

5th ISUFitaly International Conference
Rome, 19-22 February 2020

PROCEEDINGS

edited by
G. Strappa, P. Carlotti, M. Ieva
with the collaboration of
F. D. De Rosa, A. Pusceddu



URBAN SUBSTRATA & CITY REGENERATION

Morphological legacies and design tools

ISUFitaly
International Seminar on Urban Form
Italian Network



ISBN 978-88-941188-8-9

FACOLTÀ DI ARCHITETTURA



SAPIENZA
UNIVERSITÀ DI ROMA

ISUFitaly
International Seminar on Urban Form
Italian Network



lpa

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via A. Gramsci, 53
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U+D urbanform and design

online journal
<http://www.urbanform.it/>



Centro Studi Americani

via Michelangelo Caetani, 32 – 00186 Roma
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Graphic design and layout by Antonio Camporeale

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Morphological legacies and design tools

Contents

Presentation	6.
Organization	7.
Conference Themes	9.
Contents	11.

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Conference Themes

Urban Form Theories

A.2 Urban Form Theory

Urban Form Reading

A.1 Urban Substrata and New Meanings

A.3 Urban Morphology and Planning Tools

A.4 Landscapes in Transformation

A.6 Ancient and New Public Spaces

PH.1 Urban Morphology in Historical Context

PH.2 Urban Regeneration and Social Issues

PH.5 Urban Morphology and Education/Methods and Spaces

Urban Form Design

A.5 Re-Emerging Substrata

PH.3 Reading/Design Strategies

PH.4 New Trends in Urban Form Interpretation

PH.6 Continuity and Resilience as Tools for Regeneration

B.1 Reading/Design Study Cases

A.1 Urban Substrata and New Meanings

- 25 Urban Fabric and contemporary dwelling in the Greek-Roman centre of Naples
Federica Visconti
- 33 Micro-urbanism – additional tool for urban heritage determination
Éva Lovra
- 39 Documenting the disappeared Rome: the San Marco district
Chiara Melchionna, Francesca Geremia
- 51 Underlying, extended and updated Rome in Valencia: the historic definition of Ciutat Vella as the core city
César D. Mifsut García
- 61 Why an Atlas?
Reading of the cultural substrata of the Portuguese urban fabric
José Miguel Silva, Sérgio Padrão Fernandes, Carlos Dias Coelho
- 71 The concept of morpho-typology in the Alberobello urban organism
Matteo Ieva, Miriana Di Gioia, Francesco Maria Leone, Rossella Regina, Fausta Schiavone
- 79 Metamorphosis of Urban Form in A Historical Nutshell; A Critical Perspective
Selen Karadoğan, Ecem Kutlay
- 87 Transformation processes and the teaching of Urban Form Morphological legacies and Design tools
Nicola Marzot

A.2 Urban Form Theory

- 99 The Vacant City as the contemporary substratum. Why and How the crisis enables regeneration processes
Nicola Marzot
- 113 Giovannoni's "diradamento" as a congruent transformation of urban continuity. Applications and limits of a philological device for core city regeneration
Maria Vitiello
- 125 Shifting point-attractors: the central-symmetric flexi of via Flaminia and via Clodia near pons Milvius, Rome.
Alessandro Camiz

- 135 Urban aesthetics: the haussmannian urban form and the configuration of the city of Erechim/RS, Brazil
Camila Nardino, Piccinato Junior Dirceu
- 147 Coincidentia oppositorum.
The building of the urban form in O. M. Ungers
Vincenzo d'Abramo
- 155 An Examination of The Morphological Change of the Roman Main Axis-Case of Adana Turkey
Beliz Büşra Şahin, Fazilet Duygu Saban

A.3 Urban Morphology and Planning Tools

- 165 Industrial heritage as an overlooked potential in urban heritage.
Case study Miskolc-Diósgyőr.
Zoltán Bereczki, Éva Lovra
- 177 The Good, the Bad, and the Ugly
Mark David Major
- 191 Lasting transformation of Erenkoy
Burak Ozturk
- 201 The effects of planning decisions on the traditional urban fabric of a historical city: The case of Gaziantep in 1968-2008
Fatos Merve Hidiroglu, Ebru Firidin Özgür
- 213 Transitional Morphologies in the Global South: Sub-Saharan Africa
Ana Ricchiardi
- 225 Morphological features of small Morphological specific features of postindustrial small towns industrial towns
Iuliia Viktorovna Bushmakova, Svetlana Valentinovna Maksimova
- 237 Gridded Urban Morphologies, sub-Saharan Africa and Senegal: Research Historiographies and Present-day Realities
Liora Bigon, Eric Ross

A.4 Landscapes in Transformation

- 247 Transitional form of industrial mixed-use
Martina Crapolicchio
- 257 Urbanscape as Landscape Emanation of East Adriatic Coast
Ana Sopina, Bojana Bojanić Obad Šćitaroci

- 271 The role of Pulp and Paper mills in the Quebec City's urban development: the first observations.
Maxime Nadon-Roger, François Dufaux
- 279 Dyads of an operating thought: modification & continuity | project & morphology
Nicola Scardigno
- 287 The Spatial Logic of the Arabian Coastal City: The Case of Doha, State of Qatar and Muscat, Sultanate of Oman
Heba O. Tannous, Mark David Major
- 305 Borgo Taccone. From the fragment to the weave
Giuseppe Francesco Rocola

A.5 Re-Emerging Substrata

- 317 The curvilinear substrate. From the phenomenon of dequantification to deformation of the type
Cristian Sammarco
- 327 Ancient planned structures in Lake Bracciano area
Michele Magazzù
- 337 The City of Venice. The Form and the Space
Ermelinda Di Chiara
- 347 One new fragment: The Archaeological Museum by Egizio Nichelli (1954/1964)
Elisa Valentina Prusicki
- 359 The city of walls: how military architecture has shaped Baghdad and the citizens
Rossella Gugliotta
- 369 Layered Morphologies and Topographic Structures. Substrata and Design Writing
Laura Anna Pezzetti
- 383 Place Royale: An heritage to rediscover
Luiza Cardoso Santos

A.6 Ancient and New Public Spaces

- 393 Public Space in São Paulo: The fair as a form of urban land occupation
Denise Antonucci, Gabriela Lamanna Soares

Layered Morphologies and Topographic Structures. Substrata, Assemblage and Design Writing

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Keywords: layered topo-morphology; assemblage; topographic forms; architectural rewriting

Abstract

Considering the site as a 'tabula plena' rather than a 'tabula rasa', design is in no case the colonisation of a void but rather a new writing on an existing text, often miscellaneous, that requires to be read, interpreted and consistently continued. This knowledge posture deriving from the Italian tradition of urban studies and urban architecture manifests a tendency towards continuity that, although manifold and originally in either opposition or in continuity with the Modern Movement, firmly relates architecture to the meditative thought which produces advancements through a continuous reflection on previous ideas and physical 'substrata'.

