

The impact of Strategic Master Plans on the conservation of Cairo's built heritage (1956-2006)

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Introduction:

In Egypt, conservation predates planning in its modern legislative form. Since its advent to Cairo, planning became increasingly integrated into conservation and, in some respects, came to dominate it. Western style planning was introduced to Egypt in the early 1830s (Volait 2005: 83-4). By the turn of the twentieth century, large avenues were cut through Cairo's traditional fabric in an attempt to emulate Hausmannian Paris. Khedive Isma'il ordered the foundation of the Comité de conservation des monuments de l'art arabe in 1881 thus separating conservation from planning. By the 1930s, the world opinion regarding urban preservation was split: while the Athens Conference introduced the concept of urban preservation in 1931, the CIAM Conference promoted removing the old city fabric to make room for new architecture and urban forms a couple of years later. In Cairo, the status quo ante remained until the revolution of 1952.

State-Socialism Planning

1956 Long Range Urban Plan:

Based on English town and country planning, the 1956 plan introduced innovative notions of ideal size, containment, and development standards. Nevertheless, it left two damaging legacies: (1) it recommended that the industrial suburbs should absorb rural migrants, a measure that opened the door for informal housing and, (2) it overlooked Cairo's historic core (Serageldin 1989: 261).

The 1969 Master Plan:

The Greater Cairo Commission, in an attempt to institute the policy of 'concentrated decentralization,' introduced a new plan in 1969. The guiding lines for this plan followed those of 1956 but failed to address this latter's shortcomings. Large scale, state-subsidized, housing projects were introduced, and vertical expansion increased. Having filled up the available urban space, informal housing encroached on the historic areas in Cairo and Giza. Alarmed, UNESCO commissioned an urgent study to protect the visual and urban integrity of the pyramids plateau (ref. 2). The long-awaited-for millennial anniversary of Historic Cairo (969-1969) promised a serious revision of the situation of the historic core. The emerging Middle East conflict hijacked these efforts, leaving a climate of neglect, overpopulation and poverty to reign in historic Cairo. The waves of migrants of the war stricken Suez canal cities aggravated the situation, while the operation to save the monuments of Nubia drained Egypt's resources to the south dealing the conservation efforts in historic Cairo a serious blow.

Post-infitah planning

1973 Urban Plan:

A typical result of the early infitah period, this plan was prepared by Nohad Toulon, an Egyptian planner trained in the U.S. who headed the Greater Cairo Commission. The reigning climate, then, was one in which conservation could assume a role towards creating a new national resource to earn money from tourism. Many urban rehabilitation schemes were prepared for historic Cairo in during this period: Unesco presented a rehabilitation scheme in 1980, and the German Archaeological Institute presented another plan. On the whole, this period yielded a curious mix of plans and efforts. Some were extremely good, and never saw the light, while others, far less in quality, were implemented. This fact is reflected by the prestigious Aga Khan Award in Architecture that was awarded to the efforts of the German Institute in Al Darb al Asfar while the Isma'ili Bohra, a Shi'it sect from India, single handedly over-restored much of Cairo's monuments of the Fatimid period.

1983 Greater Cairo Master Scheme:

The General Organization for Physical Planning (GOPP) prepared the Greater Cairo Long-range Master Scheme in 1983 in collaboration with the French *Institut d'aménagement et d'urbanisme de la région île de France* (IAURIF). This plan revolved around 4 main concepts: (1) creating 'Homogeneous Sectors,' (2) designating 'development corridors' to channel urban growth; (3) building new settlements in the desert to accommodate Cairo's surplus population and, (4) a 'Ring Road' to alleviate traffic congestions while providing direct links to the settlements and towns in the desert (ref. 5). This plan was updated in 1990 (ref. 6:4) addressing historic Cairo's autonomy, high population density, and the employment and basic services for its inhabitants. The new update remained faithful to the original directives: improving accessibility to the new historic centre by a tunnel under al Azhar Street, preserving the built heritage and its surroundings, upgrading the infra-structure networks, eradicating pollution (law no. 4/1994) and, attract tourist visits and encouraging sustainable activities in Historic Cairo. The private sector, NGOs and local authorities were encouraged to sponsor these projects.

In the historic core, this boiled down to creating new thoroughfares to the east and north, adequate spaces for traffic and open spaces for public parks. The old city gates and wall were restored (ref. 6). While the success of these projects varied, the overriding policy proved, in general, static, end-state and allowed little room for feedback. It is to note that, from the 1970s onwards, European planners faced by similar problems moved away from the rigid, preconceived tenets of physical planning to adopt the more dynamic, open-end, structure planning. The two famous lapses typifying physical planning experimentation in Cairo are the standoff between Unesco and the Egyptian authorities to prevent the Ring Road from crossing the pyramids plateau in Giza. Another incident involved the drilling machine of al Azhar tunnel when it accidentally ploughed through the buried fragments of the Ayyubid city walls and Bab al Barqiyya. Further problems are still expected when the government goes ahead with its relocation plans (Wardany 1998).

1997 Historic Cairo Rehabilitation Report:

On 12 October 1992, at 3:14 p.m., an earthquake measuring 5.9 on the Richter scale shook Cairo for 20 seconds. The confusion arising

in the immediate aftermath created an urgent need for a structure to coordinate both the local and international response. UNESCO mandated a technical mission to assess the damages and UNDP allocated USD 3 million to develop a reactive plan. Daryl Fowler, head of this mission, proposed a Framework Plan (ref. 4:18) and produced his final report in December 1997.

Although the UNDP report set out to develop an independent study, and reach its own conclusions, it was expected to follow the recommendations of the 1990 Master Scheme. The main problem with this report was the alternative it proposed for Al Mu'iz Street. "... The proposals for upgrading and improvement of public urban space was far less convincing and will probably, if realized, have a devastating influence on the feeling of the special identity, the authenticity, and historic character of the Islamic City," to use the words of Flemming Aalund, head of the Unesco mission which was sent to evaluate the project in 1997 (ref. 3:9).

Conclusion

Programmed planning must clarify its position, and the concepts it is using to shape its philosophy. In the aftershock of 1992, planning gave way to a crisis management initiative that became a major refurbishment operation. The difference between these mindsets is immense. While planning is usually desirable, long-term, objective, and based on an optimal use of resources, crisis management is, by definition, urgent, immediate, reactive and based on a trade-off of needs. The requirements of the two conditions are also very different be it on the legislative, administrative, fiscal, technical, or the investment-decision levels. As Serageldin asked it previously: what are we trying to preserve in Historic Cairo today? A number of buildings? An urban character? A way of life? And why do we want to preserve whatever we choose to preserve? (Serageldin 2000:38).

In his book *Planning and the Heritage*, Michael Ross explained that art, archaeology, and society are prime motives for conservation. "Politicians," he added, "ignored conservation at their peril [...] the idea of conservation, the presumption that the old must survive –and on occasion adapt– has triumphed [...] the philosophy of conservation is accepted by the majority; architects, developers, planners, and politicians cannot ignore this fact" (Ross 2001). If one has any reservations about the conservationist cause in Historic Cairo today, it is not because one ignores this fact, but because an appropriate planning philosophy based on the realities of contemporary Cairo seems still elusive.

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Revitalizing a historic city – The case of Nicosia

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Nicosia, the capital of Cyprus, is a rapidly growing contemporary city, with its historic centre, the Walled City, dating back to the Roman and Byzantine times. The existing walls, surrounding the old city, were built in the 16th century, to defence the capital of the island from the invading out comers.

In the 19th century the city of Nicosia was still enclosed within the Venetian Walls, where its famous bazaars, located on the east-west axis of the city, were the hub of commercial activity between French, Italians, Syrians and Armenian merchants. From here luxurious textiles as well as other precious products were exported to the royal courts of Europe.

In the beginning of the 20th century Nicosia expands beyond the Walls. Bridges were created linking the old city with the city outside the walls. In 1945 the areas outside the Walls and the villages in the vicinity were rapidly growing, forming the beginning of today's city.

Since 1974, due to political problems, the city is facing the direct consequences of functioning as a divided city. The existence of the buffer zone encouraged a cumulative trend of suburbanization and outward movement of population and businesses, depressing land values and inviting incompatible uses, thus contributing to the degradation of residential amenities, environmental quality and to economic and population decline.

The physical division of the city resulted also to the separate development of each side. The need for consolidating the development of the city as a whole, to prevent further decline of the historic centre, lead the two major communities of Nicosia, Greek Cypriots and Turkish Cypriots, to forge a common plan for the rational development of the city.

This common plan was called the Nicosia Master Plan and was prepared by a bi-communal technical group of experts, architects, town planners, engineers, sociologists and other specialists and with the support of experts from other countries. The Plan was adopted by the two communities, being the common tool for the development of Nicosia as a whole, until today.

The **long-term physical plan for Greater Nicosia**, drafted in 1984, included the definition of a general development strategy based on the need to concentrate and consolidate the city. This strategy was supported by land-use policies for housing, industry and education, green and open spaces; the revitalization of the Walled City, giving priority to the rehabilitation of old residential neighbourhoods, to community development and population increase; the structure of the Central Business District; and the siting of major facilities such as the university, civic centres and regional and town parks.

The study of the **socio-economic profile** showed that private initiative given the existing conditions, had failed to save the historic area from deterioration. It therefore became evident that public intervention was the only means for improving the existing situation and stimulating private initiative in the desired direction.

During the implementation stage of the Nicosia Master Plan, special emphasis was put on development projects for the short and medium terms, ranging from 5 to 10 years.

The aim was to stimulate the physical, social, economic and cultural revitalization of the central area, as the key to the overall development of Nicosia.

To achieve the desired goals and objectives the implementation strategy focused on the four major actions that the development strategy set as goals;

- The restructuring of the Central Area;
- The rehabilitation and renovation of the Walled City;
- Improvement in traffic and transport; and
- Visual improvements in landscaping, urban form and civic design.

Although all the above were important for the future development of Nicosia, priority was placed on projects, which would give the public sector opportunities to achieve direct impact on the revitalization of the Walled City.

In most of those projects the emphasis was on rehabilitating declining residential communities, by carrying out housing area schemes.

These priority projects have been focusing not only to the improvement of the building environment and the conservation of the architectural heritage within the area, but also to the social and economic regeneration of the local society. By providing community and other public facilities, giving priority to cultural activities, or by creating new opportunities for employment, this combined effort has partly resulted to the social cohesion in the area and the stimulation of a slow and long procedure of its regeneration.

Along with these projects, important financial and other incentives were granted by the authorities for the restoration of listed buildings, in order to support the private sector initiative to restore and refurbish their properties.

Also other schemes and packages of incentives were promoted for all the areas adjacent to the buffer zone area.

In 2004, in a combined bi-communal effort to assess the achievements of Nicosia Master Plan, both communities expressed their will to set

out a New Vision for the Core of Nicosia, in order to promote its further regeneration and to regain its important role in the socio-economic life of the capital as a whole.

Evaluating alternative Visions for the Future of the Core Area, the New Vision Project identified a **Heritage-led Regeneration Strategy**, focusing on cultural assets for tourism and education, by strengthening the cultural and heritage uses and improving urban environmental quality in the area, with commercial and housing development as secondary objective.

The focus of change under this Vision is the unique heritage value of the Walled City and the capacity of this value to translate into an economic asset.

Adopting this strategy, the NMP has set out a number of priority projects, including housing regeneration projects, restoration of important buildings and re-use as public cultural centres, with a certain impact on the social and physical environment.

At the same time, realizing the need for the proposed strategy to be "adopted" by the local community, and based on a detailed socio-economic survey, during the diagnostic phase, NMP is preparing a stakeholder map which will form the base for a participatory plan, promoting activities such as targeted workshops/seminars, Public Private Partnerships, representation of local community on partnership management boards, community forums etc.

