neighborhood, *Porta a Pinti*.

The other door in this neighborhood was *Porta alla Croce*, inserted in the center of *Piazza alla Croce*. This space towards the outside of the city appeared as a square not well defined, surrounded by some buildings. Thanks to the sources, it was found that there are houses, a building with an outdoor area for the weekly market and other buildings not clearly defined but mostly warehouses, stabling, stockyards. Many of them, in whole or in part, will be expropriated and then demolished to make room for the new square.

Porta alla Croce was entered in *Borgo la Croce*, a road lined with buildings mostly residential, with terraced houses, mostly in three or four floors. On the back of the houses it was often present the courtyard, on both sides of the street. Here too, the first houses of the street were demolished under the provisions of Poggi in the following years. The road down widened into a small square, *Piazza Sant'Ambrogio*, with the homonymous church. Continuing the way he took the name of *Via dei Pilastri*, with a conformation similar to the previous one. The only way that crossed *Borgo la Croce* was *Via della Mattonaia*, a fairly secondary street, which is named the entire district, which was named for the brick kilns in the area. It was almost a country road because crossed the district coming up to the walls meeting virtually only vegetable gardens, just called *Orti della Mattonaia*.

This parkland was largely owned by big convents and some Florentine aristocratic families, and was divided into plots crofting of vineyards, orchards, vegetable gardens and gardens.[6]

In *Via della Mattonaia* was the Monastery of *Santa Teresa*. The complex included a large vegetable garden, surrounded by high walls bordering *Borgo la Croce*.

The area taken into analysis also extends south of *Borgo la Croce*, limited by what was called *Via della Fornace*, the current *Via dell'Agnolo*. There we find the monastery of *Santa Verdiana*, founded towards the end of '300 by Niccolò Manetto di Buonagiunta. The monastery was subject to numerous interventions and restoration work over the centuries, surviving until the Napoleonic suppression of 1808, becoming first plant for the slaughter, and culminating with the final abolition of the monastery in 1865, with the transformation in women's prison.[7] Today it houses the headquarters of *Dipartimento di*

Figure 10 – Plan of the area according to the reconstruction, around 1855.

Architettura of Florence University.
Along the walls, especially in the north of the district, the ground showed the great differences in height. On the inner side of the walls there are large bumps of the ground, and more precisely in *Porta alla Croce* and on the stretch of wall to *Porta a Pinti* is reported that the ground rose up to 5 meters and a half compared to the floor of *Porta alla Croce*. These accumulations of earth is supposed that were placed next to the walls on the inside as a reinforcement of the city in case of attack of the artillery. In fact, following widespread floods that hit the city over the centuries, gradually accumulated debris and mud, as in the case of 1557, when Cosimo I decided to use that huge land mass to complete the work of strengthening the city. Finally, all this must be added the masses of debris and waste products from the city and pushed outward, that created this irregular situation.[8]

Giuseppe Poggi's Masterplan
In 1865, Florence was proclaimed capital of *Regno d'Italia*. The city was surrounded by walls, with the focal points in the dome and other monumental buildings, in a centuries-old balance between built areas and open spaces, gardens and orchards, especially near the walls, as in the district of *Mattonaia*. In a short time the city underwent the change of role and function, highlighting a number of functional inadequacies of urban fabric, without a distinction between areas divided to public functions or private. Urgently the town entrusted the implementation of a plan to expand the city to the architect Giuseppe Poggi, that was delivered February 18, 1865. The plan had to answer a number of pressing issues, such as to provide new housing and services for the population increase due to the arrival of employees for the offices of the Capital; replace the customs border to the one formed by the walls; defend the city from the floods of the Arno; give the city a celebratory, modern and bourgeois face, in line with contemporary trends in other European cities. One of the key elements of the plan was the demolition of the walls on the north side of the Arno, to create the new boulevards. With the disappearance of the walls, the city lost a fundamental element of its structural, functional and formal definition. The distinction between an inside and an outside disappeared, and began a new relationship between the various parts of the city, between a center and a periphery.
As it happens right in the *Mattonaia* quarter, from a neighborhood inside the walls but almost comparable to the campaign to a dense set of isolated housing. The figurative presence of vertical walls that contrast with the horizontal design of the campaign replacing the section of the tree-lined avenues, interposed between the internal development of the new districts and the external expansion along the whole circuit.

The *Mattonaia* quarter after the works
The new square acquired its present appearance, which is a large ellipse with the major axis of about 130 m that less than 106 m. The shape was chosen because it made easier demolitions, the conjunctions with the streets and reduced the differences on the fronts of the buildings that were built around. The buildings were designed by Giacomo Roster, who chose to create uniformity between the facades, with the same proportions and decorations, all made up of four levels, allocating higher ones in homes and those on the ground floor with shops, with large openings on the square.
The entire area was leveled and matched as much as possible, creating a slightly tilted from *Cimitero degli Inglesi* until *Zecca Vecchia*, softening the many irregularities that were present before the works. North of *Piazza Beccaria* was drawn one avenue to *Borgo Pinti*, with a very slight slope. The cemetery at the old *Porta a Pinti* was partially expropriated and the main part was preserved, respecting the sights around him. The irregular shape it had before the work was arranged, acquiring an elliptical

structure, enclosed, elevated above the street level, and isolated in the middle of the avenue that runs around.
As for the district of *Mattonaia*, this had great development. *Borgo la Croce* did not undergo major changes, while maintaining the axis with the door and remaining a mainly residential street. *Via della Mattonaia* was extended south of *Borgo la Croce*, where he was going to form a part of the block that would house the market of *Sant'Ambrogio*, on the other side it closed the space occupied predominantly by the monastery of *Santa Verdiana*, bordered south *Via dell'Agnolo*. The northern part of the district was divided by a series of streets perpendicular to each other to form blocks of buildings in the course of the following years were of great growth, with a central large garden square *Piazza d'Azeglio*.
The protagonist of this process was *Società Anonima Edificatrice*, founded in 1848, which gave accommodation to more than 700 families.[8] One of the first buildings dates back to 1865-66, when the area was still under construction. The building is located on *Via della Mattonaia*, corner of *Via Niccolini*, one of the new roads built by Poggi. The main landmarks of the neighborhood, like the church of *Sant'Ambrogio*, the monasteries of *Santa Verdiana* and *Santa Teresa*, that were already present in previous years in the work, remained almost intact, in some cases changing their use. The perpendicular mesh of orchards and gardens in the neighborhood before the works was then replaced by that of streets and blocks.

Three-dimensional modeling: 3D modeling for graphical display

The aim of the reconstruction consists in the creation of two models in scale 1: 1000. To do so, starting from what has been possible to study and understand the area, you have adopted the operations of digital modeling. The main elements to be played were the buildings and soil, carried out separately

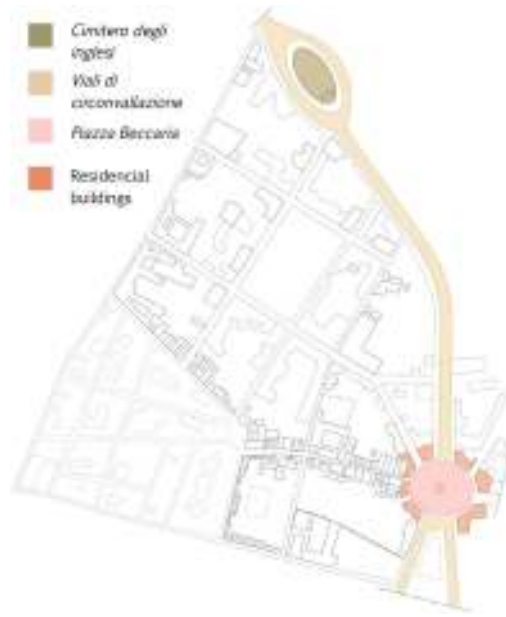

Figure 11 - Plant according to the reconstruction of the area after the changes of Giuseppe Poggi, around 1870.

and in parallel. Based on the amount of information and details that have been collected for each part of the reconstruction they were made distinctions in their graphic representation, and then later in plastic figures.
Are distinguished two types of modeling, one intended to graphical display, such as renderings, the other to the production of the plastic figures, since first of all the very small scale of the model did not allow to bring a number of details, and then because the 3d printing demanded a series of measures and adaptations that had to be made to the original digital model. With regard to the neighborhood of *Mattonaia*, modeling has focused more on *Piazza alla Croce* and the surrounding buildings, such as changes in *Borgo la Croce* later demolished, and consequently *Piazza Beccaria* and avenues. For all other parts of the area it was chosen for a more approximate reconstruction that is reflected in the modeling and in plastic figures, both for the large amount of items, both because the part most involved in the changes of Poggi was indeed that described above.

For convenience will be called before the model of the quarter before the works, and after the one after the work. For buildings, both in the before model that in the after one, as already mentioned it was adopted a distinction between those that had complete sources or sufficiently comprehensive and those reconstructed on assumptions. The number of details in this case is proportional to the number of the collected data, such as for the TYPE A was adopted in which the maximum accuracy in design, have been also reproduced moldings, arches, niches, decorations, steps and other types of secondary elements, as in the case of *Porta alla Croce* and the galleries adjacent. For Type B have been played fewer details, reporting windows, roof overhang, shadows and more generic elements.

As for the other buildings located near *Porta alla Croce*, of which there are little or no information, TYPE C, has opted for a more graphic bare, with no elements in the facade, without overhang of the roof, but still respecting what sources have described and making assumptions quite realistic about the number of floors and the roof shape. The same approach was taken for all buildings in the neighborhood, on *Via dei Pilastri*, *Borgo Pinti* and in the inner part.

For the after model the distinctions are the same, unlike the fact that many of the buildings in the model before which have a high level of definition are those that are demolished as a result of the works, and then in the second model virtually all the buildings of *Borgo la croce* are represented in the most approximate way. (Type B and C) *Piazza Beccaria* instead, it opted for the higher level of accuracy, thanks to plans and sections. In this second model, a further distinction was made, for the development of the district, as previously described, it was decided to represent only a few buildings, which more or less those who were present in the 1870s, during the work. As for the other, arose gradually in subsequent years, they are represented only with the shape, to

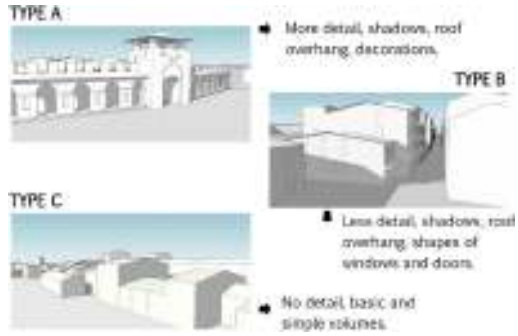

Figure 12 – Some examples of buildings in 3D model for graphical display, divided in the three types.

make it clear that they would be soon built. This operation was mostly aimed at the realization of plastic figures.

Three-dimensional modeling: 3D modeling for plastic figures

Since the goal is to print a number of elements in scale 1: 1000, the modeling was adapted to a different level of detail. So even those buildings that had been treated with the higher definition, in this case have been deprived of elements in the facade, stairs or small shelters and decorations to adapt the models to a scale so small.

To highlight this type of buildings remained the roof overhang in front. The only expedient has been adopted, in addition to maintaining always the overhang at one meter, is to give a thickness of one meter to the groundwater in the most extreme part of the projection rather than leave it to zero, so that proves 1mm in the plastic figures. Even the door has been deprived of some ac-

Figure 13 - Some examples of buildings in 3D model for plastic figures, divided in the three types.