After establishing an 'urban science' based on the typomorphological bi-univocal relationship, analogic transpositions in urban discontinuity, 'città per parti', and first inquiries in the territories of topologies, present interpretations underlying the notions of layered palimpsest, stratigraphic readings and substrata, reinforce a tendency in which architecture and the city are mutually defined.

The concepts of layered morphologies and latent topographical structures form a conceptual device that challenges the condition of the city as assemblages of assemblages, operating on the degree of integration or dispersion of its components, the decoding of latent structures and traces, the readability of morphologic-semantic units and rewritability of superior-grade figures.

In Chinese contexts, where historic space is often the space of latency under multiple incoherent texts, simply juxtaposed, the hermeneutic work of decoding and recoding acts as a carrier for constructing a contemporary cultural relationship with the site by stirring a multiplicity of meanings and resonances that enriches both situated memory and the narrative introduced by the new work.

Advancing critical-theoretical propositions while verifying their operational tool through research-based case studies, the paper explores some principles for reading, decoding and interpretative rewriting in multi-coded compromised Chinese historic sites: re-signification, re-structuring and re-morphologisation.

The Spatialisation of Temporal Dimension

When the site is considered as a *tabula plena* rather than a *tabula rasa*, design is in no case a self-referential colonisation of a void but rather a new writing on an existing text, often miscellaneous, that requires to be read, interpreted and consistently continued or transformed.

Occupied sites contains not only built structures, i.e. building types and their tissues, but also imprints, crop marks, fragile traces, hidden *substrata*, fragments, incongruous alterations and significant debris.

This knowledge posture, stemming from the Italian tradition combining urban and territorial typomorphological studies with *urban architecture* (Rossi, 1966), manifests a tendency towards continuity that, although manifold and originally in either critic opposition (Muratori, 1963) or in *rifondativa* continuity with the Modern Movement (Rogers 1957, Samonà 1975), firmly relates architecture to a humanistic meditative thought which produces advancements through a continuous reflection on previous ideas and physical *substrata*.

Since the 20th century, academic circles have questioned various theoretical models and their closely related *continuity* (Foucault, 1969). Al centro dell'articolata riflessione degli architetti sono i principi su cui si basa la definizione della forma architettonica e della città, del territorio e del paesaggio come luogo dell'architettura.

After establishing an 'urban science' based on the typomorphological bi-univocal relationship (Muratori, Aymonino, Canella, Rossi, among others), analogic transpositions in urban discontinuity (Polesello), *città per parti* (Aymonino, Rossi), and first inquiries in the territories of topologies (Gregotti, Secchi) and *ground writing* (Purini), an interpretations underlying the notions of layered palimpsest, stratigraphic readings and *substrata*, can update and reinforce a tendency in which architecture and its settlement forms are mutually defined.

Beyond significant differences in theories and methods, we can maintain the recognised relationship between knowledge and design (research-driven design joint to research-by-design), that subverting conventional functionalism and usual disciplinary fragmentation has affirmed that programs and themes need to be defined starting from the character of the site.

Understood as a context that is culturally and historically defined, it brings in foreground architecture and urban or territorial forms as an historic-cultural '*mise en forme*'.

In many contexts, from archaeological to severely compromised ones, the metaphor of the palimpsest (Geddes 1915; Corboz, 2001), supplemented by a deep stratigraphic reading of the *substrata* (Strappa, 2018), must further include the concept of *latent structure* (Pezzetti, 2019), understood as a system of physical or intangible *lines of force* that presides over the constitutive reasons of settlements. At the same time it evokes a deep and resilient order, hidden under apparent chaos, and an *absent form* that the project has the responsibility to unveil.

Differentiating between the notion of *substratum* (from *sub sternere*, to spread beneath) and ruin (from the Latin *ruere*, to collapse) (Strappa, 2018), we can consider preceding layer as a foundation for the overlapping of a new organism, or in philosophy, the sub-stantia forming the essence of a thing.

History takes place in time but also in space. The notion of memory is associated to places within which it has been produced and continue to witness the event through time.

As pointed out by Freud (1930), who compared human memory to Rome as a palimpsest city, borrowing from archaeology the metaphor of sedimentation, physical traces only rarely disappear unless abrupt events occurs, but even so people would rebuild along earlier tracks.

Exploring the notion of *substratum* within the theoretical dimension as well as design work, we can discriminate three meanings that in their complex interaction support or alter the previous layer from the within and without.

Physical *substrata* may correspond to the spatialisation of the temporal dimension which is crucial to recognise the order of superposition. The archaeologist's method

offers consistent tools to architects because differently than the historian's, the temporal dimension of time is 'spatialised' since anteriority and posteriority derive from strata of sedimentation.

Foucault (1969) introduced archaeology as an analytic method to better comprehend any system of thought that would not build linear narratives of progress. Its comparative approach was never addressed to reduce complexity to a single unit but rather it worked with fractures and discontinuity.

Nonetheless, while the archaeologist works separating the physical strata accumulated horizontally, the architect works by superimposing layers, organised both horizontally, like the Bramante's sketches for St. Peter, and vertically like Alberti and Palladio.

Substrata can be also intended as latent structures that although buried or disappeared, are still underlying imprints providing meaning to urban form.