The dynamic intervention of the public sector (local and central authorities), through the above intervention – priority projects – scheme in order to stimulate the heritage – led regeneration process within the study area, as part of the overall strategy for the regeneration of the historic centre of Nicosia as a whole, has set a concrete base for the rational development of the city centre.

The main goals of this effort are still to regenerate the whole of the area as a dynamic area and to demonstrate that regeneration is possible, but needs the follow up movement of the private sector through Private Public partnerships.

The public intervention scheme has reintroduced people from outside the old city to the old city, i.e. younger family population to give economic growth and longer term continuity. The effort was to control population displacement to the outskirts of the city and also not to create a ghetto.

The rehabilitation programme involved consultation with the existing residents, in 1986, on how they felt about the project. The result was encouraging concerning the acceptance of the intervention. The recent socio - economic survey included also consultation with the existing population which now includes new incomers, immigrants from different countries. New problems concerning the social inclusion of this new people in the local community raised and demand solutions.

As a result of the overall process, house prices have increased and rents are quite high for restored houses. Low rents still concern decayed buildings. The phenomenon of family property which is not for sale is common, especially for listed buildings. Furthermore conservation costs are high and the granted incentives concern 50% on the cost up to £40000.

In order to identify these new forms of intervention, through partnerships, there is a need to complement infrastructure and soft projects with community involvement.

Public Participation is an essential aspect of the regeneration process. Unless the people living and/or working and/or own property within the study area (who consist the local community), "adopt" any proposed vision for their City and Cultural-led regeneration strategy towards this vision, this strategy is convicted to failure.

The lack of experience in public participation in Cyprus is obvious and there is a lot to be done towards developing appropriate participation mechanisms and tools and in effectively integrating public participation activities and outcomes in the regeneration process.

Nicosia Municipality, through the Nicosia Master Plan, though, has significantly contributed to the raising of awareness of the value of traditional architecture and the importance of landmarks of cultural heritage within its historic core.

Awareness however was primarily confined to the professionals and was rather informative than encouraging active participation of the citizens. Information campaigns organized by the central and municipal authorities attracted more attention from professionals and less from investors and private sector groups.

Nicosia Municipality has set a number of scopes for the participation and involvement of the local communities, especially in priority areas, such as Walled city.



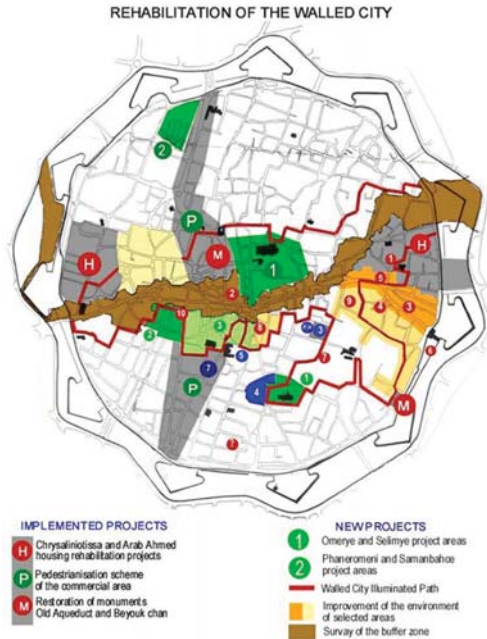
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La rehabilitación del casco histórico de cádiz, una actuación pública de gran trascendencia social

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1. Marco historico

Cádiz es una de las ciudades más antiguas de Occidente y con más importante y homogéneo conjunto edificado en los siglos XVII, XVIII y XIX.

Hasta finales del XVII los poderes económicos, sociales y culturales permanecieron compartidos entre el clero y la nobleza. El comercio con América motiva a implantarse a un creciente número de comerciantes burgueses, en gran mayoría extranjeros.

Durante el XVIII, etapa de mayor esplendor, por su situación estratégica y su vinculación con el comercio marítimo, se levantaron numerosas casas burguesas que sirvieron como residencia y negocio a dichos comerciantes.

El XIX supuso el decaimiento económico, debido al descenso del comercio con ultramar y a la pérdida de las colonias, lo que motivó el empeoramiento del parque de viviendas de la ciudad, cuyo Casco Histórico se resintió por la saturación del espacio edificable.

Como consecuencia las antiguas casas burguesas se convierten en viviendas populares, con ocupación de espacios comunes, galerías, corredores e incluso azoteas de forma incontrolada.

Fueron ocupadas por población sin recursos que comenzó a hacinarse y que carecía de servicios. Solía existir una cocina y un aseo comunitarios por planta para el uso de todos los vecinos. Si a éstas condiciones de habitabilidad le añadimos el deterioro de los edificios que provoca el paso del tiempo y la falta de mantenimiento, el resultado es un fenómeno conocido como Infravivienda.

En los últimos años, el mal estado del patrimonio residencial, la falta de suelo y el encarecimiento de las viviendas han provocado un éxodo de los residentes del casco antiguo hacia otras zonas de la ciudad y a otras localidades próximas con lo cual los residentes en del Casco Histórico se caracterizan por ser una población envejecida, empobrecida y desempleada, que reside en viviendas carentes de condiciones de

habitabilidad y sin recursos para optar a una vivienda digna.

Según el censo de 2001, 43.608 habitantes conforman la población del Casco histórico de Cádiz, frente a los 76.222 registrados a mediados de los 70.

2. Intervención de la oficina de rehabilitación del casco histórico de cádiz

La situación descrita anteriormente es la que se encuentra la Junta de Andalucía en el año 1999, cuando decide la creación de la Oficina de Rehabilitación del Casco Histórico de Cádiz y el Decreto 78/1999 de 30 de marzo sobre normas especiales de intervención de la Comunidad Autónoma en el Recinto Casco Histórico de Cádiz en materia de vivienda y suelo, publicado en BOJA de 8 de abril de 1999. Esta experiencia pionera se convierte en poco tiempo en la precursora de una nueva política de vivienda no expansiva de la ciudad sino de recuperación y puesta en valor de sus centros urbanos y barrios más deprimidos. Fruto de esta experiencia es la existencia hoy en día de más de 40 áreas funcionando a lo largo de toda la comunidad andaluza.

Cabe destacar que en dicha intervención se distinguen dos etapas:

Una **PRIMERA ETAPA** con intervenciones de urgencia, ya que eran muchos los edificios con riesgo cierto que hacían temer por la seguridad de sus habitantes.

Preservar el Patrimonio

La intervención de la Oficina se realiza sobre un Centro Histórico, cuyo patrimonio heredado se corresponde fundamentalmente a los períodos comprendidos entre los siglos XVII y XIX. Además de su extraordinaria riqueza tipológica y estilística se caracteriza por la homogeneidad de su caserío, por lo que es necesaria la intervención desde el respeto y puesta en valor del patrimonio, sin que suponga una actuación meramente arqueológica, admitiendo un mayor grado de intervención allí donde sea posible.

Se establece como objetivo no sólo la rehabilitación y mejora de vida de la población residente, sino además la conservación y recuperación del patrimonio arquitectónico. Se establece una línea de trabajo y de actuaciones encaminadas a la consecución de dicho objetivo:

- Establecer criterios para rehabilitar o demoler en función de la catalogación de la ordenanza. Procurando el mantenimiento de la estructura tipológica, y la utilización de técnicas constructivas que permitan la conservación de aquellos elementos de especial interés.
- Intervención sobre edificios emblemáticos: no sólo en el ámbito residencial, sino incorporando la actuación sobre edificios de singular interés destinados a usos dotacionales.
- Convocatorias de concursos de ideas arquitectónicas: con el objeto de enriquecer el resultado de la actuación, en aquellas intervenciones más importantes desde el punto de vista de intervención en el Patrimonio.

Mantenimiento de la Población Residente

La expulsión paulatina a la periferia de las clases populares es un proceso generalizado de las ciudades. El papel de vanguardia que las ciudades han desempeñado en el progreso de nuestra sociedad se debe, entre otros factores, a la convivencia pacífica en un mismo espacio de distintos sectores sociales que necesitan conciliar intereses diversos. Esta práctica cotidiana democrática está en la base de la capacidad de

generar inteligencia colectiva. Sirve también para explicar la conversión en ciudad muerta de distintos centros una vez que cada día cesa la actividad comercial.

La iniciativa privada en los centros históricos actúa, legítimamente, guiada por criterios de expectativas de beneficio y promueve viviendas destinadas a sectores de gran capacidad adquisitiva. Corresponde a la administración la misión de retener a la mayor cantidad posible de población tradicional residente.

Marcado Carácter Social

El marcado **carácter social de la intervención** queda patente en las siguientes cuestiones :

- Si importante es la intervención arquitectónica y urbanística para la recuperación de los edificios y de los barrios, lo es tanto o más la intervención social con las familias, que trata de identificar las realidades y problemáticas de estas y de encontrar respuestas, soluciones y estrategias que contribuyan a superar situaciones de disfuncionalidad.
- Todo proyecto debe como requisito imprescindible responder a las necesidades específicas de las familias que van a ocupar las viviendas. Se trata de compatibilizar la recuperación del patrimonio con las necesidades sociales.
- La intervención se centra en los sectores más vulnerables y desfavorecidos respecto a la tendencia del mercado, procurando evitar el desarraigo.
- En todo el proceso es imprescindible la implicación de los ciudadanos beneficiarios de las actuaciones tanto en la resolución de problemáticas propias como en las de su entorno, su barrio. Ellos son los verdaderos protagonistas del proceso de cambio y como tal deben asumirlo. Pieza clave en la interlocución son las asociaciones de vecinos, con las que debemos tener comunicación constante, al ser ellos punto de recogida del sentir de sus vecinos.

Cabe destacar la **importancia del trabajo de equipo y , de los Trabajadores Sociales** como profesionales que realizan un trabajo personalizado con las familias, identificando el grado de funcionalidad, las debilidades, fortalezas, conflictos y recursos a movilizar para la resolución.

Dicho trabajo se incardina en el que realiza el resto del equipo ya que nuestra intervención requiere de los distintos profesionales que trabajan en un mismo objeto, la actuación de vivienda.

Es esencial el trabajo en equipo de todos los profesionales que intervienen en el proceso, aunque desde los diferentes prismas de cada uno, técnico, jurídico o social, siendo este último donde destaca la importancia de la coordinación con los técnicos, arquitectos y aparejadores, desde la fase de estudio hasta la fase de entrega pasando por los desalojos, diseño del proyecto, las obras, incidencias en las familias,...

El Trabajo Social se desarrolla en las distintas fases del proceso:

- **Información y diagnóstico:** Requiere del Trabajador Social, atención individualizada, estudio e informe socio-familiar de cada una de las familias, diagnóstico previo, propuesta de posible intervención y reuniones informativas con la comunidad de vecinos.
- **Diseño del Proyecto:** Al diseñar el proyecto el Trabajador Social

será quién identifique las necesidades de las familias, ubicación más idónea de su vivienda, número de dormitorios, necesidad de adaptarlas a minusvalías, etc y se los transmitirá al arquitecto redactor. Así como el modo de vida y costumbres de las familias, las particularidades que deberían conservarse por respeto a un *modus vivendi* propio, obligando en ocasiones a incluir elementos simbólicos para quien va a ocupar la vivienda aún cuando son de escaso valor para quien la diseña.

Es necesario tener en cuenta las relaciones de vecindad y ayuda mutua existentes entre vecinos sobre todo personas mayores, para facilitar que estas continúen e incluso mejoren si por ubicación es posible.