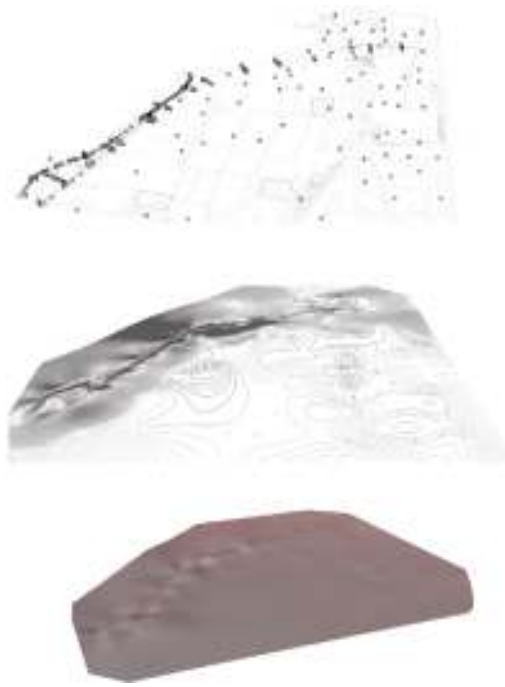

Figure 14 – Stages of the construction of the soil surface before the works.

cessory elements, while maintaining the openings in both layers. All other buildings appear as simple blocks topped by two sloped.

Figure 15 – Stages of the construction of the soil surface after the works.

Three-dimensional modeling: Soil

The soil of the before model, as already explained, it appeared very irregular originally, and then through the sections of Poggi, and combining the data obtained from all drawings observed, has created a network of points in proportion to different levels, places on the strip occupied by the walls. Based on the point which represents the threshold of *Porta alla Croce*, taken as a reference, it joined this set of points with those derived from shares of the contour lines of the plant of Florence today.

In this way it was possible to build a course that combines information taken from different sources, mapping throughout the whole neighborhood.

By this point network was built a three-dimensional sinuous surface, with peaks near the walls, due to uneven ground. Once the surface has been divided, "slicing" it through level curves, apart from one another about 30 cm, so that in the scale of each plastic would have been 0.3 mm, a right size to create a surface composed by the superimposition of layers that might be quite homogeneous and continuous. For the after model the matter it was easier because the ground appeared much smoother and cleared after the work of Poggi.

Then, by comparing the coordinates of the points taken as the sections of the project with the contour of Florence present and noting that they were very similar, the ground surface is constructed according to the interpolation of these points.

Preparation to printing and laser cutting

Before arriving at the printing stage, the individual parts have been organized to be ready for production. It is given a code number to each single piece, with a letter according to the type of element that represents and the sequence number. For example, a portion of the walls has been called 01.W, with W for Walls, and so on all other pieces of walls, or building 01.B, with B which stands for Buildings, with the assigned numbers start-

Figure 16 – Photograph of the plastic figures in assembly phase.

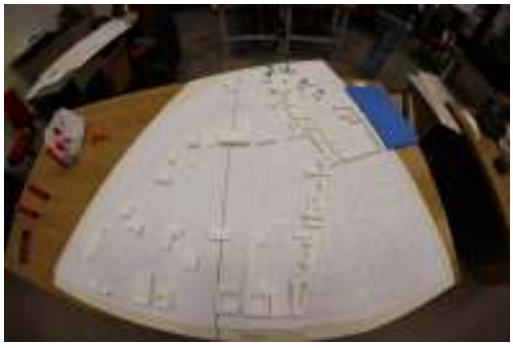

Figure 17 – Photograph of the after plastic figure, in which we can see the distinctions between reconstructed buildings and the other parts of the analyzed area.

ing from the before plastic until you get to that after. In this way all the components are classified and subsequently split by printing. This was made for reasons of practicality, in order to send to print more pieces together and save time, to better preserve the parts due to their small size, and especially to more easily find their position during assembly.
As for laser cutting, after obtaining the curves they were projected all on one floor, overlaying the entire plant area, roads, paths of the gardens and templates included. After which it is separated each curve of each other, retaining in its interior the respective portion of the map, so that each bend could be treated so single and independent, to then be cut one by one and be laser engraved each segment in its interior. In this way, once you printed all the curves and mounted one over the other it was possible to reconstruct the design of the district.

Plastic figures

The printing, which was made by machineries of Laboratorio Modelli di Architettura of Dipartimento di Architettura in Florence, is formed by two different mechanisms: the 3d printer, which produced the buildings, the walls, the door and all other similar elements, and laser cutting, with which were obtained all the curves of level for the ground. Then it was possible to assemble all the elements together.
First, the material used for the construction of buildings is the PLA, or polylactic acid, introduced inside the printer, M*aker Bot Replicator 2* and *Maker Bot replicator fifth generation*, and melted to obtain a dough liquid enough that creates the 'three-dimensional object layer after layer.
The production process of a component, such as a cube, is to create the envelope as previously described, and fill the inside with what is called infill, a kind of mesh honeycomb wide and light which serves as a fill volume to reduce the time of printing and giving less weight to the element. Also, for any openings in the model or

Figure 18 – Photograph of the before plastic figure at the exhibit.

Figure 19 - Photograph of the after plastic figure at the exhibit.

protruding elements, the printer produces a mesh to support the protruding portion or the hole as it proceeds printing, so that will not yield. After the printing the support material must be removed.
Laser cutting is a machinery to cut with extreme precision many types of materials. In this case it was used to cut and engrave a series of contour lines, on a white cardboard with a thickness of about 0.3 mm.
The machine distinguishes the different layers that are set in the input file, one for cutting and one for the incision. The result is a curve with the edge slightly dark, due to burning of the laser, with a series of incisions of the same color in its interior.
The process that leads the digital modeling to 3D printing has made numerous attempts and troubleshooting, with continuous updating and adaptation of the digital model based on the results of the printing.
The mounting of the plastic figures is started from the composition of the soil. It was then superimposed curves one above the other in the numerical order, with a glue very thin and not too liquid, to obtain throughout the entire surface above which was reassembled the drawing of the floor plan of the neighborhood. Once printed all the pieces, each element was cleaned from excess material, often by simply pulling it away and in more complicated cases using a precision instrument. Then it proceeded to place each building or group of buildings, in its place, using the drawing engraved on the surface. The distinction that you will notice in the plastic figures is between the buildings, which are all those reconstructed and divided into three basic types described, only those engraved on the surface, representing the buildings next to the building, and some blocks that are not part of the neighborhood of the *Mattonaia*, just hinted through a layer of cardboard which highlights the silhouette of buildings.
The two plastic figures were placed on woodpaper bases, reporting the scale and the north orientation symbol. Then, the two models were displayed at the exhibition *Una Capitale e il suo Architetto* organized by *Archivio di Stato di Firenze*, Florence, to celebrate the 150th anniversary of Florence capital of Italy, from 4th February to 6th June 2015.

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Notes

1 - Giuseppe Boffito e Attilio Mori (1926). Firenze nelle vedute e piante. Studio storico topografico cartografico. Florence.
2 - Giuseppe Boffito e Attilio Mori (1926). Firenze nelle vedute e piante. Studio storico topografico cartografico. Florence. Giovanni 3 - Fanelli (1973). Firenze, architettura e città. Florence.
4 - http://www.palazzospinelli.org/architetture, Repertorio delle architetture civili di Firenze, Palazzo Spinelli. Florence, edited by Claudio Paolini.
5 - Zecca Vecchia is a tower (Torre della Zecca) tha closed the walls of the city to the Arno east.
6 - F. Carrara, V. Orgera e U.Tramonti (2003). Firenze piazza d'Azeglio alla Mattonaia. Florence.
7 - Gabriella Orefice (1996). Le sedi storiche della Facoltà di Architettura - Il complesso di Santa Verdiana. Florence.
8 - Alessandro Rinaldi (2008). Sul limitare della città: storia e vita delle mura urbane a Firenze tra il '600 e l'800. Florence.
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MEGA SHIPS AND MICRO HERITAGE. THE *TUTELA* AND VALORIZATION OF HISTORICAL ELEMENTS IN THE FUNCTIONAL TRANSFORMATION OF THE LIVORNO PORT

Matteo Scamporrino
Dipartimento di Architettura, Florence University, Italy

Abstract: In the last twenty years the cruise and containerships traffic in Italy, as elsewhere in the world, has increased a lot. The current debate focuses mainly on the assessments of negative environmental effects as opposed to positive economic ones. The research that is taking place at the Port Authority of Livorno, in collaboration with the University of Florence in prospect of the new plan of the port, has studied the visual impact of cruise ships on the city trying to use the Aesthetic control as ordering element. It was decided to investigate also the waterfront and port landscape seen from ships studying it from the sea lanes of the ships arriving.
The main objective is to determine quantitatively and spatially the intervisibility, before and after a transformation, of the historical port landmark (mainly permanences of the historic old medieval harbor), compared to the identitarian observation places and routes, these distinct elements into two categories: terrestrial (squares, streets, waterfront) and maritime (routes approaching the ferry and cruise).
The goal of the research is twofold: on the one hand overcome the argumentative rhetoric that in recent years has affected the design ports; and on the other to avoid the idea of "zoning", where some areas are transformed, designed and protected in the same way as parts of the city, while other, more operational and functional, considered as a "blank sheet" where to intervene "freely" regardless of the context, with overall results of questionable organicity and aesthetic value.

Keywords: Port, Intervisibility, Regeneration, Livorno, Mega Ships, Harbour.

Introduction

The research work, of which this article is an excerpt, start from the need to find a method and tools that can allow a transformation of port compatible with urban environment and historical heritage present inside of the area. The works to be carried out provided by the Port Plan are consistent both as regards building and as regards docks and spaces for large ships. Such an operation should not delete the link between the port and city.
The approach that must have can not be to only to impose constraints on the design, but provide performance related to the physical nature of new buildings in compliance with the visual and spatial relationships between project and existing assets.
The physical proximity between operational areas of port and accessible areas from the city is not always possible due to environmental, functional, customs and security aspects. For these relations studied concern mainly a visual integration, and scenic landscapes. So the method focuses more on relations of visual, scenic and landscape. These issues are no less important when one considers that the new terminal will pass nearly five million passengers a year, double the present, right in between the city and port filtering.
The project structures will have to be both non-impact, but still adequate for height and shape to deal with the size of cruise ships and cargo. A hard limit height of the structures, as proposed by some authorities, could not so much to protect the little heritage present in the port but it disappear in a sort of "port sprawl".
Therefore it is better not to put on hard limits, but rather to safeguard visual cones and relations of intervisibility between observing sites and assets. The structures that stood

Figure 1 – This is the image of the Port Authority web homepage of the. It is here represented the tower of Marzocco, historic heritage building, surrounded by cranes and logistic yards. The choice of this photo reveals that the problem of the interaction between heritage and operation inside of the port is lived with awareness by Port Authority.

out in the past centuries were commensurate with the size of the hulls of a given period, even a ferry medium does not allow today the view of these elements, let alone the large cruise ships.

The method want to conceive the naucentric structures and spaces not as obstacles but rather as privileged points of observation and study how these modify the project criteria with the aim to bring out the vision from these of the heritage. To do this we have studied the historical relations and the co-evolution between the port and city through the naucenric rules. The method and tools tend to recreate these relations by supporting the design, planning and strategic environmental assessment, as you can see in the three experimental applications.

Livorno as an example of co-evolution between the port and city

The port of Livorno can not be considered decoupled from the city in terms of the functional and socio-economic profile, but currently from the physical this relationship seems to become more and more conflictual. In particular, this happens in terms of spatial relationships (architectures and open spaces) and in the combination of flows both on land and in water. The nodes and networks of the port do not talk more with those of the city.