Finally, intangible *substrata* refer to the reference to previous ideas and architectures that through an analogic procedure support something yet to come. The architectural work is 'a single of many', unique and made of others architectures at the same time.

Layering Process and Assemblage Thinking

In linear developments, the layering process may inherit features from previous strata, each one modifying and being modified by the new additions.

Nonetheless, during historic cycles and rapid development, the layering process may suffer violent rifts and fractures or experiment the grafting of new *force-ideas*¹ dove, più che alla continuità morfologica dei tessuti, la continuità attiene innanzitutto a structural reason and to the *substratum* formed by segni topografici incisi sul suolo dalla struttura urbana precedente o nella profondità dei tracciati archeologici. E' il caso paradigmatico del Foro Antoliniano a Milano o del Prato della Valle a Padova.

Soprattutto a partire dalla città moderna, l'accostamento paratattico di morfologie disparate, infrastrutture, e brani di natura antropizzata, rende difficile pensare in termini di continuità secondo un modello necessariamente univoco e filologico.

Experimentation derived from Postmodernism culture have already dismantled simplified linear-causal narration in favour of collage narration. Under the guidance of a predetermined theme, the text is investigated, classified, analysed, deconstructed, and re-narrated.

The last decade has seen an increasing interest in the application of *assemblage thinking*, in geography, sociology and urban studies.

Critically exploring the complexity of the society through the multiplicity of *assemblage thinking*, il recente testo di DeLanda (2006; 2016), debitore dei precedenti studi di Deleuze and Guattari (1987), sembra infatti riportare l'attenzione su un'ontologia che appartiene alla cultura del progetto: la città come assemblaggio.

Sotto le diverse declinazioni di *city of composite* or collage (Kollhoff; Rowe 1978), montage ('Roma interrotta', Città Analoga) il concetto di *assemblage* ha variamente attraversato la composizione architettonica per ricondurre a senso anche il caso e l'imprevisto come elementi di arricchimento. Del resto la strategia dell'*assemblage* e delle procedure ad essa sottese ha già dato ampie prove di sperimentazione quali Villa Adriana e la Bank of England di John Soane (Pezzetti, 2014) tra tutte.

Critically exploring the complexity of the society through the multiplicity of *assemblage thinking*, the recent text of DeLanda (2006; 2016), indebted to previous studies of Deleuze and Guattari (1987), brings attention to an ontology that has a long belonging to the project culture: the city as an *assemblage*. Under the different variations of *city of composite* or collage (Kollhoff; Rowe 1978), montage ('Roma interrotta', Analogue City) the concept of *assemblage* has variously crossed the architectural composition to make sense out of the unexpected and chaos as enriching elements. Besides, the strategy of *assemblage* and the procedures underlying it had already ample proof in historic precedents such as Villa Adriana and the Bank of England by John Soane (Pezzetti, 2014) among them.

Already in the early 1980s the city appears as 'a vivid set of pieces and fragments, of types and countertypes, a juxtaposition of contradictions, a process more dialectical than linear' (Ungers, 1979).

Moving from the multiplicity and complexity of contemporary society, the assemblage thinking has recently been relaunched from relational theories transposed to the study of urban form, informing the theme of the 2019 ISUF Conference 'Cities as assemblages'.

The meaning that the original French term '*agencement*' possesses, refers to the process of matching together a set of components and not just its result. Unlike collage, in fact, we can read in the assemblage procedures a structuring intentionality that the operation of the bricoleur does not possess. Transposed into architectural culture, this is evident in the different procedures implemented by Stirling in the plate for the exhibition 'Roma Interrotta' and Krollhof in the collage included in Rowe's *Collage City* (1978). Onto the *tabula plena* of the Nolli's map, Stirling grafted skilfully a new layer made of projects adjusted to interpret and continue the underlying urban structure; Krollhof, instead, collaged on a blank slate a Piranesian gemmation with only monuments.

The assemblage of layers leads therefore to an evolution of concepts and tools that includes the possibility of interpreting also the warps of the settlement. At the same time, it enhances *in situ* spurious elements as part of a concept of coevolutionary development and resilience of *built facts*, redirecting their transformations.

Typical warps are overlaps of unfinished or dissonant structures and incoherent morphological wreckagees that constitute, on the whole, a fragmentary and no longer univocal text that requires hermeneutic interpretation and recoding for the purposes of its re-signification.

Layering becomes a reading tool and design action at the same time, which will become part of the assemblage in its own right.

Layered Morphologies and Topographical Structures

We can think of Continuity as the link between heritage, time and society.

It is therefore necessary *invenire* (from Latin, to discover or invent) more complex forms of continuity and formation of meaning employing different codes by crossing physical *substrata*, essential when existing, with intangible ones when lost or entrusted to memory in a de-spatialized historical space, as in the case of China.

In the Chinese settlement forms, exemplified by the two cases here reported, a different notion of achronic and circular time has historically led to a continuous cycle of substitutions and demolitions without, however, invalidating an idea of continuity based on the prescriptive value of the antecedent. Continuity was ensured by the timeless essence of symbolic structures and archetypal forms rather than safeguarded by the permanence of physical substance and *auctoritas* of *spolia* and *substrates* (Pezzetti, 2017).

In a cultural framework in which Chinese architecture is not allowed to show the signs of time and the ruin, with all the evocative force of its mysterious erosion of time, is absent in the city, the intangible or material memories of the archaeological *substrata* and fragile topographical traces most of the time are the only support to give the disembodied history and despatialised rich literary memory a physical substance and *mise en forme* (Pezzetti, 2019).