- **Realojos Transitorios:** El Trabajador Social desarrolla un papel de seguimiento y/o acompañamiento en la búsqueda de la vivienda provisional con asesoramiento en los trámites que el cambio implica, informando a la familia del estado de las obras de su vivienda definitiva. A su vez programará y llevará a cabo actividades previas sobre pedagogía del habitat.
- **Adjudicación:** terminada la obra el Trabajador Social, propondrá al responsable de la Oficina, la adjudicación de las viviendas a las familias beneficiadas.
- **Seguimiento:** El Trabajador Social dispone de los recursos propios o si la familia por su escaso grado de funcionalidad lo requiriese recurrirá a los recursos externos (servicios sociales, salud, sistema de educación, asociaciones u organizaciones ...) para programar una intervención consensuada y/o conjunta y establecer un sistema de acompañamiento e incluso en una primera etapa de tutelaje.

En paralelo programará y llevará a cabo proyectos y actividades relacionadas con la Pedagogía del Habitat para brindar a las familias herramientas y modelos que les permitan aprender a vivir en comunidad, respetando todo lo que se considere positivo e incorporando nuevas prácticas para mantener el equilibrio y favorecer la convivencia.

Una vez desarrollada esta primera etapa de urgencia es el momento de plantearse nuevas metas. Dar un paso más allá de la rehabilitación de edificios para comenzar una rehabilitación del barrio, de la ciudad . Se inicia una SEGUNDA ETAPA caracterizada por:

Seleccionar actuaciones residenciales con una visión estratégica global: que de solución a problemas de planeamiento como apertura de nuevos espacios, de salvaguardia del patrimonio histórico artístico residencial, o bien actuaciones dirigidas a colectivos concretos.

A través de la colaboración con otras administraciones y con otras instituciones publicas y privadas como Universidad, Obispado de Cádiz-Ceuta, fundaciones, etc, para dar respuesta a necesidades residenciales y no residenciales pero imprescindibles para una ciudad habitable.

En esta línea se viene actuando y se actuará en el futuro para revitalizar el centro de la ciudad no solo como recuperación del patrimonio edificatorio residencial, sino desde el de recuperación de la ciudad viva y heterogénea, cultural, dotacional, comercial, etc. Haciendo participe a todos los órganos y sectores que representan la multicolectividad. Sirviendo de catalizador de un cambio en el que deben participar el resto de agentes de forma espontánea arrastrados por nuestra inercia.



1



3



2



4

La transformation et la conservation des villes historiques en Algérie : Plan de récupération de la ville de Miliana

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La méditerranée est considérée parmi les milieux urbains les plus anciens du monde vu la stratification des civilisations qui se sont succédées dans cette région. En effet ce passé urbain est commun aux régions méditerranéennes européennes et du nord de l'Afrique, mais les vicissitudes historiques connues par les organismes urbains sont différentes d'une région à une autre.

Les villes du nord de l'Afrique sont devenues, depuis plus de milles ans, des villes musulmanes ; certaines vieilles cités ont été abandonnées, d'autres fondées par des dynasties diverses issues des différentes conquêtes.

En Algérie, durant la colonisation, certaines villes précoloniales ont été transformées dans leur structure initiale, ainsi l'appropriation physique de l'espace des tissus urbains préexistants se faisait au prix de multiples destructions dans la ville précoloniale (médiina) pour le réaménagement d'un cadre bâti nouveau. En première phase, par la superposition de plans d'urbanisme qui consistaient à réaliser des percées à l'intérieur de la ville traditionnelle amputant le tissu. L'arrêt des destructions et le changement de la politique de transformation des villes algériennes correspondait à la visite de *Napoléon III* en Algérie en 1965. Après saturation des villes occupées étaient, les colons français réalisèrent des extensions urbaines, considérées comme des noyaux d'une ville nouvelle. C'étaient des quartiers destinés aux Européens, ce qui a entraîné une partie de la population autochtone à s'y installer, d'où le processus de densification et de dégradation de la ville ancienne.

Le phénomène de dégradation des centres anciens stratifiés s'est accentué avec le départ des européens qui déclencha le phénomène de l'exode des habitants de la médiina vers les logements du centre colonial libérés et l'occupation des habitations des villes anciennes

stratifiées par les couches sociales les plus défavorisée. Phénomène qui a induit à la densification, l'insalubrité et la dégradation du cadre physique.

Après l'indépendance, la nouvelle tendance de la planification et de l'aménagement du territoire n'a nullement considérée la ville historique stratifiée, elle lui a plutôt conféré un statut qui la condamne à l'inertie. Elle n'a donc suscité aucun intérêt particulier vu le vide juridique et l'inadaptation des lois en vigueur par rapport à l'évolution qu'a connu l'aménagement du territoire.

Certes la législation algérienne identifie et arrête quatre opérations : La rénovation urbaine, la restructuration, la réhabilitation et la restauration immobilière.

Ces opérations sont définies dans le cadre de la reconquête des tissus urbains délaissés, qui doit être menée tout en respectant le tissu urbain existant, le caractère de la composition architecturale et la cohérence urbanistique de l'ensemble.

Par ailleurs, le patrimoine bâti est cité parmi les objectifs que fixe le PDAU (Plan Directeur d'Aménagement et d'Urbanisme) qui est un instrument de niveau de programmation urbanistique, il fixe les vocations des sites et équipements à réaliser. Tandis qu'à l'intérieur du POS (Plan d'Occupation au Sol) que sont entreprises les interventions sur le tissu urbain existant, il édicte une réglementation de droit des sols.

Cependant une lecture critique du contenu PDAU et du POS montre que le patrimoine bâti historique est peu considéré. On déduit :

- L'inexistence de plan de délimitation des sites et monuments historiques.
- L'absence d'éléments d'analyse. Dans le PDAU et le POS, les études sont élaborées sans connaissances approfondies du tissu urbain (histoire urbaine, morphologie et structure urbaine, et typologie architecturale).

En dehors des instruments urbanistiques, la prise en charge du patrimoine bâti en Algérie est édictée par des mesures de protection comportant les actions suivantes :

1-Le classement : cette mesure de protection, est définitive, elle est particulièrement définie pour les monuments, sites historiques ou culturels¹, présentant un intérêt public du point de vue de l'histoire et de l'art ou de l'histoire uniquement.

Cette mesure ne peut que figer le bien dans le temps car le classement n'induit pas automatiquement les interventions, les procédures n'étant trop lentes.

2-L'inscription sur l'inventaire supplémentaire : Elle concerne les biens culturels immobiliers qui présentant un intérêt historique, culturel et artistique. Ces biens, qui sont appelés à être conservés sont inscrits sur l'inventaire supplémentaire.

Cette inscription entraîne les effets généraux du classement pendant une durée de dix ans. Si après cette période, le classement définitif n'intervient pas, le ministre procède à la radiation par un arrêté de déclassement.

3- La création des secteurs sauvegardés : Les secteurs sauvegardés sont créés par décret pris sur rapport conjoint des ministères chargés de la culture, de l'intérieur, des collectivités locales et de l'environnement, de l'urbanisme et de la construction. Le contenu du plan est précisé

dans des décrets exécutifs² portant les modalités d'établissement du plan permanent de sauvegarde et de mise en valeur des secteurs sauvegardés (PPSMVSS).

« Sont érigés en secteurs sauvegardés les ensembles historiques urbains ou ruraux tels que les casbah, médinas, ksours, village et agglomérations traditionnelles³ ».

A l'intérieur de la mesure de protection relative au patrimoine historique bâti, seule la mesure concernant la création des secteurs sauvegardés peut être appliquée aux villes anciennes stratifiées, lois qui sous entendent la considération des villes historiques en tant que patrimoine urbain⁴.

Les secteurs sauvegardés, qui sont créés par décret, considèrent uniquement les villes classées patrimoine national⁵, tandis que les entités historiques stratifiées, représentées par la ville précoloniale transformée dans sa substance et sa structure, ne sont pas pris en charge par ce dernier. Ni encore et ne sont pris en charge par l'instrument urbanistique qu'est le Plan d'Occupation au Sol (POS) car il est démontré sur le terrain que ses instruments sont inefficaces pour le contrôle et la gestion des transformations et la conservation dans les centres anciens stratifiés.

Actuellement, le principal problème des villes historiques stratifiées du nord de l'Algérie (médinas transformées) réside dans leur abandon ou dans leur sur utilisation. Le drame actuel est que la ville historique risque de ne plus exister, et cela est dû au nombre et à la gravité des altérations, ainsi que leur non considération de leur valeur historique et de leur dimension patrimoniale⁶.

La nécessité de leur prise en charge réelle grâce à l'instrument législatif grâce au plan de sauvegarde ne doit pas être conçu en fonction de leur valeur historique uniquement, mais aussi en terme d'un urbanisme cohérent où la création contemporaine doit se conjuguer efficacement avec les témoignages du passé.

La sauvegarde de la ville historique en Algérie pourra être réalisée dans une perspective de l'avenir de l'instrument urbanistique, c'est-à-dire penser à un urbanisme de la ville historique et en perspective, on pourra dépasser la sauvegarde et penser à la « restauration urbaine ».

Alternative de plan de sauvegarde d'une ville : cas de miliana

Miliana est considérée comme une ville moyenne de l'Algérie. Elle est parmi les villes millénaire (Alger et Médéa). Elle a accumulé de nombreuses stratifications historiques de diverses civilisations qui se sont succédées sur son territoire (figure n°1)

Le phénomène de sédimentation historique le plus apparent et le plus bouleversant, dans la ville de Miliana, reste celui d'une petite ville française. La morphologie de la ville précoloniale a été totalement perdue après la superposition de la structure en damier. (Photo n°1 et 2)

La lecture des transformations urbaines et architecturales, réalisées durant la colonisation, a permis d'identifier les éléments physiques, de l'époque précoloniale, qui ont perduré durant la colonisation et jusqu'à l'époque actuelle. Ces éléments sont considérés comme étant des permanences ayant accumulés des valeurs (historique, architecturale, symbolique,...). L'identification de ces éléments s'était basée sur les informations fournies par les plans établis au début de l'occupation française (plans cadastraux, figure n°2). C'est à partir de cette période que les documents graphiques et iconographiques furent établis et grâce auxquels, on a pu reconnaître certaines caractéristiques structurelles et morphologiques de la ville précoloniale de Miliana.

L'élaboration d'un tel document basée sur la connaissance des transformations urbaines, en plus de l'identification des caractères de l'urbain (structure géométrico-formelle, structure des espaces urbains et de leur pratique) permettra la reconnaissance de la valeur historique, urbaine et architecturale et donc de sa dimension patrimoniale. Cette caractéristique permettra la prise en charge par l'instrument relatif à la sauvegarde (PSMVSS) en tant qu'instrument urbanistique, ainsi on démontrera l'efficacité de ce plan qui tend à récupérer, à réhabiliter les villes historiques stratifiées et on atteindra l'objectif de **l'urbanisme de la ville historique**.

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1 JOURNAL OFFICIEL n° 44 , La définition du monument historique contenu dans l'article 17 du chapitre II, de la loi n° 98 -04 , du 15 juin 1998.

2 JOURNAL OFFICIEL n° 60, décret exécutif n° 03-324 du 5 octobre 2003.

3 JOURNAL OFFICIEL n°44, article 41

4 Cette notion avait fait l'objet d'une allégorie à l'échelle européenne depuis le 19^{ième} siècle. Cependant, les villes et les ensembles historiques, devenus patrimoine urbain à part entière, ont été confrontés aux difficultés de leur conservation, plus particulièrement leur réutilisation et leur intégration dans la ville contemporaine.