To understand this conflict is useful starting from the relationship genesis between the port and city that, in the case of Livorno, was the result of a real symbiosis.

Livorno was born in the fifteenth century by the Genoese who initially chose a part of the rocky coast in front of some marine dry, ideal conditions for a port. Later by landing place it became true city by the Medici with interventions of fortification to defend the hinterland. The port was inscribed in the line of fortifications, to confirm the close relationship with the city. Livorno is a paradigmatic example of city-port, because the nature of these depends on the way the sea is the inside (Bruni, 2011).

The sea laps against not only, as it may seem obvious, the city, but embraces and penetrates her, through the channelling of the so-called Venice. These channels, once used for storage of goods, are still used by the inhabitants and constituting an extension of the port inside city.

Unfortunately, space and demands of modern port is distinct to that ancient and beyond the channels of Venice the relationship between city and port is much less harmonious.

Figure 2 – In this photo you can see that the city spaces are different from those of the port. The Old Fortress, on the right, has a size relationship more with the city than with the port, while the Silos Barns, at the center, is clearly out of scale for the city but in aspect ratio with ships. This is due to the different construction periods, and then to the genesis of the naucentric component.

The port of Livorno historically is related closely not only with the city, but also with the surrounding taking also the characteristics of port-territory. In the first half of 1800 it was built, inside the port, the first railway in Tuscany and the second in Italy, linking Livorno to Florence and since the eighties of last century were boosted internal connections and created an interport in the hinterland. Even at this scale the advent of modernity has not kept the symbiotic bonds between the port and territory. Until the Second World War, where the city and the port were badly hit by bombing, the growth of the city and the harbor was generally harmonious, both of size and importance.
The increase in vessel traffic, and especially the size of the vessels introduced in the second postwar, showed even more the necessity of new spaces and a structural adjustment of the port. Immediately after the war it was rebuilt and reopened the port with the configuration prior to the bombing, waiting for an expansion plan that will see the light only in 1965.
Continuous delays, mainly due to the lack of proper investment, led to a partial implementation of the necessary works provided only in 1975, primarily related to the Darsena Toscana and the widening north of the port never appropriate the terms of availability and organization of space as well as functional efficiency.
Simultaneously, the economic boom and reconstruction also bring the city to expand with their new neighborhoods near the port. The space between these two soon became filled.
It should be noted that it was generalized across the country and globally the trend towards increasingly strict separation of operational port area and urban area (Fonti, 2010; Gras, 2013). Italy in fact the planning and management of the port had been mainly confined to a collection of specific interventions coordinated by a kind of "Plan of Works", which lacks a strategic vision of transformation and a real connection with

Figure 3 – View from the hinterland of Marzocco Tower.

the planning of the nearby city.
In the last thirty years to meet the needs of international yachting Livorno had to convert from "emporium" to a node. If in the first configuration the coevolution between city and port was the basis for the success of commercial and productive systems, in the current one this feature is likely to be harmful, as well as conflictual (Vanni, 2015). Then are created walls and separations, setting up a framework of substantial conflict. The port becomes a barrier for the city functional and visual (Fonti 2010) and vice versa the city an obstacle to the reorganization in a modern way. In the specific case the problems mainly concern inland northeast, where it is produced, in fact, a degraded threshold.
The productive areas linked to the port surround the city creating a sort of internal spur, this in turn is encompassed by the city, generating a conflictual interaction of flows and functions. The city and the port have turned their backs.
The city and the port have turned their backs. The solution of these issues are at the center of the new Port Master Plan, which provides for an expansion of the port towards the sea. In doing so want to increase the pressure on the city, rationalizing and reallocating the functional areas of port by decreasing the conflict in the fringe areas to promote environmental recovery and urban.
At the same time they move away from the filtering functions scarcely compatible with

the neighboring urban areas fostering a "mending" between city and port.

How can we integrate the port with the city?
The integration between physical space and commercial port city and today it is very difficult for environmental reasons, functional, customs and security. In fact the handling, storage and processing goods in port areas is not compatible with an absolute accessibility by non-experts.
Inside the present operational area of the port there are historical pre-existing buildings that represent a unique heritage and a strong testimony of the past link port-city.
In many cases the accessibility to these assets is hardly practicable.
This is the case of the Tower of Marzocco currently surrounded by cranes and container handling yards, but also the Old Fortress surrounded by the square boarding of the passenger terminal.
Even among the passenger port and the city integration it is difficult physically, to date due to limited accessibility filtered to travelers in transit. The same conditions apply to the 30s Silos Granai adjacent to this. With the new Plan the Port is expected to redesign of filtering between the port and the city in this area, which allows a partial access to these heritage buildings, as well as access by sea to the Tower of Marzocco.
But integration between the port and the city does not pass only by the accessibility to physical assets but must pass by new spatial and landscape relationships between them and the new structures of the port.
This heritage buildings respect to the modern port is clearly out of range.
Also are out of scale compared to the size of current boats certainly more impressive than those with which these artifacts they saw a relationship to the time of their construction.
Seeing the relationship between city and port as a structural invariant (Rosselli, 2005) at the base of the urban heritage and local identity, the aesthetic and spatial profile certainly plays a key role. Especially

Figure 4 – In this representation from the late 1700s you can see that the port entered the city and how the Fortness stood out compared to craft much more than now (Fig.1).

with the development of modern industrial ports, the conflict as well as physical and spatial concerned the figure, the image and recognizability of the city-port as an integrated system.
Changes of ports shape followed the evolution of both the nautical in the strict sense, that is, the size of the boats, both new flows arising therefrom.
Over the centuries boating followed a continuous evolution, mainly due to the technology used for propulsion (oars, square sail, coal, diesel, bunker oil), the material used for the hulls (from wood to steel) and especially the technological research in the field of fluid dynamics.
This has led, since the beginning of the twentieth century, to an increase in size (from 70m length of a galleon, with over 120m of the steamers of the early twentieth century up to 300m and beyond the current cruise ships).In this evolution of the hulls it is paid an evolution of the ports that needed docks longer and deeper waters (Bruni, 2011). But above all the ports have an increasing need for large spaces for both the maneuver in water (docks and outposts protected by dikes), both for freight and passenger movement, then forecourts, stocking and multimodal areas.
To put off the scale the historical constructions of the port are also the large blank

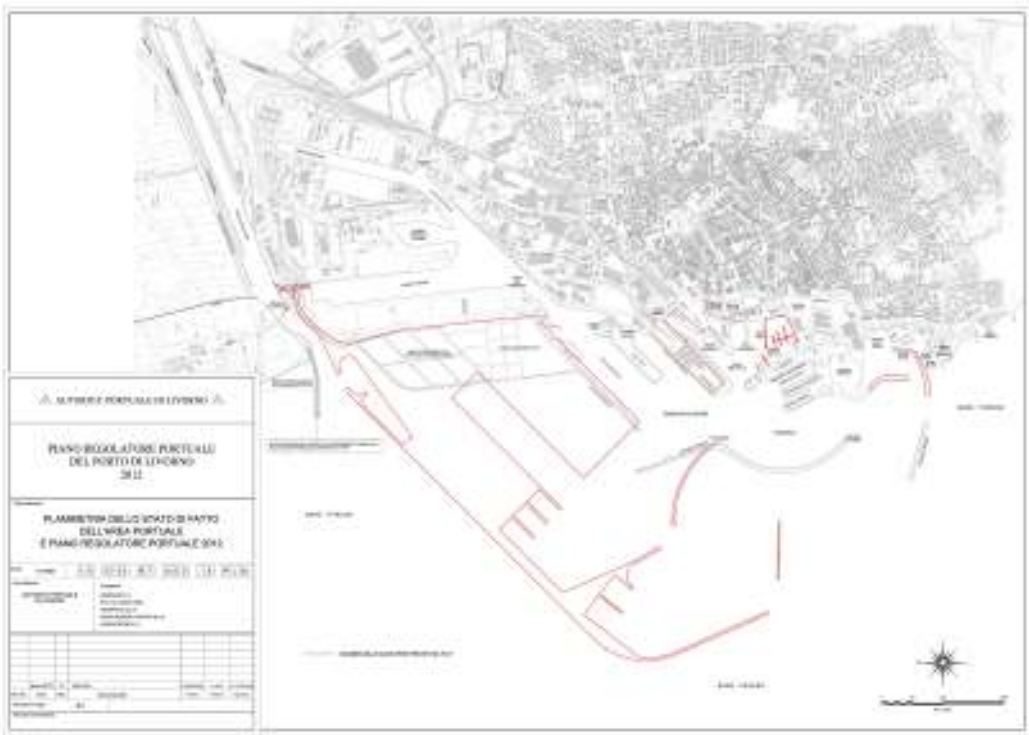


Figure 5 – In red footprint of the new port project. In particular, the offshore platform measures 3,700 m long and 1,500 m wide, almost 200 hectares of new docks and 250 new ponds. May look impressive size, but when compared to other Mediterranean ports of equal rank, they are perfectly in line. In fact, thanks to this configuration, the linear relationship between length of docks and sea surface occupied is better than others.

places with which these can no longer relate. If Livorno wishes to remain on the international circuit, he has to meet the challenge of "Naval Gigantism " coming to receive the ships Triple E 18,000 TEUs 40m high, more than 300m long and about 20m wide with a draft of more than 16m, as well as cruise ships of the same tonnage and greater height. "The port becomes a place where infrastructure and architecture are compared, made of large empty and unpublished spaces " (Brown, 2011).

But how can they talk in terms of aesthetics, composition and landscape spaces and the "naucentric" elements the port gateway with urban space and historical elements?

There are peculiarities of physical, aesthetic and morphological of the city-port, because of naucentric component , require analysis, studies and projects other than those that are done in a city or in a territory ordinary.

In this light it is interesting to read the main themes on which it should focus planning choices identified by Fonti (2010):

- integration between port and city;
- relationship that the port has with the environment and the territory in general;
- conservation of the local identity of the urban context;
- promotion and development in a global scale

The integration between port and city could not be primarily physical for environmental reasons, functional, customs and security, as mentioned above, it has to be made instead from a visual and perceptive perspective. It is therefore right to wonder also how the elements off the scale relate to the urban fabric and how the change in perception.