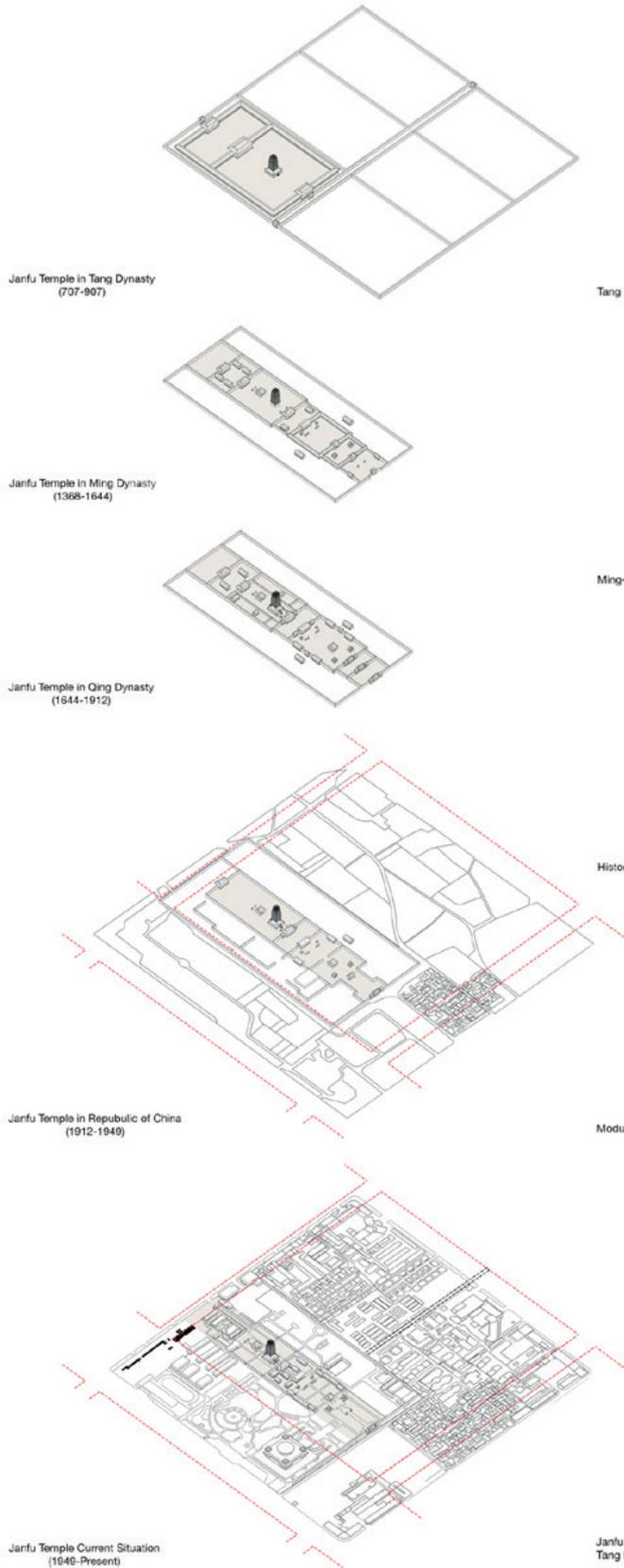
Therefore, both physical aspects informed by the *substratum* (unearthed or underground remains, matter and materials) and intangible aspects (latent structures, urban form, archetypes and cultural narratives) need to be jointly considered in the hermeneutic work of reading, decoding, and recoding and in respect to the role interpretative design plays in forming a space for cultural communication.

How we identify urban structural and morphological characteristics and how we understand the formation and transformation of urban forms is essential for the conservation and revitalization in historical cities.

Historical awareness is neither a neutral accumulation of data nor an assessment of fatally transient values. In planning all too often it remains at the level of dating and describing individual features (Whitehand, 2007). The relation between facts and the modes of description are themselves the method.

The UNESCO's dynamic rethinking of urban conservation principles and paradigms (Bandarin, 2010) launched with the Historic Urban Landscape approach (2011), should adopt sound methods related to historic-structural and typomorphological studies in

JANFU TEMPLE LAYOUT EVOLUTION



JANFU TEMPLE LAYERS IN PROJECT DESIGN

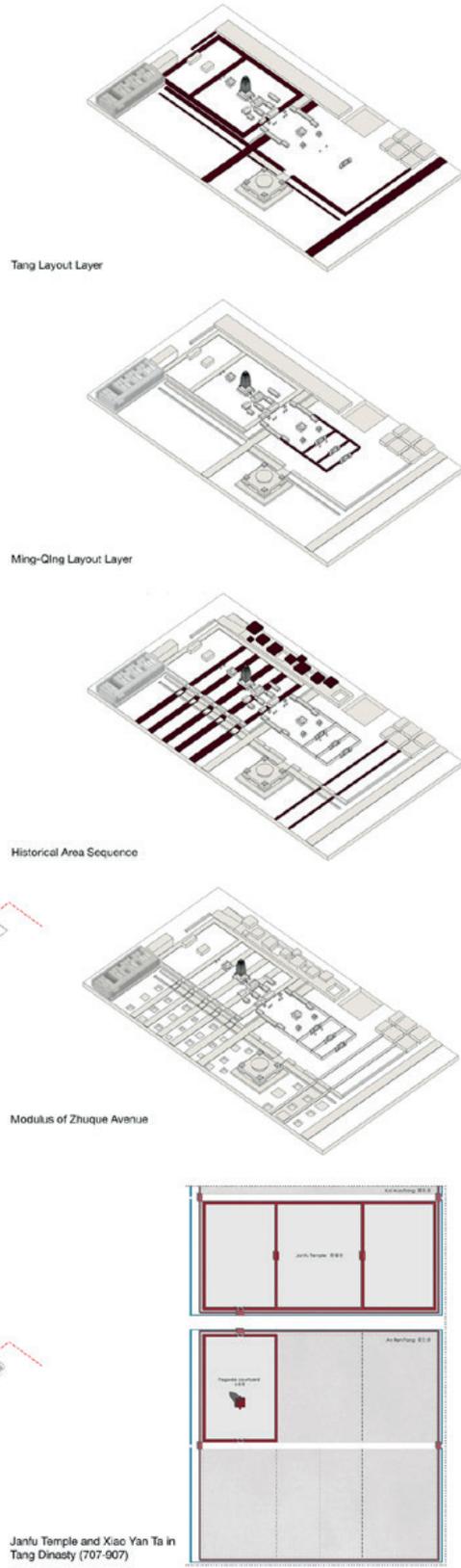


Figure 1. Xiaoyan Ta Pagoda: sequence of the historic stratigraphic layering in the Pagoda and Anren block flanked by related interpretation in a design proposal.

order to define the object and the boundaries of conservation areas through adequate understanding of settlement facts and their underlying formal structures. As well as the new layers to come, signs of the future that will be part of the layering *assemblage*.