5 Seul les cinq villes suivantes sont classées patrimoine national: Casbah d'ALGER (JO n° 34 du 11 mai 2005), Vielle ville de CONSTANTINE et la vallée du M'ZAB (JO n°39 du 04 juin 2005), Casbah de DELLYS et la vielle ville de TENES

6 Un projet de catalogage des villes historiques stratifiées (transformées par les projets d'alignement) sera entamé pour leur identification, classification, leur reconnaissance en tant que patrimoine urbain, leur classement et leur prise en charge par l'instrument urbanistique d'intervention sur les villes historiques : plan de sauvegarde

Mediterranean architecture, preservation of the historical peninsula in the city walls of Istanbul aim target and the strategy

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Introduction

Fatih and Eminönü districts are called historical peninsula and it is situated in the south east of Çatalca Peninsula. Haliç (Golden Horn) and Beyoğlu are situated in the North. Bosphorus is in the east, Marmara Sea is in the south, Zeytinburnu, Bayrampaşa, Eyüp districts are in the west. Istanbul lies between Silivri and Gebze. Just in the center of the metropolitan area and Istanbul maintains functional relations with all problems.

Historical peninsula (Sur içi) covers 1582 hectare areas with 33 quarters, it lies in the South of the peninsula. Haliç (Golden Horn) is situated among Bosphorus, Marmara Sea and Fatih.

Vision (The Aim of the Planning)

To protect the historical, cultural and architectural values of the historical peninsula and preserving the central, traditional features of the original identity and developing quality of the buildings, environment and the level of standart of living and convey these wualifications to the young generation.

A.1. To represent the spesific identity of the Historical Peninsula by making functional analyzes and planning ; the refinement of the functions which are not suitablewith its own spesific identity of the peninsula.

A.1.H.1. To define the functions in historical peninsula and its qualification. Providing suitable planning in developement of the peninsula by offering suitable plannings to its spesific identity. Dispersing of the sites according to the needs of environment.

• **A.1.H.1.S.1.** Balanced dispersinf of the commercial areas and making functional planning, to control the constructional areas which may destroy the historical texture of the peninsula.

• **A.1.H.1.S.2.** Limitation of the linear trade and developing a system which provides suitable environment for Byzantium and Otoman era.

A.1.H.2. The functions which are appropriate for the historical texture should ne organized improved and activated.

• **A.1.H.2.S.1.** To remove small industry, manufactured goods and warehouses, to the outside of the city walls.

• **A.1.H.2.S.2.** To preserve the historical texture instead of these discharged places, new functional places should be organized and should compensate the needs of this age.

A.1.H.3. Preseving the historical peninsula from the pressure of the

dinamics.

• **A.1.H.3.S.1.** The functions which receive high condensation of the traffic jam and high population should be removed from the peninsula. Mostly hospital buildings and university buildings should be removed from the historical peninsula because of the traffic density.

• **A.1.H.3.S.2.** In 1985, the historical peninsula was included in the list of Unesco World Cultural Inheritance and in 12.07.1995, the law number 6848 was proclaimed that this historical peninsula as a site area but these precautions are also inefficient to preserve the historical area. The preservation and developement of the Historical Peninsula should be obligatory in order to save the present inheritance. City planning approach is a controlling means of concept to evaluate new developments.

A.2. The environment, constructions and developement of Standard of living of the historical peninsula.

A.2.H.1. The resolution that is made for the transportation is that pedestrian prñciples should be given importance and entegrated with the present transportation system. The limitation of the pressure of the rubber tyres on the ancient pedestrian streets and other public transportation systems should be given precedence. Only this way, these ancient street qualifications could be preserved.

• **A.2.H.1.S.1.** Limitation of the rubber tyre transportation system could be made by the traffic jam outside this ancient area and to emulate new street outlines. Only with this way the features of the ancient roads could be saved.

• **A.2.H.1.S.2.** Sea and railway transportation should be given importance only by this way we can preserve ancient street forms.

• **A.2.H.2.S.3.** In the needs of park and ride system, the arrangements of the car parks should be made suitable to the sensitivity of the ancient texture. City outline can be preserved from the visual and biological environmental pollutions by the new arrangements.

A.2.H.2. The preservation of the buildings and renovation of the damaged buildings.

• **A.2.H.2.S.1.** Establishing new regulations of constructing buildings such as not constructing buildings higher than ancient ones. (culturally inherited ones)

• **A.2.H.2.S.2.** Rehabilitation and restoration projects are made in order to arrange the buildings which are suitable to the ancient texture and refinement of the buildings which are not appropriate. Regaining the old buildings by arrangements that would made in contemporary technology.

A.2.H.3. Maintaining night and day balance.

• **A.2.H.3.S.1.** Decreasing the pressure of the trade and accomodation areas residences especially in Eminönü district and regainin residences should be made. The population of Eminönü by night is nearly 45,000 and tha day time the population increases to 2.000.000. the population by night should be increased at leas 500,000. this proposal would not be a solution but nightlife areas could be enlarged.

• **A.2.H.3.S.2.** The area could be more attractive by the a ccurate and suitable equipments and functions. The main elements that would add attractivity to the area are primary schools, kindergartens,

hospitals park areas, squares, religious buildings, open areas, cafes, book stores and small shopping trade centers.

- **A.2.H.3.S.3.** In order to balance the night and day population of Eminönü and Fatih districts we should combine the central and local administrations because the population of Fatih district is the same at night and day time. Therefore combination of these two districts may increase thenight population nearly 600,000.

A.2.H.4. Developing the quality of landscape by generating the traditional, natural texture of the historical peninsula.

- **A.2.H.4.S.1.** We should preserve and develop the natural texture by arranging the landscape projects. The existed landscapes should be explored and investigated. We must give a place to the solutions which give importance to natural flora and asymmetrical solutions.

- **A.2.H.4.S.2.** The area which is excluded from the historical city texture and vegetable gardens should render service to the inhabitants of the historical peninsula by arranging the regional parks and recreation areas.

A.2.H.5. Developing the quality and the standards related to urbanic, social and technical in infrastructure and making adequate for the public which is inhabitation of the population

- **A.2.H.5.S.1.** To apply investment funding. This area will turn out to be attraction center by applying investment fundings for the verbal sector. We should not give permission to applications which would increase the population amount. In fact, the areas which was collapsed should be rehabilitated and become the attraction centers.

A.3. Providing the visual integrity and regaining the silhouette on the basis of historical identity and preservation.

A.3.H.1. Decreasing the intensity of constructions.

- **A.3.H.1.S.1.** The limitation on the basis of the construction will decrease the rate of population by taking the decisions. A French Urban Institute specialist professor Henry Prost prepared a zoning plan for Istanbul in between 1936-39. Prost, restricted the storey levels in order to minimize the rate of population. After 1950, these regulations were changed and the present population rate was aroused.

A.3.H.2. The prevention of the constructions which affects the visual integrity negatively.

- **A.3.H.2.S.1.** In Residence areas the planning which is made should preserve the historical peninsula cultural and natural existence and should be harmonious with the cultural and natural existence and should not damage visual effectiveness. Plans should cover +40 and +50 decreasing the altitudes of the building by taking decisions such as for +40 only 5 storeys should be given permission to construct and for +40 +50 not more than 3 storeys.

- **A.3.H.2.S.2.** It is compulsory to make arrangements to prevent the visual pollution. For example we can take crossroads and car parks underground or new arrangements should be made. In Fatih and Eminönü districts, Atatürk boulevard can be taken down to underground and vehicles with rubber tyre can be taken underground as well. Pedestrian crossings should be constructed instead of this traffic arrangements. The road between St. Sophia

and Beyazıt was once on Byzantine main road which was also used during Ottoman and finally it is the right solution to change this main axis to main pedestrian traffic.

A.4. The protection and the emergency of the cultural architectural and historical values of the historical peninsula.

A.4.H.1. The determination of monumental buildings and the examples of civil architecture, the renovation of all buildings adapting to the city atmosphere.

- **A.4.H.1.S.1.** The buildings spoiling the historical identity of the squares should be arranged again.

- **A.4.H.1.S.2.** Generally in the peninsula, there should be existed walking routes for pedestrians among the high density of cultural and historical regions where there are lots of buildings that need protection.

- **A.4.H.1.S.3.** The spaces between the lands parcelled up and the places near the streets are all arranged as green areas in order to preserve the street- parcel structure

- **A.4.H.1.S.4.** The regions should be entitled as the first, second, third, as their protection degrees from the high density monumental and civil architectural areas to low density of cultural and historical buildings respectively.

- **A.4.H.1.S.5.** The handicraft works should be given importance and some precautions should be taken in order to enliven these handicrafts.

- **A.4.H.1.S.6.** The projects of restoration should be done for damaged historical buildings.

- **A.4.H.1.S.7.** The lack of lost works and parts of buildings should be determined and supplied to reconstruct under the principles of legal and practical issues.

A.4.H.2. The high cultural inheritance potential of the historical peninsula should be evaluated in the benefits of cultural tourism. Huge, empty buildings can be restored as boutique hotels.

- **A.4.H.2.S.1.** The encouragement of the tourism cultural, artistic activities should be organized properly besides the innovations in accommodation.

- **A.4.H.2.S.2.** The supplying the accurate accommodation facilities and the encouragement of cultural tourism in the peninsula.

Conclusion

Istanbul has been located in the center of the old world which consisted of Asia, Europe and Africa as the known establishment date from our times for 2700.

In the world all the peninsula lie down to North- South directions while the Anadolu peninsula lie down to east-west direction. This made an unique geographic feature. Although the capitals of the most countries were located far away from the sea, Istanbul was a unique harbour city being the capitals of Byzantine, Roman and Ottoman Empire. Meanwhile, Istanbul is the city, where different religious groups such as Muslims, Christians and Jewish people live in the same society together in peace. Istanbul is the city which has got many documents written, drawn and photographed. Furthermore, Bosphorus is the place where people admire when they see the highlights of the city. Istanbul is not only the city of historical importance but also popular in cultural tourism and international trades.

Instruments et méthodes pour la rehabilitation de l'architecture traditionnelle en sardaigne: le manuel de recouvrement des centres historiques de marmilla¹

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Fondements et objectifs

Le "Manuel de rehabilitation des centres historiques de Marmilla, du
Sarcidano, de l'Archi et du Grighine" est un instrument opérationnel
conçu dans le but de fournir des lignes guide pour les interventions de
recouvrement sur le patrimoine architectural traditionnel d'un domaine
territorial très vaste et extraordinairement intéressant sous le profil de la
culture de l'installation et de la construction.

Le système d'installation de Marmilla, en effet, conserve sa matrice
médiévale constituée d'une série de petits villages parmi lesquels
émergent quelques centres d'importance historique comme Ales,
Laconi, Mogoro, Sarda, Senis et Usellus.

Ici, comme dans d'autres zones internes de la Sardaigne, et de la même
façon que dans d'autres domaines de la Méditerranée, on peut relever
au moins deux données de fond particulièrement alarmantes:

- le procès migratoire de rayon court et grand qui intéresse les centres
depuis des années;
- l'isolement et les petites dimensions des communes qui ont de
grandes difficultés à mettre en marche des procès économiques
qui consentent aux communautés de se soutenir.

Il s'agit de deux phénomènes fortement liés qui mettent en discussion
le lien entre les communautés et leur territoire, contribuant au
dépeuplement des noyaux historiques, à la dégradation qui en

suit du patrimoine de bâtiment traditionnel et à la perte rapide des
connaissances constructives prémodernes.

La Marmilla, en revanche, possède une forte charge d'identité encore
clairement lisible dans les centres historiques à travers l'homogénéité
et la répétitivité des caractères de leur architecture de base.

Aussi bien sous le profil étroitement culturel qu'économique, elle a
mûrie la conviction que l'architecture populaire puisse être interprétée
comme patrimoine matériel de valeur absolue.

C'est dans ce sens que la découverte, la connaissance de la
culture constructive locale, la conservation et le réemploi grâce au
recouvrement du bâtiment historico-traditionnel, représentent une
importante occasion de développement économique du territoire
fondée sur les propres spécificités. Et ce sur la base des instances de
réappropriation que les communautés, surtout si elles sont petites
et isolées, manifestent avec grande force par rapport aux sujets de
l'appartenance et de l'identité.