The second theme is a clear reference to the port landscape and how this has a visual relationship with the surrounding context, what and how they impact on the naucentric

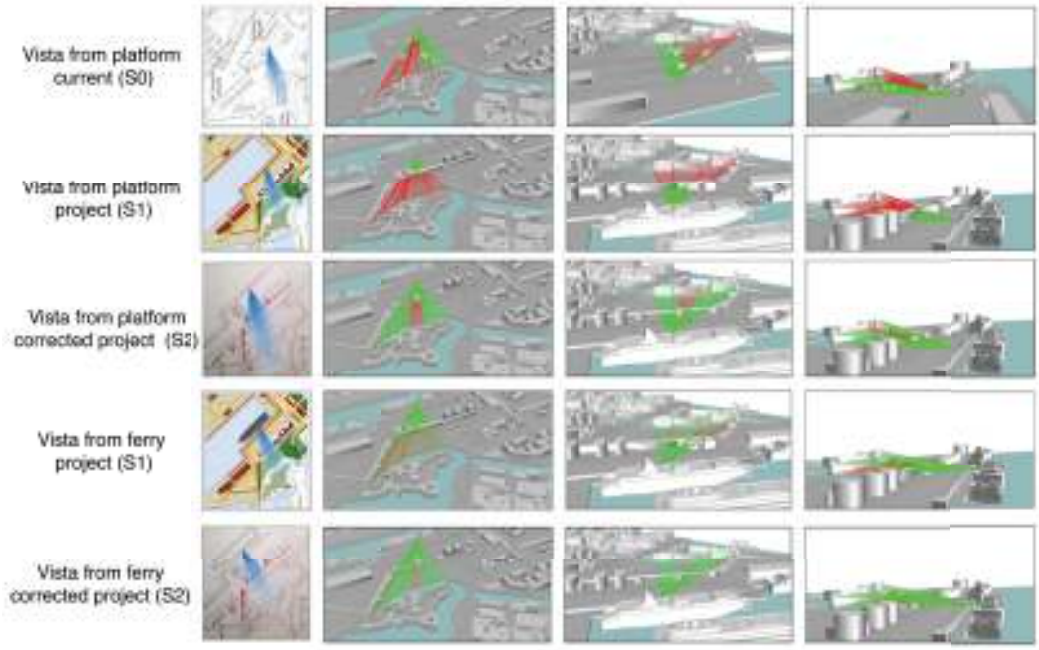


Figure 6 – Experimental application about Visual and aesthetic control in the project. Starting from the analysis view of the actual state (S0) were detected visual obstructions in the first project (S1). Was subsequently provided guidance to designers to correct the structures between the Terminal and the Old Fortress. This has led to a second project solution (S2) where the green intervisibility lines are more. The improvement of the project is commendable and verifiable directly from the GIS 3D model.

elements and spaces. The preservation of local identity passes certainly from the recognition and visual preservation of historical/identity urban elements, perhaps of smaller physical scale but a higher ranking and collective importance.The city-port, by their nature, have historical permanence and persistence within the port areas, often bounded as in the case of Livorno, which must be safeguarded at a visual level to preserve the historical recognition and identity.Globalization and internationalization of routes is not only about the goods, but also the passengers; in this case the heritage elements inside the port and the waterfront serve as a showcase for the entire territory, a proper study of aesthetics and visual helps to make it attractive and representative of local identity.

Three experimental applications of aesthetic and visual control over the port of Livorno

To insert a component of visual and aesthetic control in the Plan of the Port of Livorno has been developed a methodology related to three areas: Project, Planning, and Strategic and Environmental Assessment.

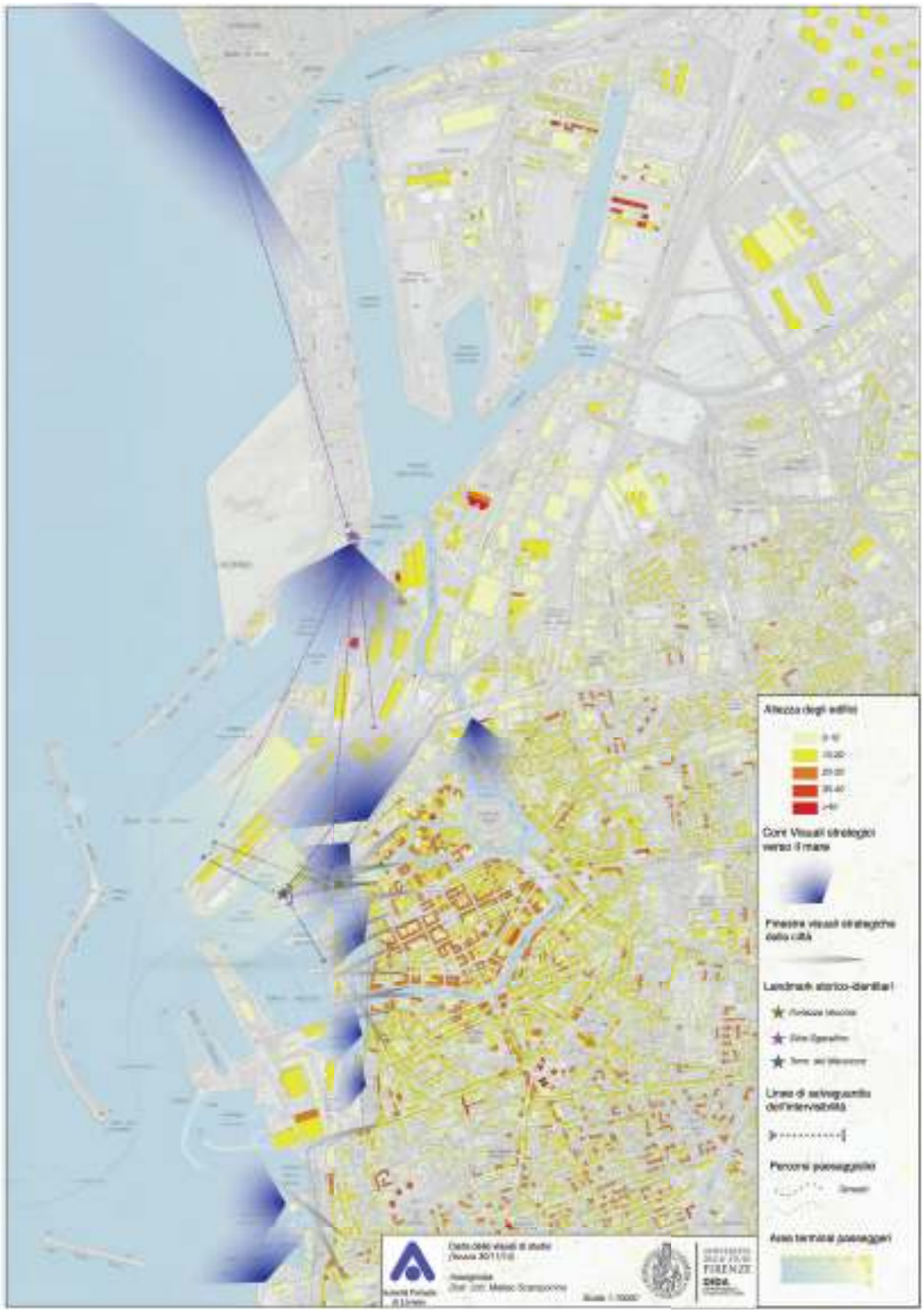
Have been developed 3D GIS models of the port and its territorial and urban context, on which, through the viewshed and line of sight analysis, have been traced and represented the relationships between visual elements historical identity and the hypothetical points, areas or routes of observation.

These simulations have allowed us to compare the current scenario with the project giving a rich picture of the impacts and effects of transformation choices.

Visual and aesthetic Control in the project

The first concerns the safeguarding of intervisibility from Maritime Station of the Old Fort.

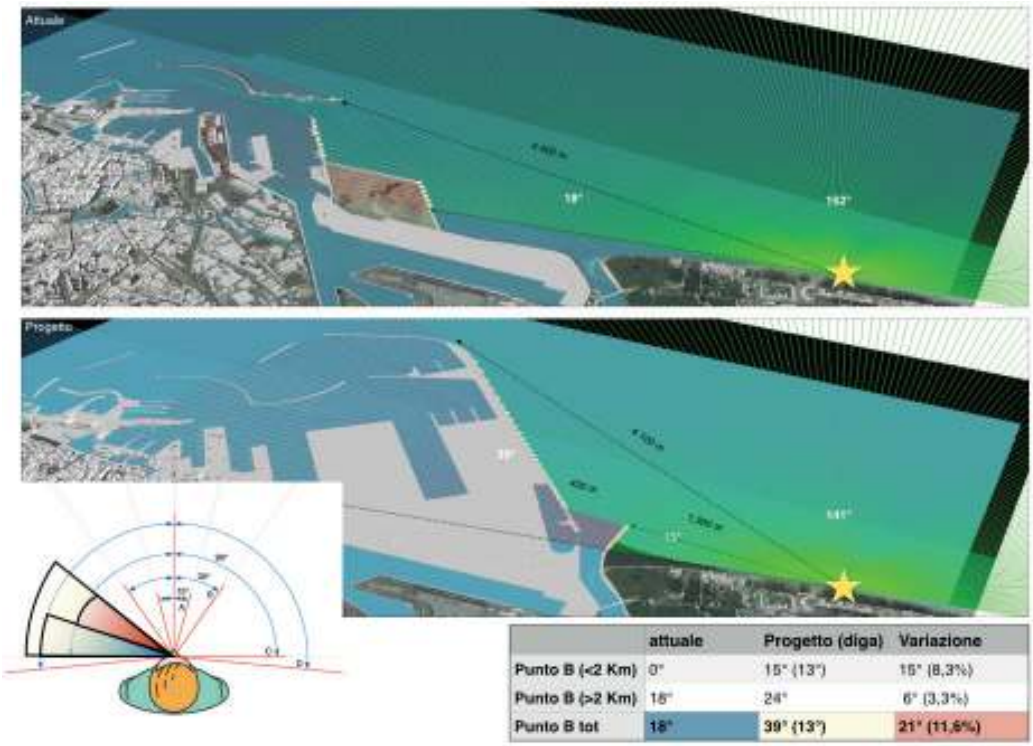
Two models have been created so GIS 3D: the first of the current situation and the second of the project scenario. The observation points considered are two, from the dock and from the deck of the ferry. It was found that,



especially from the dock, the Old Fortress is not visible because of a curtain of buildings functional terminal.

Using exact knowledge of visual obstructions derived from simulation, together with

Figure 7 – Experimental application about Visual and aesthetic control in planning. The Visuals Map. Are shown and summarized all sensible visual cones where preserving the visibility of the sea or heritage elements (blue areas and dashed lines). Also reported are the "telescopes" visual from the city (gray).



	attuale	Progetto (diga)	Variazione
Punto B (<2 Km)	0°	15° (13°)	15° (8,3%)
Punto B (>2 Km)	18°	24°	6° (3,3%)
Punto B tot	18°	39° (13°)	21° (11,6%)

Figure 8 – Experimental application about Visual and aesthetic Control in Strategic Environmental Assessment. 3D model of the visual ray from the beach, both current project. Summary table in degrees of impact at various distances and graphic synthesis.

the designers, steps were taken to a different distribution of masses of the project and the introduction of walkways for the connection that could allow the vision of the historical element.

This working method has proven to be a valuable support to the design, in fact it was possible, not by reducing the volume necessary, reshape the aesthetics of artefacts increasing intervisibility and visual relationship between city and port.

The process has a vocation of performance rather than prescriptive aimed at safeguarding aesthetic and visual characteristics of city-port identity.

After the changes in the project, the Old Fortress, very important heritage building, is most visible from the dock and ship arriving. This will have established new spatial relationships between elements of the city, and important areas of the port.

Visual and aesthetic Control in planing

The method is based on that used for the UNESCO site of Liverpool Port, adapting it to the context of Livorno, but intends to implement it rigorously calculate the variation of visual impact that new measures will have on the state of affairs.

In fact, the choice of views not only takes into account the state of fact, then of actual heritage building and viewpoints, but also focuses on the areas subject to future transformation, where projects will be implemented.

For example in the case of the provision of new docks or dams, the visual cones will fully include in their future within the project areas even if they are empty now of structures and significant elements.

The outcome of the analysis of identification of visual cones are summarized in the map that serves as a views base to support the planning, design and evaluation.

This map is part of the framework of knowledge but rather a summary of the design guidelines.

Visual and aesthetic Control in Strategic Environmental Assessment.

The goal is to investigate the visual impact and landscaping of new offshore facilities, but especially to quantify the impact from the neighboring port itself, the Calmbrone, currently affected by urban and environmental redevelopment.

The goal is that of find indicators that are useful for the Strategic Environmental Assessment.

Currently supporting the SEA there are any indicators able to measure the effects and the direct and indirect impacts of planning decisions at a local level, socio-economic and environmental, but in fact there are no standards nor models of reference about the landscape.