The study of the process of layering morphologies and topographical structures can make significant contribution to the conservation of historic parts of urban landscape now considered as 'tangible' heritage, together with its associated intangible memories.

The first theoretical and operational shift is to redefine the concept of 'setting' and 'assessment' as 'context' and stratigraphic reading.

The notion of 'setting' contained in the ICOMOS China 'Principles' (2015), together with the mere hint to 'natural landscape and surrounding environment' in the 'Regulation' (2008), are actually undefined references lacking appropriate knowledge tools that have, instead, a long tradition in morphological urban studies. They are insufficient to decode, along with style and vernacular traditions, the settlement matrixes and their underlying formal structures, which are crucial to understand the relation between single building types and their settlement or landscape forms, providing a scientific and cultural foundation to the knowledge project of the entire organism. Besides, 'assessment' is mainly referred to values, which are transient and unrelated to the complex reality of built organisms.

The structural and historical notion of context allows penetrating the deep structure of settlements where the place, rather than the visible *hic et nunc*, is the result of a dense texture of signs and relations, fractures and oppositions that are forms, ideas, memories and absences the decoding of which takes place first of all (but not only) within the layered text that is the site (Pezzetti, 2019 b).

This legacy constitutes the reference framework also for the dialectical relationship between old and new, i.e. between the pre-existent to be conserved and design as the authentic form of its enhancement.

Therefore, place-as-a-context is also an absence, and a possible text that, similarly to a palimpsest contains several traces and different signs including the future ones (Pezzetti, 2019).

Absences, in fact, are never entirely disappearances, as they leave traces in the deep memory of places. In the case of an absent form (Eisenman, 1983), what matters is precisely the structure that underlies and makes it possible. This concept has proved to be effective in the Chinese context where latency, disappearance and intangibility all too often open the path to demolitions, substitutions or simulacra (Pezzetti, 2019).

Therefore, if the concept of context as a layered palimpsest allows reading morphology and topography as a continuous recording of signs, what our knowledge of the context is made of becomes a crucial issue.

The second shift is that research has to transcend some usual spatial ontologies such as architecture/planning, preservation/design, urban/rural, developing a multiscale approach integrating theoretical and methodological tools.

The conceptual device of layered topographic structures and morphologies has been developed as a theoretical and methodological approach to investigate the coevolutionary nature of architecture and settlements (Pezzetti, 2019).

Promoting a renewed notion of built heritage as historicised architecture and of landscape as a structure of structures, the dialectic conservation-modification is investigated from the recognition of pre-existent signs, or formal orders, typomorphological structures and topographical writing of the ground. Besides, challenging the condition of the city and of most historic spaces as *assemblages* of *assemblages*, the concept operates on the degree of integration or dispersion of its components: the decoding of latent structures and traces to reveal the intangible heritage of urban form, the legibility of its semantic morphological units and their architectural rewritability as *superior-grade figures*.

Verifying the operational value of its critical-theoretical propositions in both urban and rural Chinese contexts where latency, disappearance and intangibility, combined with the lack of morphological studies, too often open the path to extended demolitions, simulacra reconstruction and incongruous development, the methodology has revealed an effective reading and the potential underlying those settlements forms.