La nécessité d'établir un standard pour les bonnes pratiques
d'intervention, surtout aujourd'hui où le recouvrement est souvent
soutenu économiquement par les institutions publiques, attribuent au
livre un rôle de premier rang dans les stratégies opérationnelles pour la
valorisation et la requalification urbaine.

Les utilisateurs du Manuel

Les objectifs de ce manuel sont reductibles aux instances culturelles
et d'usage.

La structuration du manuel à travers l'illustration détaillée, par tables
graphiques et écrites, d'un échantillonnage vaste d'éléments typiques
de l'usine traditionnelle (toits, planchers, murages, ouvertures etc.),
permet une clé de lecture d'archives qui les présentent comme un
répertoire de cas à travers lequel déterminer les types récurrents
constructifs.

Le manuel, en outre, fournit à techniciens et maçons un instrument
pour une approche opérationnelle au bâtiment traditionnel, tant sous
le profil cognitif que sous celui des méthodes d'intervention pour la
tutelle active, l'entretien et la modification.

Les personnes auxquels s'adresse ce manuel sont la communauté
installée et le monde des spécialistes dans sa double articulation en
techniciens et maçons, en pensée et pratique.

Aux premiers le manuel devrait stimuler l'appréciation du centre ancien
à travers l'expressivité de ses représentations qui synthétisent l'essence
des constructions traditionnelles; par secondes il s'adresse avec le but
d'étendre la connaissance du bâtiment pré moderne, codifiant les
règles principales qui ont été transmises, fin à aujourd'hui, seulement
sur la base de l'expérience pratique du savoir faire du chantier.

Pour les projeteurs, le manuel est un guide et support dans la définition
de l'intervention de recouvrement, orientant dans le choix de matériels
et techniques cohérentes avec ceux qui appartiennent à la tradition
locale constructive, selon une logique de projet qui opère en continuité
et pas en opposition avec le passé.

Contenus et instruments du Manuel

Le domaine territorial d'intérêt présente des variantes morphologiques
et culturels liées à au moins quatre sous-zones de référence qui
dérivent de l'intersection entre les régions historiques du Sarcidano,
de Marmilla, du Grighine et, secondairement, du Campidano central et
septentrional dans lequel on relève substantiellement des caractères
naturels, typologiques et technologiques homogènes.

Les cultures de l'installation et de la construction qui se sont développées et consolidées dans chaque zone jusque dans les premières années du siècle dernier et même, dans certains cas aussi, au-delà du second conflit mondial, apparaissent liées aux caractères naturels du territoire, à la culture et à l'économie des communautés qui résident en lui.

La donnée matério-constructive est fondamentale dans la définition des sous zones homogènes: elle permet de distinguer les zones de la terre et celles, nettement prédominantes, de la pierre qui, elles-mêmes, se répartissent en zones de trachyte, de grès, de marnes, et de basalte. Les marges ne sont pas précisément définissables: si dans quelques cas en effet, ils coïncident avec ceux des sous zones mêmes, (les zones du basalte qui sont localisées sur le versant occidental de l'Arce par exemple, ou du trachyte qui comprend les territoires du Grighine), dans d'autres cas ils se dilatent concernant plus de sous-zones (la zone de la terre crue se répand par exemple aussi bien en Marmilla que dans le Campidano).

Le Manuel s'articule dans les sections suivantes:

- a. analyse et étude de l'architecture prémoderne;
- b. analyse des formes de dégradation et des pathologies récurrentes;
- c. réhabilitation de l'architecture prémoderne: modalité d'intervention.

a. Dans la partie Analyse et étude, pour chaque sous-zone déterminée, on recherche les relations entre morphologie urbaine, typologie de bâtiment et technologie constructive.

A l'aide de tableaux synoptiques interprétatifs et de comparaison on a étudié les centres urbains selon trois échelles d'approfondissement différentes:

- Urbaine dans laquelle on a identifié les principales règles d'installation telles que la même orientation des corps d'usine/édifices résidentiels, les rapports entre espaces publics et privés, les rapports entre plein et vide, les éléments d'aménagements urbains.
- Bâtiment, reconnaissant les types les plus diffus (maisons à double cour, antérieur, postérieur, bâtiments productifs comme pressoirs, moulins, caves etc.), et leur modalité d'accroissement et de développement;
- Matério-constructive, avec référence à des techniques et des matériaux employés dans les éléments de la construction prémoderne tels que: murages, couvertures, planchers en bois, avant-toit, ouvertures, fenêtres, portes et portails, pavages de places extérieures et intérieures, éléments particuliers décoratifs, oeuvres en fer.

Chaque niveau est accompagné de tables, de tableaux synoptiques, de fiches spécifiques intégrées à l'aide du matériel documentaire, photographique et graphique à la base de la recherche analytique, fondamentale pour résumer la grande quantité de renseignements et la rendre consultable.

Pour chaque sous-zone on a produit en particulier:

- Des tableaux synoptiques qui, à partir de cartographies cadastrales des premières installations géométriques (remontant au début des années 1900), soulignent les principales règles d'installation des centres urbains en examen, relativement aux caractères morphologiques des lieux;
- Tables typologiques dans lesquelles les modèles de classification sont donnés par la position mutuelle entre cour, maison et rue, du numéro de cellules qui constituent les installations d'origine des habitations, du numéro des niveaux sur lequel les maisons se

développent, de la présence de portiques et de vains instruments;

- fiches typologiques dans lesquelles chaque type déterminé dans la table est étudié en détail à travers l'emploi de reliefs de cas réels, de documentation photographique et de textes explicatifs;
- axonométries qui soulignent le rapport entre types de bâtiment et types constructifs;
- tableaux généraux synoptiques des éléments constructifs;
- fiches technologiques à l'aide de photographies et de dessins schématiques ou de détail relatif aux variantes avec lequel chaque élément constructif se présente en chaque zone matérielle.

b. L'analyse des formes de dégradation et des pathologies récurrentes fait référence essentiellement à l'étude des dégradations technologiques, sous divisé en:

- dégradation des éléments structuraux
- dégradation des matériels et des surfaces.

Pour évaluer la dégradation des éléments structuraux on considère la dégradation des éléments verticaux (murages, colonnes etc.), et des éléments horizontaux (planchers, couvertures, structures à arc etc.). Pour chaque catégorie de dégradation et suite aux principaux éléments structuraux et superficiels les symptômes et les causes des pathologies plus diffuses ont été examinés dans le bâtiment traditionnel, à l'aide de tables photographiques de synthèse.

Les catégories de dégradation des éléments structuraux sont en grande partie liées à des affaissements intermédiaires et terminaux, à des renversements et des rotations, à des écrasements, à des inflexions et des déformations excessives.

L'étude de la dégradation des matériaux s'articule, quant à elle, en trois sections spécifiques relatives à la nature différente des surfaces considérées en déterminant les catégories suivantes: fracturation, érosion, efflorescences, exfoliation, altération chromatique, tâches, lacunes ou manques, pulvérisation, concrétion et oxydation.

c. Dans la section **Réhabilitation de l'architecture prémoderne: modalité d'intervention**, on recommande l'emploi de matériaux et de techniques compatibles avec la construction traditionnelle, tout en tenant compte de sa prédisposition naturelle à l'assemblage et à la pratique d'entretien. Dans cette section, nombreux sont les renvois à la règle d'art.

On examine, à travers des fiches opérationnelles d'intervention structurées de la même manière que celles technologiques d'analyse, les problématiques récurrentes dans le recouvrement de:

- matériaux naturels et artificiels;
- éléments structuraux verticaux et horizontaux;
- surfaces et revêtements

selon quatre catégories d'intervention:

1. consolidations
2. intégrations
3. protections
4. déshumidification

Les fiches, qui illustrent quelques lignes méthodologiques de recouvrement, n'ont pas la prétention de résoudre tous les problèmes d'intervention du bâtiment historique, mais ils ont comme objectif celui d'affronter les casuistiques récurrentes d'intervention de manière opérationnelle et directe.

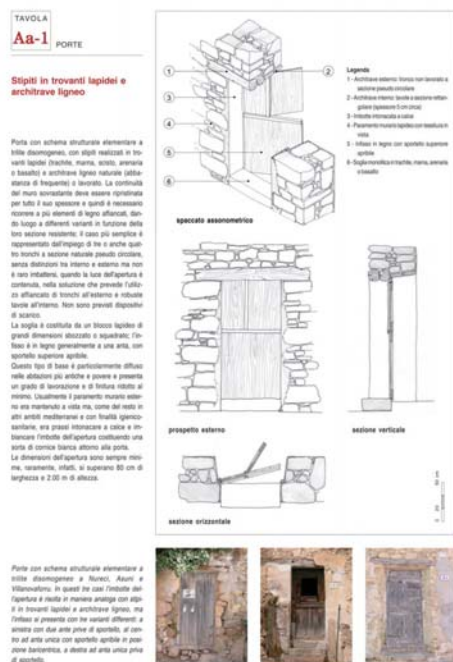
Les tables et les fiches de synthèses qui y sont intégrées, permettent de disposer d'un tableau complet pour chaque élément constructif, sous le profil de la construction d'origine, des pathologies et des interventions, contribuant ainsi à une approche à la réhabilitation le plus immédiat et conscient possible.

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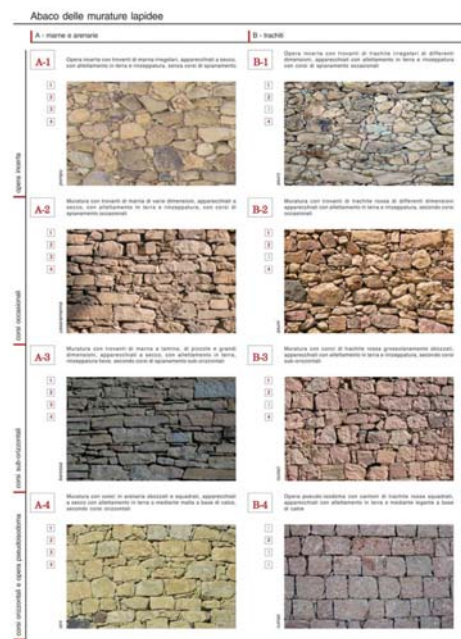
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- 1 Le Manuel de Réhabilitation des Centres Historiques de Marmilla, du Sarcidano, de l'Arci et du Grighine rentre dans le cadre d'une initiative communautaire LEADER + et elle est financée aux fonds communautaires FEAOG – Orientamento - Piano di Sviluppo Locale del Gruppo di Azione Locale Interprovinciale delle Marmille, Sarcidano, dell'Arci e del Grighine, Axe I, Mesure 1.3, Action 1.3.b.1 qui prévoit la réalisation d'un instrument opérationnel "d'étude et analyse du patrimoine de bâtiment des centres historiques des 44 Communes de la zone Leader +, finalisé à la prédisposition d'un Manuel pour la requalification des Centres Historiques et des éléments urbains..."
- 2 L'étude photographique préliminaire à la rédaction du Manuel de requalification a intéressé un patrimoine historique du bâtiment qui conserve, inaltérés ou lisibles, les caractères typologiques de base, estimés à environ 4.200 bâtiments. Tenant compte que les bâtiments recensés sur la cartographie des premières installations sont environ 9.000 en tout, la donnée est absolument considérable pour la quantité des bâtiments historico- traditionnels en état acceptable de conservation (46%). L'étude typologique s'est en outre basée sur l'analyse ponctuelle des reliefs d'environ 500 bâtiments dont 20% a été reporté dans le manuel sous forme de fiches typologiques.