While aware of the complexity of the analysis, ranging from the cognitive approach / perception, introduced by the European Convention, to the more traditional holistic, this methodology allows to measure the exact impact visual very important component of landscape.

Conclusions

Spaces and structures needed to make operative and adapted the new port, surely they have a remarkable consistency. They will change the skyline, the landscape and the shape of the actual Livorno port. It will be a significant jump of scale, as the naucentric evolution imposes.

Even during this great transformation the method allows to small heritage buildings and to the historic city, to find a visual and spatial relationship with the new context, reversing the tendency of separation between the port and city.

The method is designed as a Decision Support System (DSS) then a stand of the process rather than of the project. The latter can still develop according to the needs and sensitivities that designers regard themselves appropriate during the development of the Port Authority Plan. Rules and performance criteria, contained in the map of visual cones, allow individual projects to have a consistency both internal on the general transformation, than external relative to context and heritage buildings not directly functional to the regeneration of the commercial port.

Finally, the method allows a further verification of the visual impact, in line with the strategic environmental assessment, as in the third experimentation about the Calambrone. The DSS of port transformation process is so comprehensive in terms of both method and tools.

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FORGIVING A PLACE: THE CASE OF THE PIONTA CITADEL IN AREZZO, ITALY

Giorgio Verdiani, Iacopo Giannini
Dipartimento di Architettura, Florence University, Italy

Abstract: Arezzo is placed in the middle of Italy, a town in Tuscany with a rich and intense story. Even if such a thing is true for a lot of old town in Italy and abroad, in the story of Arezzo there is an ancient and complex event which has cancelled a piece of the timeline in the history of this town. There was a time when the hillock named "Pionta" was closed by walls protecting a small independent citadel, governed by bishops, with its own churches and politically aligned with the Pope and the Vatican State. This small enclave in the Tuscany territory ended being tolerated in the XVI century. In 1561 Cosimo de' Medici ordered the destruction of this walled town, bringing to the ground all the buildings and trying to cancel the existence of this place not only from the terrain, but apparently from the historical memory. Even if the presence of this area remained at a latent state in the memory of the population, the buildings on the hill were demolished and probably their materials reused somewhere else, while only minor parts of the previous churches and chapels were reused and adapted in combination with new constructions. In 2014, a new research about this area has been started, based on the collaboration between the cultural association "Academo, Roberta Pellegrini" and the "Dipartimento di Architettura" of the Florence University. The digital survey data treatment, the reading of the architectural traces, the interpretation of the original projects -made following the logic of Architecture- and a specific investigation about the state of the knowledge about this area, have brought the basis for starting to hypothesize a map of the next possible excavations, while other common solutions to investigate the underground (like georadar survey and visual analysis of the anomalies) turned out to be not so usable, because of the strong transformation of the ground which is mixed with ruins and fragmented parts creating a very "noisy" and uniform terrain, in this way only a direct excavation, planned by clear guidelines, can give results. Because the state of ruins and the poor remains of most of the excavated areas, it was decided to proceed comparing other architectures and getting the digital survey of any elements "connected" to the original settlement and its architectures. The study and analysis of the architectural traces and indications is allowing the gradual interpretation of the original design of large part of the buildings. All the digital tools have been used focusing on the will to understand and discover traces of the original asset of this place, trying to bring back in the memory of the people the presence of their past. The research presented here will bring the status of its advances about the survey data, virtual reconstruction, methods and techniques used to enhance the knowledge about a lost architecture and urban settlement.

Keywords: Digital Reconstructin, Inverse Design, Digital Survey, Arezzo, Pionta.

Introduction

Arezzo is placed in the middle of Italy, in its central part, a town in Tuscany with a rich and intense story. Even if such a thing is true for a lot of old towns in Italy and abroad, in the story of Arezzo there is an ancient and complex event which has destroyed a piece of the timeline in the history of this town. There was a time when the hillock named "Pionta" was closed by walls protecting a small independent citadel, governed by bishops, with its own churches and political alignment with the Pope and the Vatican State. The hill rises in an area out of the Arezzo walls, it had its own fortifications and was a completely independent settlement. The Place was not chosen by chance, in the past it has been used by Etrurian and later by Romans, it was also a burial place. Because of its use as a cemetery the St. Donato burial

was placed here, creating all the conditions of faith and devotion that chanced this place from ancient graveyard to a hoy place. *San Donato* was an important Saint, he is the patron of Arezzo, were he was born in an unspecified date (even if some studies try to locate his place of Birth in Rome, or even in *Nicodemia*, Turkey) and died as a martyr in Arezzo on the 7th August 362 AD (or in the 304 AD according to other studies). The presence of such an important tomb may explain the reason for the first Christian settlements with the construction of chapels and churches, but the reason for creating a separated, self-governing town can be found in more complex motivations. On one side probably there was the political and strategical intention to have some sort of outpost directly in the heart of Tuscany. But on the other we can find some philosophical reason basing the reasoning on the words of Jaques Le Goff in *L'imaginaire Médiéval*. Here, presenting the urban concept from Guglielmo d'Auvergine (Aurillac, 1180 – Paris, 1249) in his *Opera Omnia* (pp. 407-416), the author underlines the following passages: "Let's imagine a town made by the grouping of such perfect men (*imaginabimur civitatem aggregatam ex hominibus sic pefectis*) that all of their life is focused on giving honour and respecting God, a life dedicated to reach and apply the nobless of the soul (*honestas*), a life dedicated to serve the others" [...] "It comes out clear how in front of such an admirable town (*preclara*), the rest of humanity is a like a savage forest (*quasi silva*) and all the men outside are like raw wood (*quasi ligna silvatica*)". To the contraposition between town and forest, Guglielmo d'Auvergine adds a second contraposition: the one between the natural materials and the construction materials, in the specific of the natural stone and wood against wood beam and sculpted stones.

"On the contrary of the brute stones, raw pieces from the quarry (*lapidicina, lapides rudes*) and of the natural wood, the cemented stones, nailed or connected and the

Figure 1 – The Pionta Hillock and its main urban surroundings.

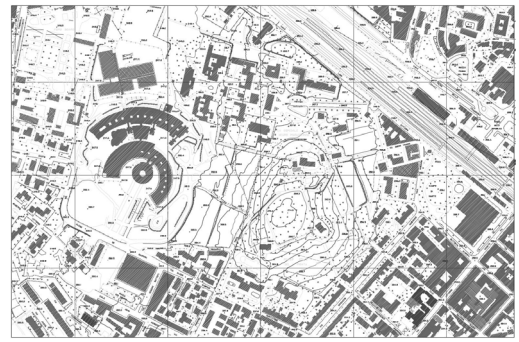


Figure 2 – The urban asset around the Pionta Hillock, on the left, the new hospital complex.

Figure 3 – Main archaeological areas on the Pionta Hillock, with the later St. Stefano church and one of the old hospital pavillion.

manufactured wood (*coementum, et clavi, e carteraeque ligature inter lapides, et ligna*) are the symbol of the mutual love and of the spiritual needs coming from humanity". He defines: "this admirable town is exactly the society, the aggregation of men or the city (*societas, aggregationes hominum, seu*

civitates)". This town is the real alternative to the "fake" towns, which are forests and caves. The town is defined by the work of men whose capacity of artistry and work is a gift of God (*vires, et artem, et artificium*). In the end: the towns are men (*Cives civitatis procul dubio sunt veri nomiinis homines*).
Such ideas can be imagined in their materialization in a rich, well constructed and "ideal" settlement, placed as a sort of satellite on the borderline of the main town, a place of faith influencing its urban surrounding, showing and at the same time preserving, the meaning of Christian values in front of common political and social context. This particular condition seems to find its graphical representation in one of the must famous frescos from Giotto (or least attributed to Giotto), the "The expulsion of the devils from Arezzo", realized in Assisi, in the Upper Church between 1295 and 1299, but representing the town of Arezzo, a town closed by walls, with the apses of an independent church creating the background for San Francesco and other friars. The chaos of the town in parallel with the well organized lines of the church. The devils can be banned from the town because of the strength of faith, but the faith needs proper places to host its intermediaries with humanity. Maybe this was one of the concept at the origin of the consolidation of this citadel as a religious outpost in front of the town.
The tolerance for this small enclave in the Tuscany territory ended in the XVI century. In 1561 Cosimo de' Medici ordered the destruction of this walled town, bringing to the ground all the buildings and trying to obliterate its existence not only from the terrain, but apparently from the historical memory. The memory of the place remained, supported by some elements saved and reused in other churches, some frescos and paints representing the Citadel, but most of its consistence is due to the "myth" developed around of the first Arezzo Cathedral, the Santo Stefano e Maria and the second one: the San Donato. Not a simple story, but the

Figure 4 – Cacciata dei Diavoli da Arezzo, Giotto Di Bondone, Assisi, Basilica Superiore, 1295-1299.

story of two Cathedrals, one near the other, one larger than the other, one ancient and coming from an early period of Christianity and a second one, almost experimental, for its articulated plant and enriched by marbles and spolia elements.
The traditional reading of these events indicates the presence of two large churches in this area, both once used as cathedrals. The ancient one was dedicated to the Saints Mary and Stefano, it was a quite common construction in the system of the Romanesque churches, while the following St. Donato, was characterized by a very complex asset, with a central and symmetric plan organized around a large empty space. Even if the presence of this area remained at a latent state in the memory of the population, the buildings on the hill were demolished and their materials were most probably reused somewhere else, while only minor parts of the previous churches and chapels were reused and adapted in combination with new constructions (like the small church of St. Stefano, built in 1610, hosting a small crypt from the original settlement). Various interventions through the centuries have rearranged the terrain of the hill itself and only

Figure 5 – Aerial view of the ruins of the St. Mary and Stefano church.

Figure 6 – Ground view of the ruins of the St. Mary and Stefano church.

starting from the 1960 a real archaeological excavation campaign was started, to discover the remains of the ancient town. The ruins of the Romanesque church of St. Maria and St. Stefano were brought to light and various minor remains were excavated in the following archaeological campaigns. But a large part of this settlement is still mysterious and unclear. There are no significant traces of the large church of St. Donato, the real cathedral of the walled town or the original walls protecting the citadel. The organization and the aspect of the area is barely testified by some paints and drawings, which include a plan view of St. Donato made by G. Vasari, but all these buildings seem to have disappeared, there are no clear remains or traces, neither there are findings of their basements.

A new research about the Pionta Hillock

In 2014, new research of this area was started, based on the collaboration between the cultural association "Academo, Roberta Pellegrini" and the "Dipartimento di Architettura" of the Florence University. A general photographic shooting operated by UAV, using an Aremax drone was done just before the beginning of the main survey campaign. Then a new survey of the whole area has been made with the use of a 3D Laser Scanner and a Total Station. During these activities all the emerging walls have been photographed to allow further reference and texturing. Specific photogrammetric surveys were made for the main finds, like Roman marble urns, original mosaics and decorated remains. The survey data treatment, the reading of the architectural traces and the interpretation of the original projects were made according to the logic of the architecture. At the same time a specific investigation about the state of knowledge of this area was brought on. These two research lines formed the basis of a starting hypothesis for a map of the next possible excavations. Other common solutions to investigate the underground (like georadar survey and visual analysis of the anomalies) turned out to be not so usable. This limit is due to the strong transformation of the ground which is mixed with ruins and fragmented parts. In this way the data can be very "noisy", so only a direct excavation, planned by clear guidelines, can give results. The ideas about this place are easy to be resumed. The hillock hosted a very rich citadel, with the presence of two cathedrals, the older one dedicated to St. Mary and Stefano and the "newer" one designed by Maginardo in the XI century and dedicated to St. Donato, additionally to the cathedrals because as such it indicates that the St.Donato cathedral is comprised of a set of minor chapels and small churches, the presence of defensive walls and an undefined

Figures 7-10 – Various representations of the St. Donato Cathedral. All of them realized after its demolition. The 9 is quite interesting, it shows a "group" of Cathedrals, with no intention to place them in a real space. In 10, the idea of more than one cathedral at the same time is consolidated.

group of buildings and facilities composing an urban pattern. All of this was built over older remains, coming from the Etruscan and Roman ages. But even if well built the whole citadel was completely destroyed. All the buildings were demolished to their basements, in an undefined time lapse, disappearing almost completely and leaving hard to read traces of their presence. One of the most surprising element is the total destruction of many parts. No traces of the St. Donato Cathedral, no traces of the defence walls. Most of the ruins seem to come from a level underground which was underground even at the time of the demolitions. It seems more proper not to formulate the question "Where are the remains?" but "Why these remains are still in place?".