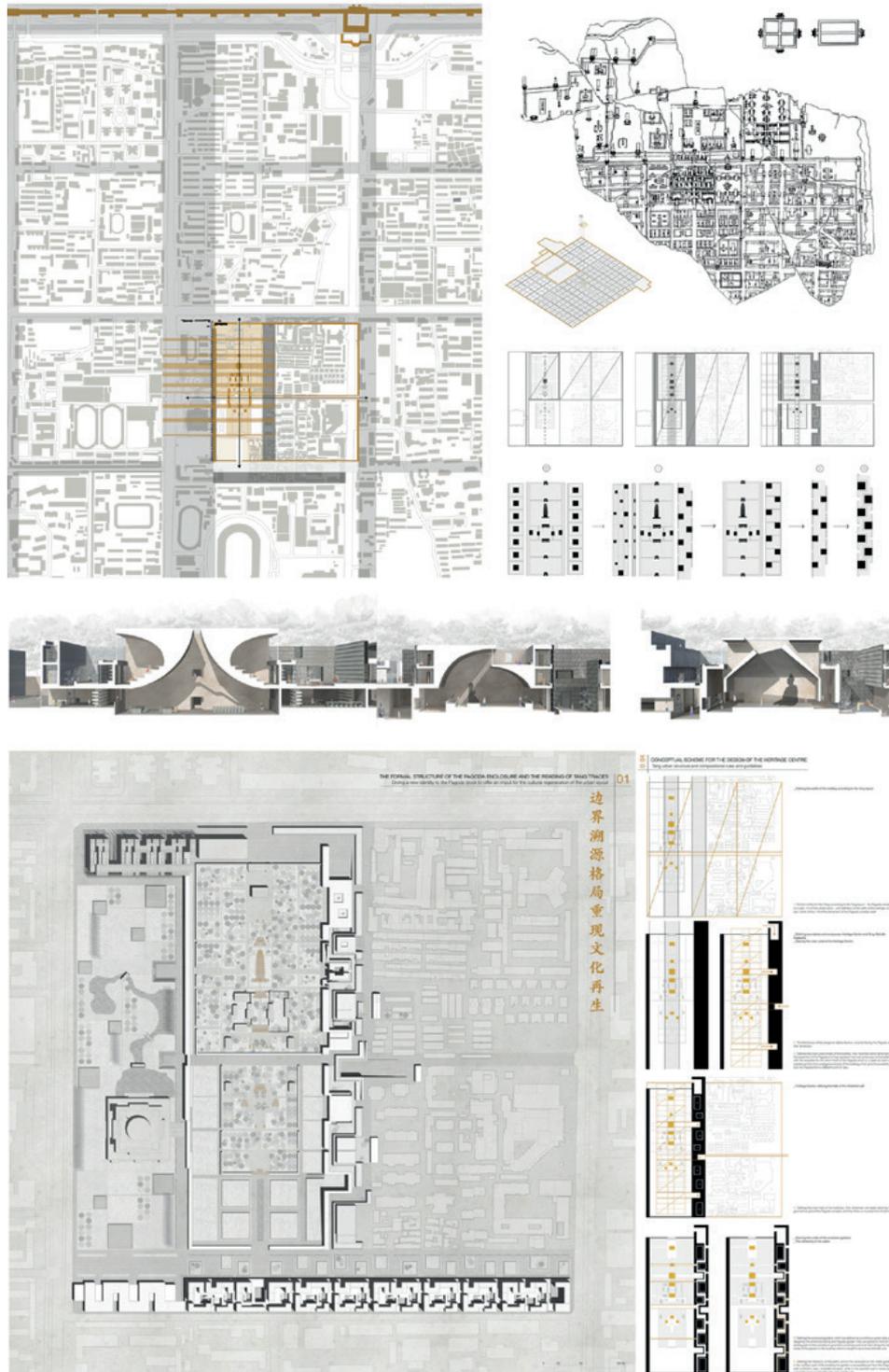


Figure 2. Xiaoyan Ta Pagoda: **2.a.** interpretative diagram of the Anren Li Fang, Pagoda, and Tang axis, in their interrelation and urban role in the present Xi'an, showing the Tang grid overlapping on the blocks defined by the 1950's masterplan; **2.b.** Lu Dafang's map, redrawn after the stele fragment with two types of *li fang* and a graphic reconstruction of the Tang City's layout; **2.c.** Anren Fang's Tang structure, evolution, and design interpretation; **2.d.** diagram of the ideal type of the Pagoda (0) compared to the strategy for the Tang axis (1) and Pagoda's west boundary (2); **2.e.** Design project for the protection and regeneration of the Pagoda and Anren block; section through the Heritage Center defining the Xiaoyan Ta's east boundary and diagrams of form's definition.

The paper presents two historic sites in Shaanxi where the superposition or simply juxtaposition of multiple texts and incoherent fragments, apparently deprived of any reference to previous *substrata*, is brought to extremes.

The former, focussed on the UNESCO Xiaoyan Ta pagoda² (707-710 A.D.) built in the ancient imperial capital of Xi'an during the Tang Dynasty (618-907 A.D.), demonstrates the potential operational role of urban underground *substrata* in providing meaning and a physiological continuity to existing and new layers to come, through the prevailing issue of the latent structure relating to a single typomorphological principle. The protection of the UNESCO site results indissoluble from the interpretation of the entire Tang block, the Anren Li Fang (Fig.1-2).

The second, focussed on Fenghuang³, an old town included in the list of 'Famous Historic Cultural Towns' (2010), that still features late Qing Dynasty courtyard architecture and some physical remains of its constitutive matrix. Its discovery has unveiled the indissoluble interaction between an original morphotype, a latent radial topographical structure, and the geographical character of the valley, thus providing ascertained principles for organic strategies of re-morphologisation and re-signification reconnecting old and new (Fig. 3-4).

In both cases, the investigation of the layering underlying the *assemblage* has revealed latent resistant structures that clarify the urban process of evolution. Although fragile, those signs of persistence are culturally meaningful and offer clear operative principles for unveiling the hidden orders that support spatial and architectural interpretation.

Another foremost outcome is that in the case of Fenghuang the reading has also provided vernacular Feng Shui and Shan Shui principles with an extrinsic and fully expressed spatial form.

Continue to Write: The Issue of the Absent Form, Latent Structure and Despatialised Memory. Two Chinese Case Studies.

As the time is spatialised in layers, architecture as archaeology becomes interpretative. The prospect of working within layering becomes constitutively hermeneutic.

The reading of the two case studies has produced a new interpretation of their existing and latent texts which have been recreated from the hermeneutic point of view as a 'rewriting'.

In Chinese contexts, where historic space is often the space of latency under multiple incoherent texts, simply juxtaposed, the hermeneutic work of reading, decoding and recoding acts as a carrier for constructing a contemporary cultural relationship with the site through design. Stirring a multiplicity of meanings and resonances the relationship enriches both the situated memory and the narrative introduced by the new work.

Re-coding implies interpretation. For interpretation to be valid and not to improperly 'overinterpret' the text, it needs to be latent in the text (Eco et al., 1992).

The re-signification project reintegrates a fragmentary incomplete text prefiguring new signs, insertions and overwriting according to its structural laws. The studies on the structure and urban form *substrata* provide solid method and tools to define what we are trying to preserve, enhance, and eventually develop and the foundation of a site specific strategy.

As a result, the project itself is the palimpsest when based on the relation among past, present and future across the layers.

The interpretative design based on latent structures rewrites the order of relations in the layering of both physical and mnemonic historic space, redefining the interaction of the main components: settlement structures, types, morphologies, form of topography and form of the void.

The underlying structure therefore reveals the absent form which is the very object of research, exegesis and design interpretation. The place therefore is also an absence and the possible text containing different traces and signs, including the future ones.

By following the latent *lines of forces*, 're-coding' reconnects what has now become intangible to its physical *mise en forme*.

As the site is the real generator of a joint conservation-rewriting strategy, the programme and the construction of design narratives infuse past ones with new meaning.