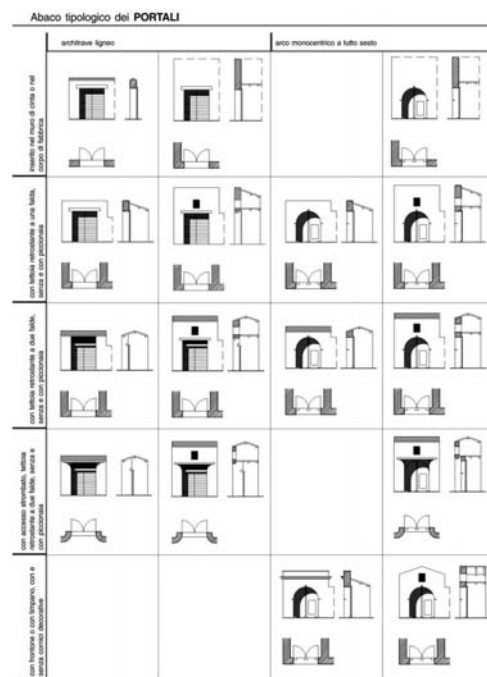
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analyses et connaissances de l'architecture traditionnelle de La Marmilla: la fiche technologique d'une porte



analyses et connaissances de l'architecture traditionnelle de La Marmilla: table des murages



analyses et connaissances de l'architecture traditionnelle de La Marmilla: table typologiques des portails

The western City Wall of old Aleppo. An area under transformation

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The city of Aleppo was erected on the plain of the Qoueiq's river. Its Citadel was built on the highest hill of the area. The Old City surrounds the Citadel and occupies about 360 hectares. The majority of the survived urban fabric goes back to the Ottoman period (1517-1918). The first Master Plan for the city was prepared in 1900 and delineated the development of the city toward the west. Just after the mid nineteenth century, the city started to expand toward the west and the north. However, the Master Plans of 1954 and 1972-1974 triggered the demolition of about 20% of the historic urban fabric.

Consequently, in 1974 the Directorate of Antiquities registered the whole intramural city as a historic district. In 1978, the northern extramural area was included within the protection zone; and in 1985 the eastern area was incorporated. Furthermore, the subsequent year witnessed the addition of the Old City of Aleppo to the UNESCO's list of World Heritage Sites.

In 1992 a Syrian-German cooperation project for the rehabilitation of the Old City of Aleppo was initiated. Ever since, the Rehabilitation Project has worked on developing revitalization schemes for the Old City. In 1998 a Development Plan was prepared. It outlined the strategies for upgrading and preserving the living urban heritage of Old Aleppo. The primary strategy consisted of identifying catalysts for urban development in the Old City.

Within this framework, the Western City Wall Project is considered the biggest and most recent urban development project in the Old City. This project's area is characterized by its strong socioeconomic setting and complex urban structure. It attracts customers from the Aleppo metropolis and the surrounding region. However, it suffers from various problems mainly related to underdeveloped land, unorganized traffic, informal activities, and neglected landscape.

This area is situated extramural in the city center between the old

and the new town covering an area of about 65 hectares. The eastern boundary of the area is demarcated by the ancient Western City Wall highlighted by Bab Antakieh, one of the remaining gates of Old Aleppo. The western limit is drawn up by the Qouaque River. Up north, the area is limited by the thoroughfare coming from Damascus and in the south by the alignment of the southern edge of the Old City. (Photo-1: Location in the Old City)

Throughout the years a long stripe of shops was erected in front of Aleppo's ancient western fortification wall. These shops comprise a wide range of commercial activities including shoe repair workshops, seed wholesalers, foam and carpet shops as well as construction material and sanitary ceramic stores. Across the street, the western adjacent area attracted a diversity of formal and informal commercial activities, various administrative buildings, as well as a wide range of local and national transport facilities.

The northern part of this area includes second hand clothing shops and numerous vegetable shops. These are strongly linked to Souk al-Hall the biggest vegetable wholesale market in town, and to several informal street stands. The central zone is occupied by various building materials' workshops; a cargo station, a fridge building, Souk al-Duogma and Souk al Hall. To the south of the wholesale market, a large number of recycling workshops for plastic and polystyrene boxes cover part of the open green space in the area. They are directly linked to the activities of the vegetable wholesale stores. The green space south of Souk al-Hall is used as farmland for growing vegetables and flowers. Further to the south, a dense traditional residential neighborhood starts.

The offered transportation facilities occupy a large surface at the northern part and are represented by an inner-city public bus station, a western rural area microbus station, regional and rural bus station, as well as a bus station for national and international bus lines. Public and administrative buildings and functions are mostly located in this part around the bus stations. The area around Bab Antakieh is a gathering point for informal construction workers as well as transportation services. (Photo-2: Actual Situation & Boundary, Photo-3: Northern Part of the Area)

The planning work of the Western City Wall area was carried out in line with Action Area Planning Principles. Accordingly, problems, potentials, trends, as well as a set of objectives and strategies were defined. Nevertheless, due to the pressing need to expose the Western City Wall and the long process of plans' approval, a bottom-up approach was adopted in parallel to implement various Action Projects while waiting for the ratification of the legally binding qualitative and quantitative land use plans.

The project aims at readdressing the persisting dilemmas in the area by removing the expropriated shops attached to the Western City Wall, restoring and exposing the ancient wall and the gate of Bab Antakieh, reusing some of the remaining historic buildings to consolidate the tourism infrastructure and transforming the area into a new city district of the Aleppo metropolis. Within this transition zone, the challenge faced is to preserve the socioeconomic profile and the urban liveliness of the area, improve the interaction between the old and new city while insuring the balance between preservation and development.

In order to set the logistics for rehabilitation, the area was the subject of various surveys. This included the documentation and the historic evaluation of shops along the city wall, as well as surveys on ownership, building heights, qualitative and quantitative land uses, traffic system and transportation means. Based on the surveys carried out and the

urban analysis of the area, an urban planning concept was developed in 2006. It combined between the revitalization of historic monuments, the introduction of new metropolitan functions, the protection of the existing open spaces and green areas, the elaboration of landscape design, as well as the development of the streets and pedestrian networks in accordance with the general traffic concept of the Old City. Within this framework, additional administrative buildings, new tourism facilities, a reorganized informal market, as well as new commercial activities were introduced.

A particular importance was given to the design of the public space facing the gate of Bab Antakieh in order to highlight the new city center. According to the future planned changes in the area (i.e. the removal of the microbus station and the vegetables' market to the northwestern and the southwestern outskirts of the city), this 'square' should gradually be expanded toward the west up to the river shore in order to form a special zone and/or corridor between the old and the new city.

In 2007, the qualitative and quantitative land use plans were elaborated in order to preserve the cultural heritage, consolidate the existing functions and secure housing while leaving sufficient room for new development. Accordingly, five zones were proposed: conservation area, administrative, mixed business, mixed residential and special zone. (Photo-4: Urban Concept & Land use)

The implementation of this urban development project was scheduled into phases. The first phase included the removal of shops between the northern and the southern towers of Bab Antakieh and the elaboration of the place in front of the exposed wall. This phase was partly implemented in the area between the gate and the northern tower. This section of the Western City Wall dates back to the French mandate period (1920-1946). However, the shops in this section are distanced from the wall and the gap in-between is filled with earth and rubbish rising up to six meters above street level. Therefore, a structural survey was carried out prior to implementation in order to examine the state of the buried wall's foundations. By coincidence, these investigations led to the discovery of the ancient city wall which most likely dates back to the Ayyubid period (1171-1260).

For unknown reasons (e.g. enlarge the street above the wall), the 'French wall' was built above the remains of the 'Ayyubid wall' and stretches out in front of it by about two meters. As it stands today, the 'French wall' is supported on a 15cm reinforced concrete slab. Following the removal of the filling in-between the shops and the wall, the structural condition of the 'French wall' became critical. Several cracks started to appear in the street above and in the mass of the wall. Due to the unexpected finding of the 'Ayyubid wall' and the movement of the 'French wall', all implementation works were stopped and a proposal for a provisional shoring was elaborated. Archeological excavations, the elaboration of the final concept and the permanent stabilization of the 'French wall' would all depend on the allocation of the required budget for implementation.

Subsequently, implementation will focus on the transformation of the microbus station into a public square, the rehabilitation of Souk al-Dougma to host the commercial activities between Bab Antakieh and the southern tower, the removal of the expropriated shops, the restoration of the city wall, the rehabilitation and the reuse of the gate and both towers for tourism facilities.

Other implementation phases will focus on extending Souk al-Dugma to include the remaining expropriated commercial functions, exposing

and restoring the southern segment of the city wall, applying the first stage of the traffic concept, removing Souk al-Hall from the area, extending the park toward the river and connecting the area to the Old City ring road. Private investments will also have their share in the area to accelerate the development process.



Location in the Old city



Actual Situation, Boundary



Northern Part of the Area



Urban Concept, Land Use

L'architecture de la ville Le projet urbain; Aspects paradigmatiques méthodologiques et pragmatiques

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La ville en tant que paradigme d'établissement humain est en mutation .Apparue voici près de 5000 ans en tant qu'organisme distinct du village,partant de la centralisation de la population et haut lieu de la civilisation ,du savoir ,de la culture et de la diffusion .L'histoire de la ville et de l'urbain a connu de très grands bouleversements et changements en parallèle aux révolutions culturelles et les ruptures paradigmatiques esthétiques et idéologiques .En fait, dès le début de l'aire industrielle ,la croissance démographique de la population grâce au progrès de la science et l'exode vers les villes des civilisations usinières ont amorcé une urbanisation galopante de ces dernières .Par la suite, l'évolution des communications des matières et des informations ont très vite eu raison de l'urbanisme et de la ville dans son concept traditionnel. La ville du progrès comme entité spatiale et morphologique intégrant une organisation cohérente et centrée tend à disparaître. Déjà, elle atteint ses limites avec les grandes métropoles de l'aire industrielle et

capitaliste.

Une expansion continue et une quête de plus grand, de plus haut et de plus vaste inspire un urbanisme nouveau ,aux prises avec une nouvelle complexité de la vie moderne ,complexité résultante de l'élargissement de l'étendue géographique et l'intégration de diversité de réseaux dans l'épaisseur même du fait urbain..

Une mutation qui déteint aussitôt sur l'architecture qui voit la production de bâtiments et d'édifices inédits concentrant fonctions et usages .L'explosion des programmes des nouvelles constructions conjuguées aux nouvelles manières d'habiter et aux récents comportements urbains sont venus s'imbriquer sur les anciennes typologies .De nos jours, la civilisation usinière cède la place à une civilisation communicationnelle imposant des changements techniques dans les manières de faire et des changements paradigmatiques dans les manières de voir .Une complexité grandissante et des changements rapides dans l'environnement culturel ont causé des chocs profonds dans l'architecture et l'urbanisme qui ont essayé de s'y adapter tant bien que mal en changeant de structure .

Aujourd'hui, la révolution urbaine à l'échelle mondiale cognitive rend caduque cette organisation centrée et ordonnée .La ville implose en une multitude de réseaux et de constructions sans limites.

Afin de contourner et maîtriser cette mutation irréversible, il est de la plus haute importance de fixer les grandes lignes qui pourraient permettre d'aboutir à l'étude et la compréhension de ces faits urbains dans leur aspect descriptif et analytique. On parle souvent de système urbain pour désigner la ville .Il est aussi question de structure urbaine et structure constructive .Toutefois les termes système ,structure et les notions de forme et de fonction n'ont pas en réalité la même connotation systématisée et stabilisée qu'ils ont dans les sciences .Alors que c'est la métaphore architecturale même qui est à l'origine de la pensée structurale avec la distinction nette qu'à fait VIOLET LE DUC entre structure et forme .Cependant le champs de l'urbain et de l'architecture n'a pas pu adopter et digérer le paradigme structuraliste ni même à connaître une transformation limitée systémique ou paradigmatique. Et pour pouvoir aller plus loin dans le travail d'abstraction et d'évaluation, on pourrait définir le fait urbain comme étant un cadre bâti artificiel construit par les hommes et soustrait de l'environnement naturel ;c'est de la matière solide qui est mise en forme comme enveloppe physiquement rigide et stable en creux des volumes vides,constituant le milieu habitable.