Because the state of the ruins and the poor remains of most of the excavated areas, it was decided to proceed by comparing other architectures and getting the digital survey of any elements "connected" to the original settlement and its architectures. While the gathering of all the possible indications is still in progress, the virtual model of the whole area, in its current condition, has been completed, allowing the presentation and the browsing of all the parts of the ancient Basilica. The study and analysis of the architectural traces and indications allows the gradual interpretation of the original design of the larger parts of the buildings. All the digital tools, from the survey to the data treatments, to the post processing of the information have been used focusing on the will of understanding and discovering traces of the original asset of this place.

Digital Survey

The whole research started from the digital survey. While it is the first meaningful way of knowledge, a first approach to separate the mass of data from place and start structuring ideas. The organization of the survey followed multiple actions. In the first the whole area around the site of the church of St. Mary and St. Stefano was photographed using an UAV,

an Aeromax model equipped with a Canon PowerShot S100 12.1Mp compact digital camera (offering RAW shooting and GPS function). The pictures were taken from a single height with the camera parallel, most of the time, to the ground and with only a few shots taken from a tilted position. All the shots were taken in raw format and this allowed the recovery of a certain amount of details from the shadows. Indeed the weather conditions at the time of this survey offered a clear sky and a bright sun and in consequence a set of deep shadows. The total aerial survey was done in one morning, with a shooting session of 1.5 hours (from the first to the last shot). The pictures were later used to create a first textured 3D model of the area. This was done using photogrammetry, in the specific case with Agisoft Photoscan. This solution produced a light and practical model capable of giving a first, generic, visualization of the site, with all the main elements visible and readable. But this was not a complete and fully usable result: the quite large pixels describing the stones and the area and the quite simple mesh resulting from the photogrammetric process were not fully satisfactory.

The 3D laser scanner survey was planned in the form of an integrated survey, combining 3D LS to a topographic survey, the solution is quite classic and well suited for a situation like this, allowing the reduction of the need for a large and overlapping scanning area. The 3D laser scanner used was a phase-shift type, a Zoller+Fröhlich Imager 5006h. This unit offers good accuracy combined with robust construction, fast operations and the possibility to use the same tripod of the topographic unit. This last feature can turn to be quite useful during integrated survey operations: with three or four tripods around the area it is possible to swap from one to the other, reducing the operational time of the entire process. The working range of this instrument ranges from 0,4 to 79 metres (according to the technical specification of the manufacturer), in this survey the most

Figure 11 – 3D model created from the aerial (UAV) photogrammetry.

Figure 12 – 3D Laser Scanner at work in Area 1000.

Figure 13 – 3D Laser Scanner pointcloud (aligned).

usable data was ranging from one to 50 metres. The positioning of the scan stations was decided according to the shape and to the specific conditions of the terrain and of the remains.

The surveys were completed taking 112 stations, all of them operated in full panoramic mode, and exploiting the characteristics of the 3D laser scanner in use, which was capable of scanning 360° on the vertical axis and 310° on the horizontal axis. The site has generous vegetation, with various trees and brushes and at the same time it has various "empty" space with no relevant structures, the excavated areas are at a certain distance one from the other, but the terrain is at the same time interesting for investigation and design aims.

So the topographical network worked well in connecting all the scans together and allowing a lower density of the scans for the terrain and the "connecting" parts and applying a high level of details only for the excavated parts and the sectors were it was really needed.

Post Processing of the data

The first data treatment was dedicated to the alignment of the point clouds; this was done using Leica Geosystem Cyclone. The topographical network was the base of all the work, but to ensure a solid result each couple of scans were consolidated using geometrical matching between the clouds: the so called "cloud constrain". This process took time and produced the first 3D digital point cloud model of the archaeological site.

During the following post processing of the point clouds special attention was given to the trees, the parts of the point clouds describing them were separated and heavily decimated. In this way the overall work, was simplified to a little less than 2 billions points. Thus this was still a "heavy" and not easy to use dataset, so it was used only for data extraction and not for interactive usage.

A final version of the global point cloud was exported into Pointools Viewer (now Bentley Pointools) with interesting benefits in interaction and visual performance.

The dataset was later divided into multiple parts, according to the structure of the site. The first to enter the process for multimedia aims was the sector of the ruins of the Church dedicated to the Saints Mary and Stefano. This is indeed the "best" preserved monument of the whole hill, but it's more or less a collection of low walls and fragments. But it remains the only clearly readable architecture and a very important reference for any further study.

The dataset of this ancient structure was treated using a well-consolidated practice, derived from the video games graphical solutions and still useful for Cultural Heritage items in digital survey processing. Starting from the point cloud of the church ruins a very detailed mesh was created. Then it was considered as the "high poly" (high number of polygons) mesh: this very complex model was exported using the .OBJ format into Raindrop Geomagic Studio. Using the specific tools of this software it was decimated to became a "low poly" (low number of polygons) mesh. The "high poly" model was then used to extract its details in the form of a normal map and displacement map; these two bitmaps were then applied back on the "low poly" model. In this way the lightweight model was capable to be used with ease in multimedia and interactive use, apparently preserving its original level of details. For the remaining walls of St. Mary and Stefano the decimation was quite strong, the original model, made of around six million faces was used to apply texture. This one was created starting from a large set of shots taken on the ruins at the time of the survey.

Then, after the extraction of the normal/ displacement maps, it was simplyfied to be made by only 50 thousands faces, but with the texture, the normal and the displacement maps applied, it still looks rich and useful for the reading and interpreting of the site. The processing of the texturing was done

using Maxon Cinema 4D, the model was then exported again in OBJ and DAE formats for further use in multimedia and interactive software.

Other surveys

The poor ruins on the hill of the Pionta are not the only witness of the ancient condition of this place. A various set of iconographic examples are here and there in Arezzo and they testify, in their own way, the original aspect of the citadel. Some of them are very interesting and so it was decided that photogrammetric surveys of each of them were to be taken. The first was the sign engraved on the main door architrave of "St. Maria of the Old Dome" Church in the Arezzo downtown, probably realized immediately after the destruction of the citadel. The second was a baked clay plate from and altar, now located in the Diocesan Sacred Art Museum in Arezzo. For both these items the photogrammetry was based on the use of Agisoft Photoscan, with the use of a measurement taken in place to put the final model in scale.

The use of 3D models to study such elements is very interesting, because it allows the detailed reading of the shape of the elements and it makes it possible to take a look from different and specific perspectives. There are also other and even more detailed graphical description of the place before its destruction, but they are paintings or drawings, thus a simple flatbed scanner was enough to create a digital copy starting with a good quality reproduction of these documents.

One of these is currently conserved in the Uffizzi "Gabinetto dei Disegni" and it's a work by Giorgio Vasari the Young, a drawing showing the plan of the original St. Donato Church. This is a very important document, describing a rare and innovative medieval church, with a spatial organization running all around a central space, something existing in other architectures, but only in churches built various centuries later. The combination of this drawing with the other traces left in paintings and in sculptures are the only possible bases to start a virtual reconstruction of the St. Donato church. While the presence of a certain set of ruins from the Church of St. Mary and Stefano allows to start investigating this ancient church with more ease.

Figure 14 – Baked clay representaion of the Pionta Citadel, Diocesan Sacred Art Museum in Arezzo.

Figure 15 – The façade of St. Donato in the crest of the St. Maria of the Old Dome" Church in the Arezzo.

Figure 16 – Detailed 3D textured model of the St. Maria and Stefano church (Mirco Pucci).

Digital Reconstructions: St. Mary and Stefano

The virtual reconstruction of the site started from the main evidence of the site: the Church of St. Mary and Stefano.

The remains of the crypt, of the walls and the previous archaeological investigations and studies, offered the base for an architectural reflection on this building.

The plan of the church was compared with other similar, like St. Salvatore in Agna in Pistoia and St. Eugenia in Bagnoro, Arezzo, two churches in well preserved conditions, useful to better understand the general aspect of the fronts and sections of the ruined church.

The study of the geometrical layout, based on the units in use at that time: the Florentine "braccia", was done starting from the remains.

This work was very useful in defining a spatial grid, able to be exte nded and allowing a better understanding of the proportions of each part.

To have a confirmation of the virtual project, the mosaics found during the excavation of the sixties, and now conserved in St. Stefano Church, were virtually brought back in place, extended in their pattern to fill the whole spaces.

This was a successful test, while the new hypothetical plot showed to be perfectly compliant with this operation.

The use of the grids developed during the analysis phase was very useful to define the missing parts and organize a logical relationship of proportions.

The process was brought on interpolating between the evidences coming from the survey, the logical construction and comparing buildings from the same period.

A first set of classical 2D drawings was realized out of all the sketches produced in this phase, then, later, a 3D model with details and texturing of all the external parts was realized.

As a third step, the model was then completed of all the internal elements, while the modelling of the space of the crypt is still an ongoing project at the moment of this writing.