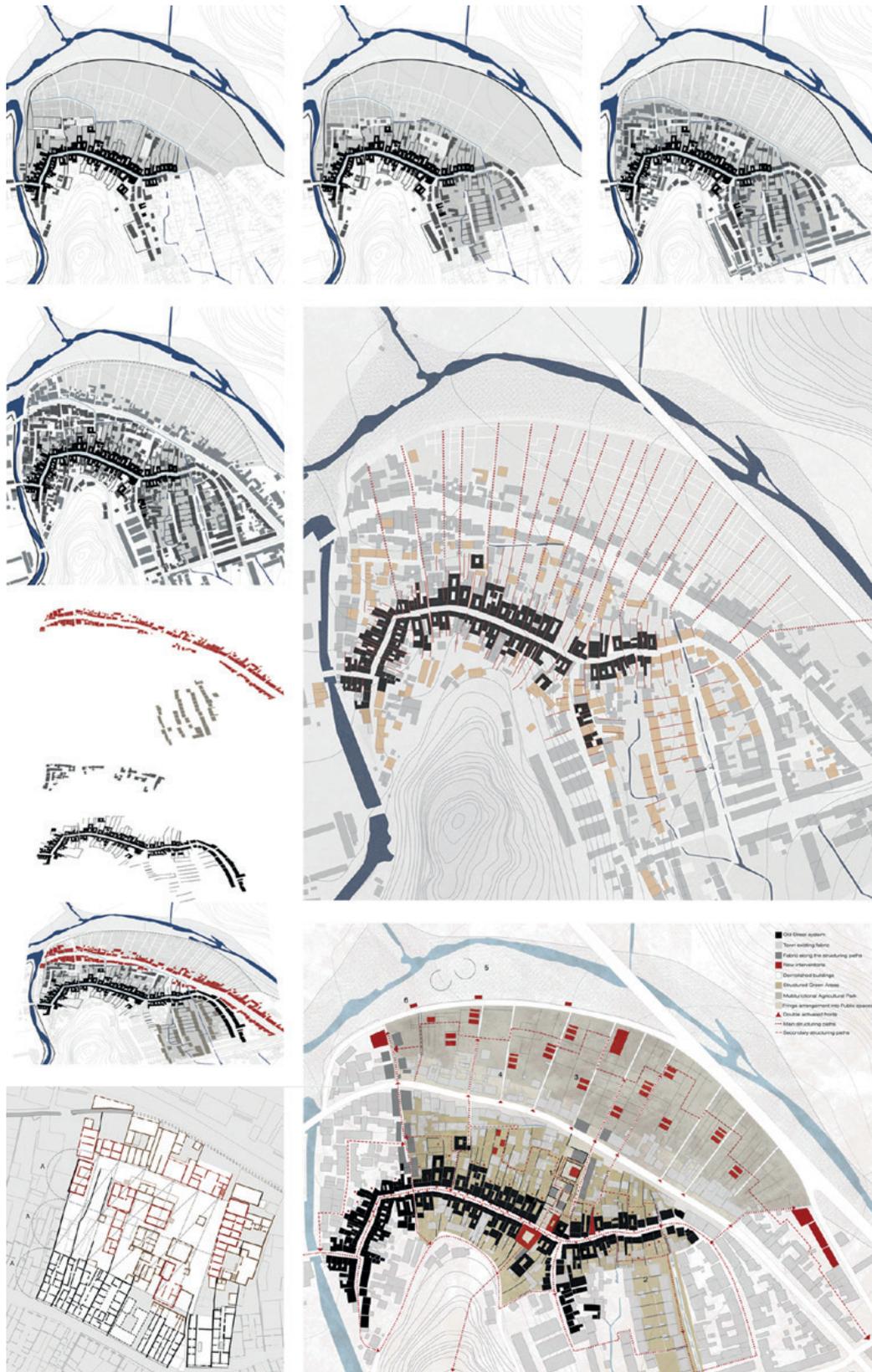


Figure 3. Fenghuang: 3.a. sequence of stratigraphic layering in diachronic and synchronic historic sections showing four rural-urban structures; 3.b. superposition of the old radial latent structure; 3.c. synchronic stratigraphic layering in one morphotype; 3.d. plan-project and enhancement strategy.

The tool of stratigraphic mapping, by investigating the site in its diachronic construction and synchronic reading, has revealed in both case studies a deep-seated urban order that can be still traced back to regenerate not only the key conservation units and their buffer zones, but the overall legibility of the *li fang* block³ in Xi'an as an urban part, and the entire urban form in Fenghuang as an organism (Fig. 2.a; 3.a-b).

The UNESCO Xiao Yanta and Tang Anren block, which formed an ideal but abstract *substrata* in the First Masterplan in the 1950s⁴ evoking the grid of the Tang capital, can be interpreted as a semantic unit and by four major diachronic components:

1. The 200 metre-large void showing the only perceivable fragment of the Tang Imperial Axis, which structured the order of *li fang*'s typomorphological enclosures and emerging cultural buildings, like temples and pagodas. Interpretative layout suggests keeping this void unbuilt as a green area, equipped possibly underground, showing the boundary of the pagoda enclosure and prolonging its traces towards the city wall as a cultural axis⁵(Fig. 2);

2. The geometric order established by the unearthed or potential underground remains of the walls system in Ri-type *li fang* and *zhai* (its inner subdivision), traceable through the intrinsic logic of infographic materials, such as the Lu Dafang's stele fragment (1080)⁶, Zhang modules, maps, aerial pictures. It suggests redefining the boundaries of the ancient morphotype by interpreting them as 'inhabited wall' to protect ruins or house cultural programmes and reintroducing the moat. The present asymmetry in the eastern boundary can be interpreted as the ideal type's lateral sequence of courtyards to connect the UNESCO site to the fabric (Fig.2.c-d);

3. The Pagoda, that once was part of the disappeared Janfu Temple, and needs to become again readable in its enclosed character and layering of boundaries by interpreting the rhythms established by halls and gates;

4. The disparate 'collection' of modern morphologies is a record of concluded historic cycles and a low-rise variety of types which is hard to find in the 'generic city'. Specifically, the urban village just demolished presented ancient patterns and traces consistent with the *zhai* modular subdivision. Although unrecoverable, they should be assumed as a physical and mnemonic *substrata* for the current redevelopment (Fig.2.e).

Unlike cities, the form of Chinese villages still retain types, landforms and writings of the ground – whose anamnesis and interrelationship would reveal their constitutive rules and co-evolutionary character, thus opening a new approach for both conservation, enhancement and development (Pezzetti, 2019).