Obtenant ainsi même par conjonction dans le sens de l'épaisseur, la réalité de l'architecture urbaine, une composition, et dans le sens de l'étendue, une croissance .C'est cette double composition qui constitue le phénomène urbain qu'il faut asseoir sur le plan théorique et conceptuel en vue de généraliser et identifier un système urbain. La forme concrète qu'il prend en tant que modèle physique est co-naissante avec sa forme abstraite ,son concept.

Cette problématique revêt toute son importance si on la remet dans le contexte de l'architecture méditerranéenne et surtout celui des pays du sud avec la grande extension que connaissent les villes en réponse aux grands changements socio-économiques .On assiste alors au démantèlement continue du caractère identitaire de cette architecture et déstructuration des modes traditionnels et l'adoption de nouvelles manières de concevoir et construire .On prend par exemple l'aspect urbain de la Tunisie : jusqu'au début du 20^{ème} siècle, on admettait des courants clairs de production ,par exemple l'urbanisme citadin des médinas ,berbère des montagnes et le pré-saharien des oasis.

Il faudrait alors pour savoir comment se posent les problèmes de l'architecture de l'urbain et comment on peut y apporter des solutions formelles et organisationnelles , traiter du processus global de production.

L'architecture spatiale fait partie intégrante de la ville comme le projet urbain, et le moment de la conception fait partie du processus global de production du cadre bâti urbain .Le processus de production du projet urbain,se décompose en sous processus comprenant la planification,la projection ,l'édification et l'appropriation . Chacun de ces sous processus se subdivise à son tour en sous processus.

En premier lieu ,on a la planification qui englobe les idées du projet de commande et tout le travail de programmation détaillant les buts et les moyens .La projection englobe le travail d'anticipation de l'objet « le design »du bâtiment .L'édification englobe la phase de construction ,la fabrication du bâtiment conçu et sa réalisation Quant à l'appropriation , elle englobe la phase de l'occupation du bâti de l'usage et de l'appropriation du bâtiment réalisé .Et si on représente ces stades selon leur déroulement dans le temps cela donne le schéma suivant : (schema 1)

Cette représentation diachronique et linéaire ne prend pas compte de ce qui se passe réellement. Il y a des rétroactions entre un stade et celui qui le précède et même entre le moment de l'appropriation et la première phase à savoir la planification .Il convient donc de se proposer une représentation plus dynamique du processus production.

Le concepteur devra alors disposer des compétences nécessaires, réclamer la formation adéquate et se positionner de manière plus positive plus efficace et plus agressive par rapport à la production en maîtrisant mieux le processus dans sa globalité.

(Schema 2)

La question serait alors de savoir si on peut parler d'une base théorique de règles qui pourrait constituer le départ de l'accomplissement du travail de la conception .

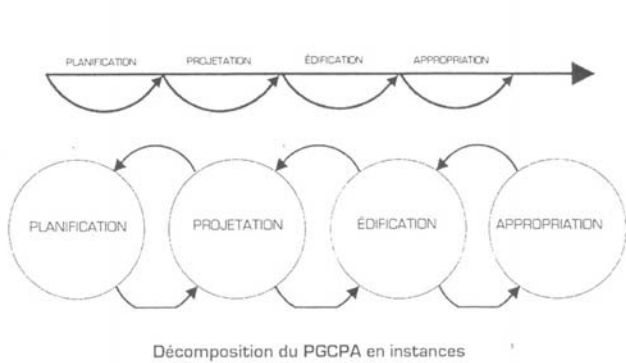
Dans ce sens l'architecture peut être une forme de de connaissance essentiellement tacite agissant en rhizome de savoirs et de savoir faire techniques et empiriques même si on peut reconnaître en l'architecture sa branche scientifique.

Comme base théorique du PGCPA, on propose un modèle du système architecturologique en dialectisant la théorie de la quasi-décomposabilité de H.A.SIMON et la théorie du progrès cognitif de J.PIAGET.Ces deux théories complémentaires démontrent par leur application l'erreur de l'opposition théorie-pratique constituant la difficulté majeure dans le champs de l'architecture de l'urbain .Elles permettent aussi de prendre conscience de la possibilité de progression de la compréhension par l'analyse de systèmes architecturaux existant à la création par synthèse de systèmes architecturaux « virtuels ».Les deux thèses sont susceptibles d'accord à travers le paradigme holographique tel que proposé par J.C. TABARY posant un isomorphisme de structure entre le système Total de la connaissance humaine et le système partiel de la connaissance architecturale.

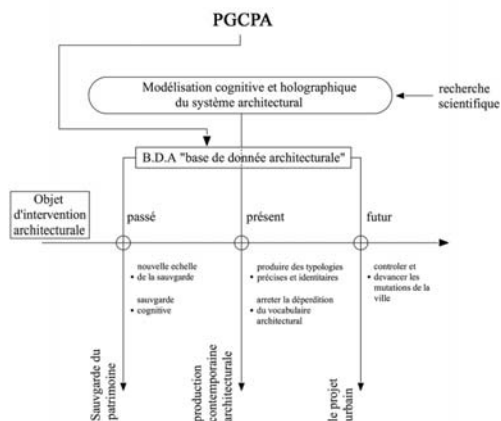
Alors tangiblement, quels sont les potentialités de ce modèle et ces applications sur l'architecture?

L'idée de départ est l'identification et la représentation par le pradigme holographique de n'importe quel système architectural et par la suite à travers la complémentarité des recherches la constitution du système Total de l'architecture .Comme resultante on aura l'obtention de la BDA « base de données architecturales » qui rassemble les données traitant des divers courants d'architecture. De ce fait, la modélisation

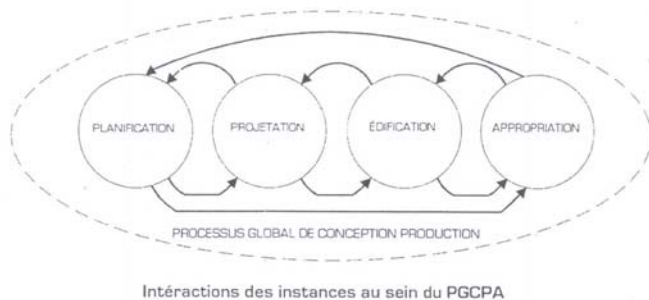
cognitive et holographique du système architectural offre de très grandes potentialités au sein du PGCPA et ceci au niveau des trois temps critiques d'intervention .En premier lieu le passé : en fait, pour ce qui est de la sauvegarde du patrimoine et au lieu d'une sauvegarde selective ,on peut adopter une autre échelle urbaine plus vaste et qui ne s'arete pas aux monuments ni aux quartiers de proximité immédiate. (la sauvegarde se fait par le biais de la sauvegarde des données ,et ceci concerne essentiellement les pays où le budget dédié au patrimoine est vraiment réduit et ne permet qu'une intervention partielle).Le second temps est celui du présent ,où la BDA permettra de donner naissance à des typologies précises bien ancrées dans les réalités identitaires de chaque communauté lors des interventions contemporaines des architectes .Ce qui déminuera considérablement la déperdition du langage et vocabulaire architectural des lieux et faits urbains.Et finalement , le futur de l'architecture méditerranéenne qui est directement reliée aux nouvelles règles d'urbanisme qui devront réguler et contrôler les mutations des villes et où la présence d'une base théorique et scientifique mettra fin aux règles caduques et bateaux et donnera une nouvelle dimension à la ville en tant que lieu identitaire au carctère particulier .(schema 3)



schema 1



schema 2



schema 3

Towards a new Design tool for Urban Islamic Contexts.

Zaouiat Lakhdar and the Medina of Marrakech

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Research context

The research described in this paper is part of a larger on-going project that aims at incorporating shape grammars (Duarte 2001) with an existing generative design system based on genetic algorithms (Caldas 2001) within a real architectural context - Marrakech Medina as its architectural precedent - (Rocha, 1995). The ultimate goal is to develop a computational tool for generating original urban and housing configurations that could be more sustainable and energy efficient, while respecting certain cultural and architectural qualities. Previous work that constituted an early effort to characterize the urban and architectural patterns of this area, suggested that a stylistically coherent corpus of designs existed and that it had enough variety and value to fit the research objectives.

2 Architecture and tradition

The reason for choosing the Marrakech Medina as the case study for this experiment is twofold. First, it draws from the necessity to explore existent architectural values in a new context of investigation. Projects carried out by architects such as Jean François Zevaco with his courtyard houses at Agadir (1963-65) and Serge Santelli's Andalous

residence in Sousse (1975-80) already demonstrate how contemporary architecture can embody traditional spatial and typological features within a new architectural interpretation. The elaborated connections between urban configurations with pure abstract volumes of houses suggest that the systematic use of the patio-house typology allows for the emergence of an urban tissue with such complex characteristics. Second, the population increase that occurred in Marrakech during the last decades, as in most North-African and Middle-Eastern cities, has led to an uncontrolled urban growth that produced urban environments lacking the spatial richness found in historical vernacular districts (FIG01). Thus, this research intends to provide a computational framework that can assist architects in the design of urban environments that all together maintain compositional principles while satisfying new necessities of present-day life.

3 Urban heritage

The foundation of the *Zaouiat Lakhdar* quarter, one of the oldest along with those situated north and north-east, *Assouel* and *Hart Soura*, is associated to the construction of the Ben Youssef Mosque in the XII century and to its religious complex. As a city of Islamic origin, Marrakech shares specific social and cultural values which are embedded in its system of social organization, therefore, in its urban and architecture form. While many aspects of Islamic social behavior are related to the Islamic law, *shari'ah*, and certain principles found in urban environments are a tribute to the *shari'ah*, the *Qur'an* and the sunnah (life of the prophet), others stem from traditional building codes related to, inheritance and endowment laws. Which was the inheritance process that shaped the morphological spaces of *Zaouiat Lakhdar*? Can we map out its transformations and relate them to the set of religious and social rules which determine many of the collective patterns that form its urban and architectural configuration? An utmost Islamic social value is that a strong social relationship is underlined by the concept of brotherhood. Strong family ties are expected to last and this partially explains the organization of domestic architectural spaces which are close to each other and contain multifunctional spaces surrounding a courtyard. It also partially explains the unsolved familiar problems which can lead to spatial arrangements such as the closing of a *derb* (*dead-end-street*), the change of its direction, the destruction of a house for its division, or decisions about land division among family members and disputes of inheritance goods. Oleg Grabar in his study on traditional Muslim urban environment says: "It is Islam which gave resilience to the Muslim city and to its bourgeoisie, not because it was necessarily aware of all urban problems but because it had the abstract form in which all of them could be resolved." (Grabar 1976) These laws, which are applied in everyday life, form a dynamic set of rules that actuate in a bottom up manner which influences the development of the city urban tissue.