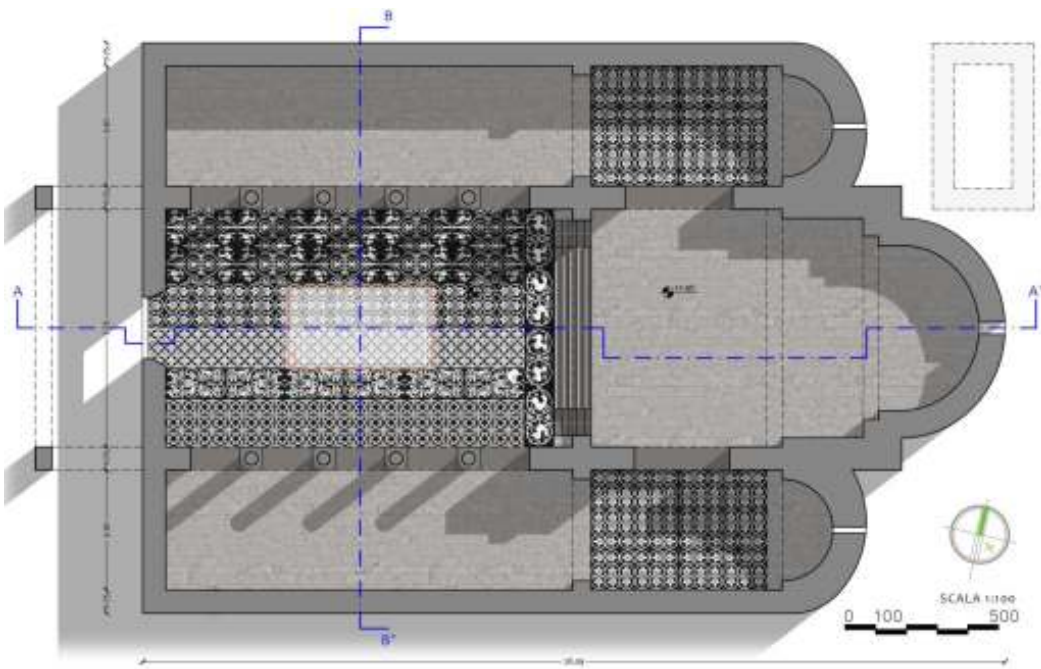
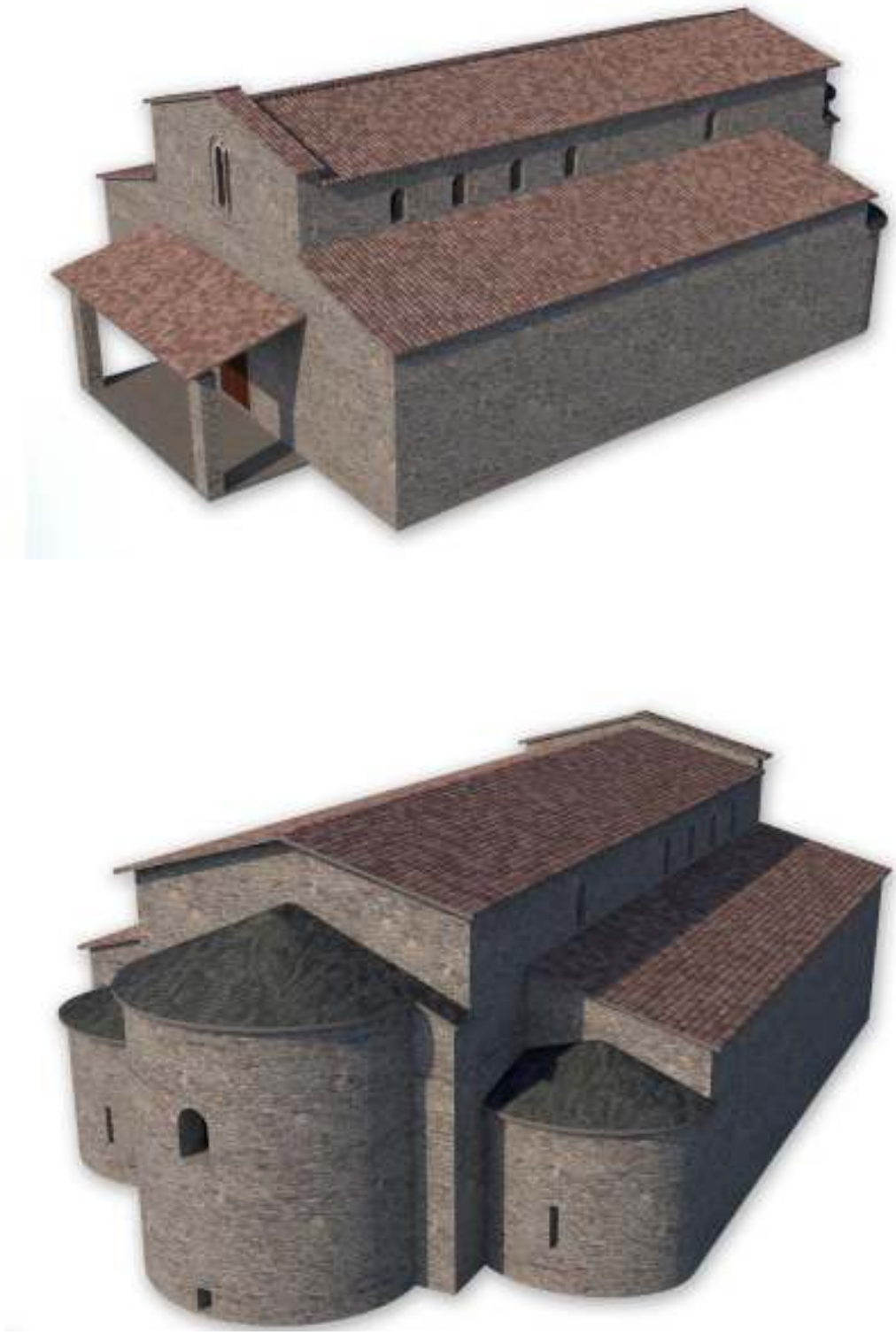


Figure 17 – Digital reconstruction of the St. Maria and Stefano church, with the floor mosaic brought back in place and interpolated to complete their drawing (Iacopo Giannini).



Figures 18-19 – Digital reconstruction of the St. Maria and Stefano church, external views (Iacopo Giannini).

Digital Reconstructions: St. Donato

If the St. Mary and Stefano church offers many walls and various elements to base a reconstruction, the St. Donato cathedral seems a sort of vanishing buiding, with no remains to support hypothesis.

None of the previous excavations have ever found traces of this building, the list of references are quite short, the most relevant are: few written lines about the St. Donato in "Le Vite" from Giorgio Vasari; a plant of the cathedral made by Giorgio Vasari the Young; various paints and frescos, all realized after the demolition, representing an apses view of the cathedral, probably most of them are based on the same drawing and one follows the other altering an original version of this view; the two representation in marble and baked clay mentioned in the previous paragraph; various ideas coming from previous studies, most of them oriented to find a reference in the St.Vitale in Ravenna.

The text from Giorgio Vasari about the St. Donato Cathedral is short but meaningful: *"Gli edifizii ancora, che in quel medesimo tempo si fecero in Toscana, fanno di ciò pienissima fede. E per tacere molti altri, il tempio che fuor dalle mura d'Arezzo fu edificato a S. Donato vescovo di quella città, il quale insieme con Ilariano monaco fu martirizzato sotto il detto Giuliano Apostata, non fu di punto migliore architettura che i sopra detti. Né è da credere che ciò procedesse da altro che dal non essere migliori architetti in quell'età; conciò fusse che il detto tempio, come si è potuto vedere a' tempi nostri, a otto facce, fabricato delle spoglie del teatro, colosseo, et altri edifizi che erano stati in Arezzo innanzi che fusse convertita alla fede di Cristo, fu fatto senza alcun risparmio e con grandissima spesa, e di colonne di granito, di porfido e di mischi che erano stati delle dette fabriche antiche, adornato. Et io per me non dubito, alla spesa che si vedeva fatta in quel tempio, che se gli Aretini avessono avuti migliori architetti, non avessono fatto qualche cosa maravigliosa; poiché si vede in quel che fecero, che a niuna cosa perdonarono per fare quell'opera, quanto potettono maggiormente, ricca e fatta con buon ordine. E perché, come si è già tante volte detto, meno aveva della sua perfezione l'architettura che l'altre arti perduto, vi si vedeva qualche cosa di buono."*

From the text emerges: rich shape, rich architecture, materials and elements coming from the Roman sites.

For sure it was a quite particular building, rich, articulated, maybe "experimental" for its time, with the effort to find a balance between the need of a Cathedral and keeping a central space, opened to the roof.

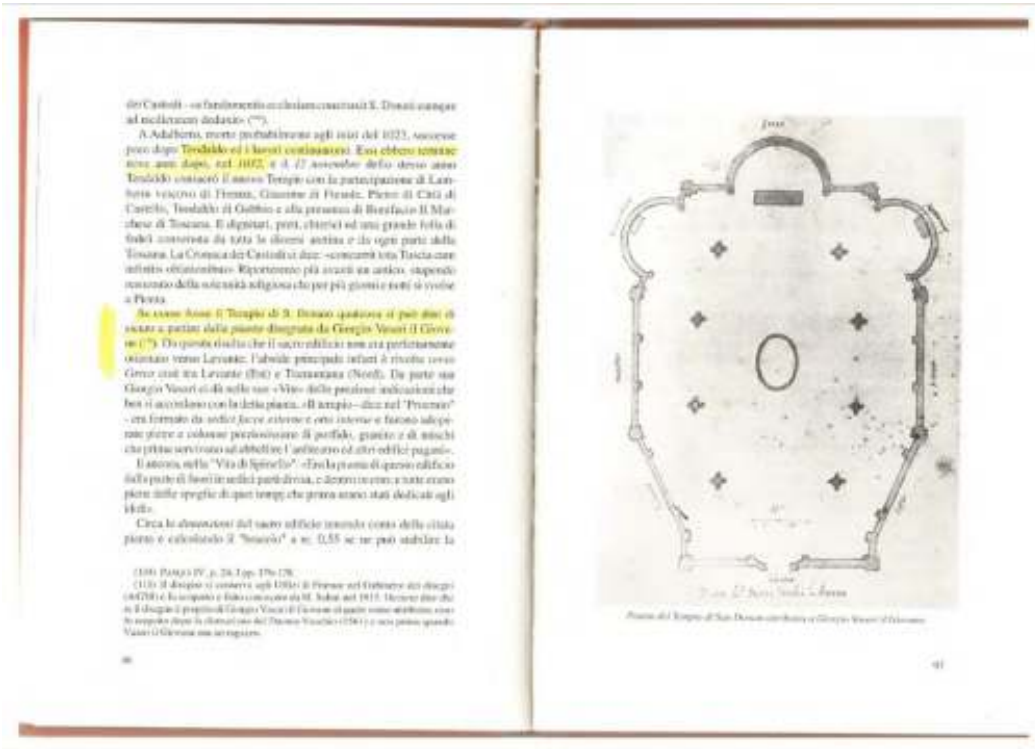
Such a design creates a lot of difficulties in finding existing reference buildings, none of them seem available in Tuscany, almost none of them from the same age.

At the state of the research it has been possible to find two interesting reference: the church of St.Sofia in Benevento and the church of St. Erasmo in Capaci. Both are not to be considered in connection with the St.Donato, but probably they present a similarity in the spatial aspect, with a central volume articulating the shape of the church all around. The two churches come from different historical periods, but both present the complex will to design a central space developing into the naves of a church.

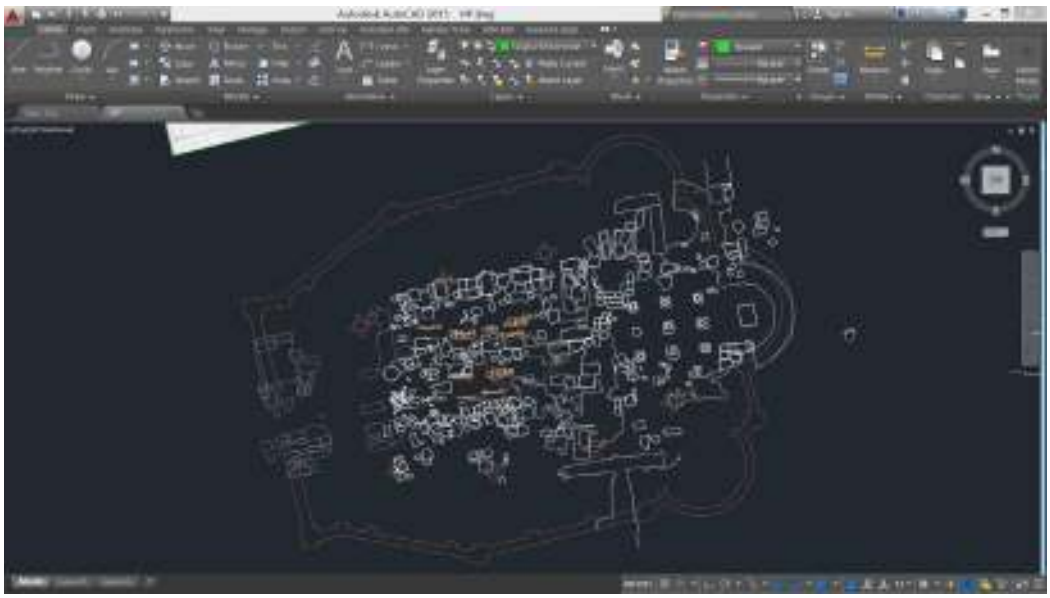
The digital reconstruction moved from the plant view made by Vasari the young: once oriented and putted in scale (the drawing has clear notes to help it), it has been the start of any further development.