Through a hermeneutic reading, based on the interrelation of topographic signs with material and typomorphological survey along with diachronic stratigraphic mapping (Fig.3.a), a latent structure emerged in Fenghuang. Orthogonally to the winding association of courtyard *zhai yuan* houses along the Old Street commercial road, now forming the key unit of adopted conservation plan, a perpendicular latent structure was discovered, linking in a triple relationship type, morphology and agrarian fields' structure (Fig.a-b).

The correspondence between building parcel and building type generated an original radial strip structure converging on the top of the upland of the Ying Pan Hill where the ancestors recognised in the village form the deployed wings of the flying Phoenix (Fenghuang). The structure defined the whole settlement, stemming from the plot of the *zhai yuan* narrow courtyard houses, stretching to the backyards and vegetable gardens, continuing as far as the fields' *strigatio*⁷ down to the riverbank wall where it finally opened like a fan and reverberated in an ideal triangulation with the mountains' peaks (Fig.3.b).

The structure clarify traditional topological principles of Feng Shui and Shan Shui, enlightening them for the first time with a describable *topographical figure* and urban form.

The void is the essential field on which these *lines of force* establish the relationship between mountain and water, similarly to Chinese painted landscapes where invisible lines that underly things establish their mutual relationship (Cheng, 1979).

This meaningful urban-rural whole is the very text to be understood, preserved and coherently enhanced for the future in relation to which the multiple issues of preservation, revitalisation, design enhancement and development need to be jointly redefined (Fig.3.c).



Figure 4. Fenghuang: 4.a. detail of the morphological survey of the ground floor of Old Street's courtyard houses (*zhai yuan*) highlighting the old partition walls that defined land property and are still traceable; 4.b. longitudinal section through the Dang Courtyard House and examples of historic permutations of the *zhai yuan* courtyard type.

Some major results can be here summarised.

Comparing the latent structure and historical accumulation, four cycles of development traceable in their different strategies have been detected (Fig.3.a). The five morphotypes that can be acknowledged based on the triple relationship between type, morphology and land, led to redefine on sound criteria the boundaries for an articulated conservation plan (Fig.3.c).

The notion of *landscape units* (Conzen, 1988; Whitehand 2007) could be introduced while contextually reformulated in terms of complex *semantic morphological units* (Pezzetti, 2019) based on ascertained morphotypes not necessarily homogeneous since they includes also subsequent accumulation (Fig.3.c).

Considered as a *substrata*, the latent structure is the underlying order that provides new meaning even to some recent parts of the settlement, since under the apparent disorder they followed the old tracks and developed on previous structures.

Following the *lines of force* of existing structuring *substrata*, the site can be read and decoded in its internal logic, re-significate, re-morphologised and finally, regenerated. By activating the existing lines of force and 'exploration paths' within the radial fabric, the courtyard houses together with the new design writing may double the active fronts in order to generate new economic activities and a mixed residential-hospitality use throughout the year (Fig.3.c).

Another achievement of the research is that the *writing of the ground* also defines a *topographical figure* endowed with an iconological quality. Such figure is no less important than that formed by the built heritage, embodied in the winding 'wings' of the Phoenix (Fenghuang). Both emerged and lived in a mutual relationship that encapsulates the meaning of Fenghuang's urban-rural form. The joint presence of a typo-morphological solidarity among courtyard houses and a clear topographic structure allows us to read this entire settlement's form as a superior-grade *organism-figure* (Fig.5.c).

This figure is real, readable and rewritable, i.e. is available for future appropriate writings and coevolve over time together with society.

It is therefore a matter of interpreting the principles of continuing to write over a layered text that is already written and that even in China can be read as a *tabula plena* rather than an upcoming blank slate.

To continue to write, the text must be also rewritable in the essence of its formal and syntactic structure.

Understanding of the *figurativity (figuralità)*⁸ of a latent structure is the necessary quality for reading architecture, city or landscape as a '*mise en forme*' and thus, to continue to write and compose meaningful worlds bridging the past, the present, and the future through interpretative design.

Footnotes

¹ The expression force-idea is used by Aldo Rossi (Rossi, 1974).

² The research has been conducted by the author at Politecnico di Milano under the framework of the 'Heritage-Led Design Workshops', 2015-18, directed by Proff. L.A. Pezzetti and K. Liu, and Double Master Degree with Xi'an University of Architecture and Technology. Analysis and drawings were executed in team with master degree students (M. Cappellani, W. Longfei, G. Mazucchelli, C. Mondani, M. Pozzoli), supervisor L.A. Pezzetti.

³ The research has been conducted by the author on the case study of the 'Heritage-Led Design Workshop' in 2018, and has been discussed extensively in the book L.A. Pezzetti (2019) and in the paper 'Layered Morphologies and Topographical Structures in Historic Rurban Landscape. Integrating Typo-Morphological, Topographical and Landscape tools with Feng Shui' presented at the ISUF Conference 2019, *Cities as Assemblages*, forthcoming.

³ Sui Tang Chang'an hierarchical grid was organised in Li fang block which were like a 'city in city' from the point view of its pattern structure. Li fang were surrounded by high walls, were divided in 2 (Ri) or 4 regions (Tian) with respectively only two or four gates corresponding to inner streets. The gate were guarded by people appointed by the government, opening and closing at regular time. Only regular residents could access.

⁴ The existing blocks are slightly shifted from their real position unveiled by the ruins discovered in the north-western corner of An Ren Fang, at those time still buried.

⁵ Many cultural and educational infrastructures are today placed along this axis.

⁶ The fragments of the Lu Dafang's stele map in the Song Dynasty feature the most ancient known representation of the capital Chang'an (now Xi'an) during the Sui-Tang Dynasties.

⁷ The term defines the rural land division in ancient Roman *centuriation*.

⁸ Starting from the '90s the 'figure' (*figura*) of composition became a crucial issue for the study of both city and territory within the tradition that Manfredo Tafuri defined as the 'axis Milan-Venice'.

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