The first reflection can come from placing this first drawing over the ruins of the St. Mary and Stefano church. They look compliant, it is possible to suppose the St. Donato built over the previous church, a renewal of the Cathedral in place of a double Cathedral.

No other evidences can support this idea, but this is something happened in other context, the old church leave space for the new one, the ancient basement remains beneath the new building. This hypothesis should explain why there are remains of the St.Mary and Stefano, they were underground at the time



Figures 20 – Frequently published, the plant of the St.Donato Cathedral from Giorgio Vasari the Young is a well known reference for the Romanesque architecture.



Figures 21 – Matching of plants between the St. Mary and Stefano and the St. Donato.

of the demolition and so they remained. Obviously there is no way to demonstrate this, but in the lack of any archaeological finds this can take place in the various number of ideas about this place.

The definition of the digital reconstruction was here operated using directly a 3D modelling process, starting from the inside

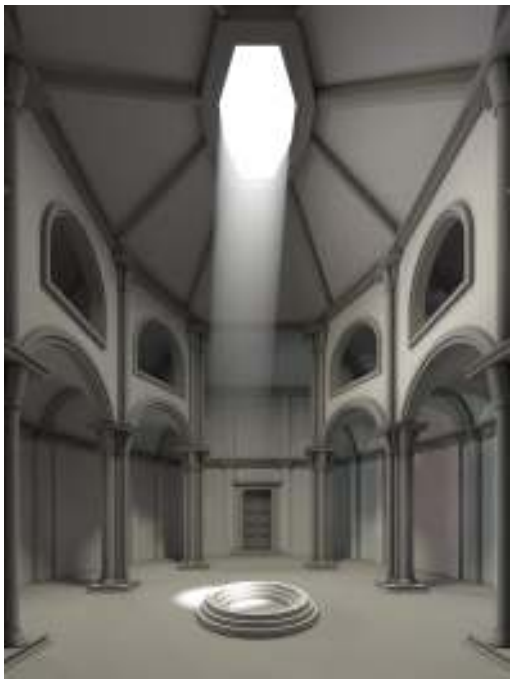


Figure 22 and 23 – Digital reconstruction of the St. Donato Cathedral (Giorgio Verdiani and Mirco Pucci).

and then going to the apses, then back to the interior and in the end completing the external sides. For the interior a matroneo (women's gallery) has been thought to match the San Vitale in Ravenna structure.
The development of the model confirm the complex and rich characteristic of this architecture, confirming it as one of the most peculiar lost building from that age.

General Dissemination

As a first test for the possible export and sharing of the models coming from this research, all the main models were brought inside the Sketchfab.com online community, this interesting service and site allows high quality real time browsing and at the same time protects the original 3D contents from unauthorized access and download.
The results are easy to browse in high quality graphic, both the models coming from the main and the secondary surveys are well integrated inside the website interface. In this way, technology enthusiast and scholars can browse and analyse the 3D models of this monumental and mysterious area appreciating the size and the articulation of each part of this complex puzzle.

Conclusions

The virtual reconstruction of the St. Mary and Stefano church and of the St. Donato was just the first step of a complex work, the models defined interpolating between existing architecture and inverse design procedures allow to have a first look at the possible aspects of the area, yet it leaves all the questions about the St. Donato cathedral open, as its original place remains a mystery and nothing seems successful in finding its traces.
Even the most promising excavations turned out to discover only fragments belonging to other buildings. While the presence of the underground chapel, gives not enough suggestions to be used as a possible reference in locating of the main monument.
In the end the total destruction applied to all the buildings of the area and the numerous rearrangements of the terrain seems to have destroyed everything to such a level that the main question seems to be "why did only the

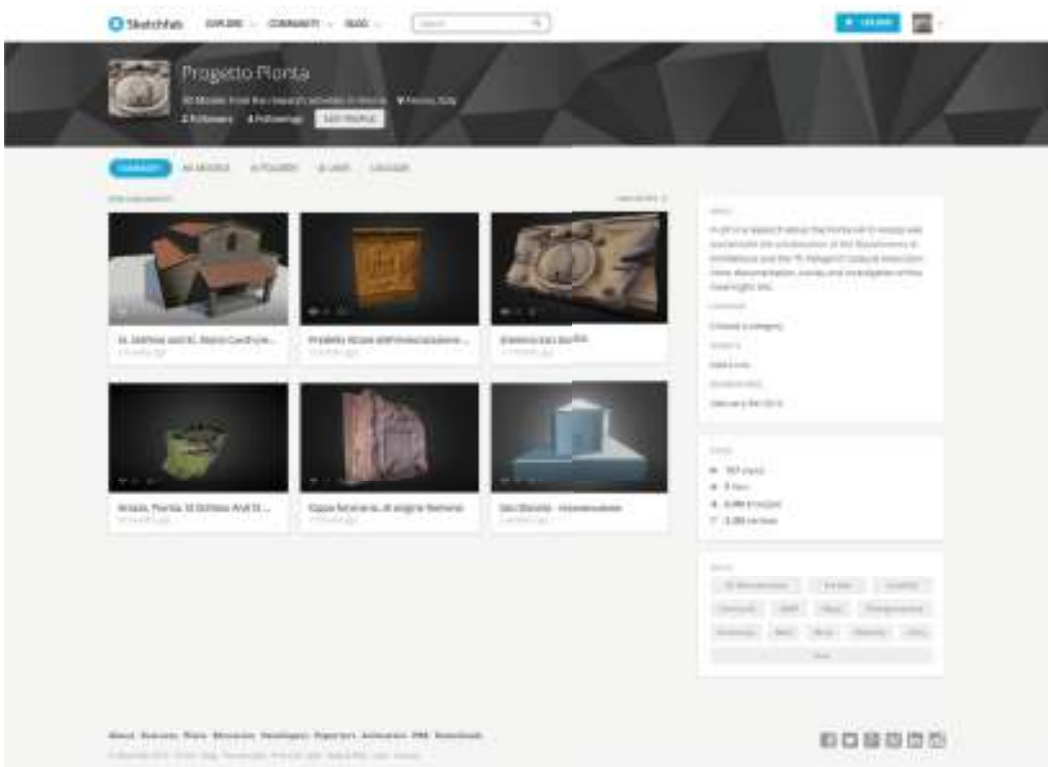


Figure 24 – The "Progetto Pionta" profile in the wwwsketchfab.com community.

St. Mary and Stefano Church ruins remain intact enough to be read?"

Such a question may be able to open new and interesting scenarios about the state of knowledge of the area, while the attention raised by the use of contemporary archaeology may be able to bring back attention and understanding about this rich and unlucky part of the town.

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Pictures from the workshop

Giorgio Verdiani
DiDA (Dipartimento di Architettura) – School of Architecture – University of Florence

Abstract: Behind a conference, behind the proceedings and the book left to testify the complexity and the mountain of ideas flowed in few days, there is always the group of people who debated all the subjects, and their life around the event. So documenting with pictures is a nice way to add something more to the acts, and its something that can be done with group pictures, with reportage pictures, with casual shots, but is also something that can be done with an effort, the one that trying to capture the real essence of visit and of the people around. In this closing contribution it is possible to see a selected series of images from the workshop, the visited towns, but no people posing or common postcards, only few shots to put in order what was done and trying to capture the involvement of the participants to the workshop. All the pictures here are taken and post processed by the author.

Keywords: Photography, Workshop, Valencia.

Social activities: visit to the Archaeology Museum in Valencia and to the downtown

A very interesting architectural space, showing and mixing new and ancient elements from the story of the town.

One of the main positive aspects is the continuous interaction between the townscape and the museum, the parts, even when from a remote past are not isolated and almost nothing remain unexplained.

Some original architectural solutions, like the pool lighting the ancient baths are worth of mention. Phisical models and well balanced multimedia integrate information where needed. A perfect place to start the discussion about urban asset and historical traces.

Out of museum, visit to the downtown

After such an archaeological premise, the visit continued in the Valencian old town. The walk to the town centre pass by the Cathedral, the central Market, the alley and the streets of the downtown, allowing to appreciate the contest, the urban mood, the specific aspects of a lively town. The specific moment seems quite interesting for this visit, showing a mix of old and new elements, a tension toward transformation frozen by the economical difficulties brought by the crisis. Here the holes in the urban fabric and the decay appears partially integrated by street art operations, colourful works, inclusion of new global ideas with the tradition of

the places. “Continuity” seems the word. But almost in an unexpected way. The visit starts from the ancient archaeological remains, but just to find the archaeology of the present. The

time run forward faster than ever, or at least it gives this impression. Certain elements, like street art and temporary setup, even if can strongly influence the contest, have such a brief duration to require an archeological approach after few years, if not after months. This continuous changing in the urban contest has been well focused by James Dixon and in

Valencia as in many contemporary towns this is clearly readable. Once more the layers in the town center are all present: from the ancient time to the present, a long development made of rethinking and reuse of the space, not crystallized around a single idea of town, but still ongoing. The present is the time in which all happens and this looks clear.

Social activities: bike tour of Turia river
Helped by the wonderful weather, the visit took the whole day, bringing all the participants along this modern and pleasant park, visiting the main architectures and some interesting location in its surroundings.

Days of the workshop (next pages)
Obviously, the presentations of all the participants, questions, answers, discussion.
The interest and the intention to bring on this experience.


SAPIENZA

Vaencia, Spain
18-20th May 2015

Scientist workshop:
ARCHITECTURE, ARCHAEOLOGY AND CONTEMPORARY CITY PLANNING
"State of knowledge in the digital age"

The workshop took place in Valencia, Valencia, Camino de Vera, Universitat Politècnica de València, School of Building Engineering (Escuela Técnica Superior de Ingeniería de Edificación) Building 1C, first floor, boardroom.

Workshop organizing committee:
Pablo Rodriguez Navarro, Giorgio Verdiani, Per Cornell

The workshop has been realized in collaboration between Universitat Politècnica de València, Spain, the Architecture Department of the Florence University, Italy, the Department of Historical Studies, University of Gothenburg, Sweden.

Proceedings Editors: Pablo Rodriguez Navarro, Giorgio Verdiani, Per Cornell
rodriguez@upv.es / giorgio.verdiani@unifi.it / per.cornell@archaeology.gu.se

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In discussions on urbanism, the need to involve new actors has been a major theme of recent debate. In this field, throughout Europe, various ways of allowing citizens to take a more direct part in planning is stressed. It is also important to look at the role or lack of role played by particular research fields. Architecture plays a major role in city planning. While archaeology has become increasingly involved in field projects in urban environments, the discipline seldom plays an important role in city planning. In several countries and particular cities this situation has been questioned during the last decades. In May 2015 a group of scholars from different countries met in Valencia to discuss about the relationship between Architecture, Archaeology and contemporary City Planning. This book collects the final papers from that meeting.

The workshop has been realized in collaboration between **Universitat Politècnica de València**, **Spain**, the **Architecture Department of the Florence University**, **Italy**, the **Department of Historical Studies**, **University of Gothenburg**, **Sweden**.

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