Design tool

A detailed analysis of *Zaouiat Lakhdar*, suggests a well-structured urban system with patterns which are topologically similar. It was possible to infer and encode the identified patterns into a reduced number of parametric schemas that constituted the basis for the design grammar. The parametric shape grammar was able to simulate urban growth accordingly to the rules seen and mapped on site. At the outset it was considered necessary to deal with both the urban scale and the scale of the house by developing two independent grammars: an urban

grammar that would account for the urban layout, and a housing grammar that would account for the functional organization of the houses. This paper addresses the first context and proposes a more accurate map of the quarter (FIG 02). Its inner spatial area is structured around 10 *derbs* which form several housing clusters. As the perimeter space of the quarter is only used as commercial area, all housing entrances which form a complex network of private *derbs*, are located within the quarter. Within this network we identify nine major clusters, which hold 142 courtyard houses, organized around specific *derbs*. The longest crosses horizontally from west to east and holds 34 houses, a few of these dating from the early XVI century. This street system which runs from public space until the utmost inner private entrance of the house cell, constitutes 7,8% of the overall plot area of the *Zaouiat Lakhdar* quarter. The functional organization of the houses seemed to be partly responsible for the behavior of the geometry of their perimeter, which also varied on different floors, and with neighboring houses. An initial *Autolisp* implementation of the inferred topological urban features run for 100, 200, 500 and 1000 interactions proving that an automatic generation of a urban space with similar features is possible to achieve. FIG 03 illustrates the complex network of *derbs* and courtyard housing plot areas being generated in real time. Learning from these results a detailed parametric grammar was set where the derivation of designs proceeded through six stages: (1) define neighborhood limits (2) insert *derbs* entrances (3) insert extenders and articulators to *derbs* (4) insert spatial boundaries (5) define spatial constraints. An interpreter was built in *Autolisp* (FIG 04) that facilitated the interface with prototyping technologies. Fig 04 illustrates the interpreter being used in the generation of a new possible urban solution and its model produced by a laser cutter.

In conclusion, the implemented system proved flexible enough to encompass the requirements of such a design experiment. Further work will include the generation of houses and of its urban layouts within a more free architectural framework.

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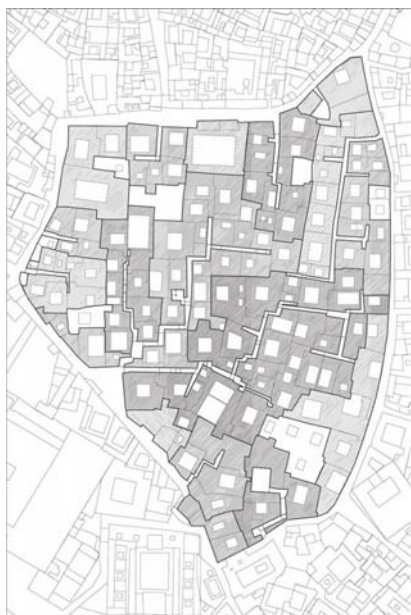


Figure 01. Zaouiya Lakhdar entrance situated in front of Ben Youssef Mosque.
New urban dwellings at the southeast of Marrakech Medina.
Photo credits: João Rocha

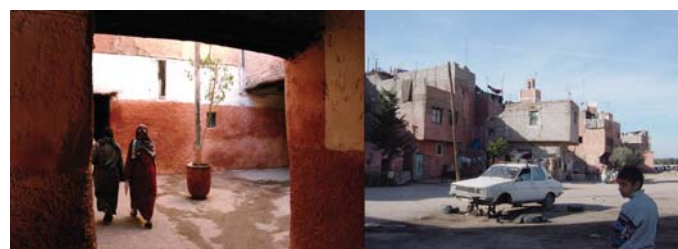


Figure 02. Zaouiya Lakhdar plan with its subdivision in housing clusters and property division according to the existent derbs

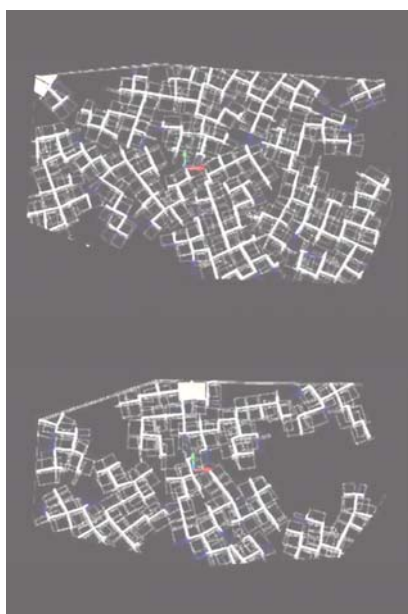


Figure 03. Autolisp implementation with design outputs for 200 and 1000 iteration trials.

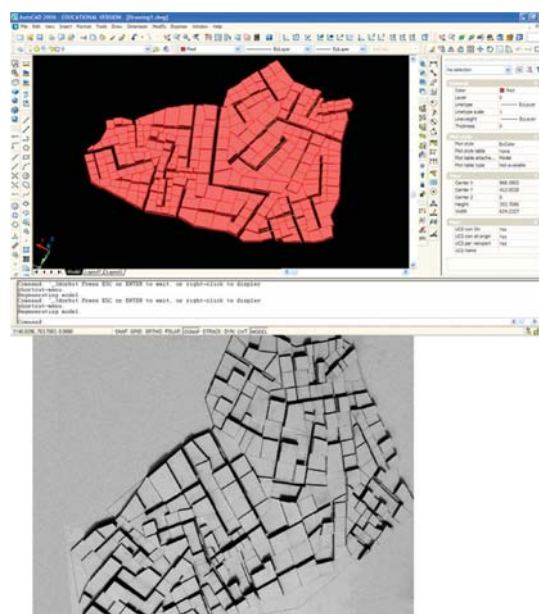


Figure 04. Autolisp Interface Interpreter showing the generated solution and its digitally mockup.

Proyectos de recalificación urbana para las áreas del interior de Cerdeña

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En el siguiente texto se describen algunos ejemplos de recalificación y recuperación de zonas de asentamiento de poblaciones del interior de Cerdeña. Se trata de propuestas elaboradas en el ámbito "CIVIS, proyectos experimentales de calidad" llevados a cabo en una red de pequeñas poblaciones, financiados por la disposición 5.1 "Políticas para las áreas urbanas" del POR Sardegna 2000-2006 (documento de desarrollo elaborado por el Estado Italiano y por la Comisión Europea durante el periodo 2000-2006 de acuerdo con el Marco Comunitario de Apoyo).

De acuerdo con lo establecido en el edicto regional, el objetivo de dichos proyectos es el de mejorar la funcionalidad y la calidad del sistema urbano de los centros de Cerdeña. Concretamente el proyecto de revalorización de las poblaciones de la isla pretende el desarrollo de una política turística basada en los recursos culturales y territoriales que valoricen la identidad local, mediante una consolidación de sus propias potencialidades.

Los proyectos específicos muestran dos ejemplos de recuperación y reutilizo de edificios histórico-tradicionales y el proyecto de un espacio público¹.

Proyectos de recuperación de casas histórico-tradicionales

En el proyecto "CIVIS" se llevan a cabo tanto la recuperación de rutas históricas urbanas, como la activación de procesos y sistemas de gestión de calidad territorial, urbana y arquitectónica; pero sobretodo tiene como principal objetivo la rehabilitación de casas tradicionales, puesto que representan la mejora del escenario urbano en tanto en cuanto son modelos para la intervención de calidad.

En los "proyectos de calidad", las rehabilitaciones se hacen principalmente en casas históricas que son consideradas portadoras

de una fuerte marca de identidad y que representan un enfoque de proyecto basado en los principios de conservación e innovación, pero también se llevan a cabo en las instalaciones típicas del lugar, poniendo especial atención en la tutela y en el respeto de las características de la construcción y de la integridad de los espacios.

Ambos edificios son objeto de profundización y están constituidos por unidades habitacionales simples, de forma que el espacio original digamos que es el arquetipo formal del que después se han desprendido las sucesivas decisiones para reutilizar y modelar este espacio. Por eso en las propuestas de intervención se cree oportuno revalorizar y reestructurar ese espacio interior para dejarlo como era originalmente, liberándolo de obstrucciones como pueden ser por ejemplo tabiques o falsos techos; las pequeñas transformaciones se siguen manteniendo siempre y cuando sean compatibles con la filosofía de conservación de la estructura original.

El principio de espontaneidad con el que la construcción de base se ha ido concentrando a lo largo de la historia de las pequeñas poblaciones de Cerdeña es el de la agregación por unidades habitacionales, que se van añadiendo por yuxtaposición lineal y alrededor del patio (como es el caso de la ex almazara de Villa Verde, Oristano, en la que cuatro unidades habitacionales se alinean y definen por un lado la fachada que da a la calle y por otro cierran el patio interior, fig.1). En cambio otras veces también por altura, hasta incluso cuatro/cinco niveles (como es el caso de Sa Domu 'e su Notari di Olzai, Nuoro, en el que la casa se presenta como una estructura de cuatro niveles de diferentes medidas constituidos por dos unidades habitacionales provistas de una escalera exterior, fig.2).

Por este motivo y partiendo de estos principios-normas, se han puesto en marcha proyectos que han llevado a cabo la lógica de la continuidad con lo ya existente, con aumento de unidades habitacionales por añadidura en las tres dimensiones del espacio.

El proyecto de rehabilitación y reutilizo de la ex almazara² prevee la realización de un modesto centro de exposición-información turística dedicados a los productos enogastronómicos locales, dada la importancia de Villa Verde como punto de referencia de la zona por este tipo de producciones tradicionales.

Estructura planimétrica simple de un solo nivel, constituida por cinco unidades habitacionales alineadas, orientada en dirección norte respecto a la vía pública con un único acceso y con una sucesión de aberturas de forma ritmada. En conjunto, la puerta y las ventanas delínean una fachada simple en la que la presencia de la pared de basalto negro prevalece sobre la escansión de los huecos de las aberturas; en dirección sur, los mismos vanos se abren en el pórtico del patio. Construcciones añadidas de diferentes tipos realizadas con materiales poco compatibles o incoherentes con los caracteres constructivos y los materiales del lugar, obstruían el patio en dirección este frente a la gran puerta monumental que se ha conservado perfectamente hasta nuestros días. En esta área, conjuntamente a la escalera de acceso al semisótano y a los servicios, se ha predispuesto un nuevo cuerpo de proporciones modestas en continuidad con los ya existentes.

La rehabilitación y las posibles modificaciones pretenden devolver al patio el valor y el significado que tenía originalmente como espacio abierto en el que antiguamente se llevaban a cabo actividades de trabajo comunes, y que hoy día podría servir como espacio de producción y sociabilidad. Por este motivo, puesto que la vieja superficie era de pavimento empedrado, el nuevo patio se ha concebido como una grande y única base de piedra basáltica que se extiende por

todo el espacio abierto sobre un nivel único, excepto en un espacio verde ocupado por unos olivos seculares existentes que da a la puerta monumental.

También en el proyecto de reutilizo de Sa Domu'e su Notariu de Olzai, se ha querido responder a la necesidad de la adecuación funcional del edificio sin modificar los elementos estructurales, ni alterar las formas y las proporciones de los cuerpos originales; la introducción del ascensor en el pequeño patio situado detrás permite el cómodo disfrute de los nuevos espacios destinados a acoger las salas de exposición para el nuevo centro de información de turismo y cultura sobre la identidad y la historia del territorio de los centros de la red. Además, se ha dado especial importancia a la eliminación de las barreras arquitectónicas para favorecer de este modo el disfrute del edificio rehabilitado a personas discapacitadas.

Proyecto de un espacio histórico público.

El proyecto de Usellus es un ejemplo de intervención en un ámbito caracterizado por una compleja estratificación histórica de los procesos de asentamiento. De hecho Usellus fue una floreciente colonia en la época romana (Colonia Julia Augusta Uselis), y sucesivamente en la edad media se convirtió en un centro importante de la zona de la Marmilla, e incluso sede de diócesis eclesiástica.

La intervención comprende la recalificación de la estructura del centro histórico de la población y la recomposición y reordenación de la plaza Funtana Majori, situada en la parte confinante del centro histórico. De esta manera se recalifica un itinerario de conexión entre las áreas arqueológicas y se valora una zona que la comunidad reconoce como suya, dado que es el escenario de manifestaciones populares y que tiene un fuerte carácter de identidad, ya que en sus proximidades se encuentran vestigios romanos. La plaza da forma a un espacio unitario e integrado que lleva la marca de la historia a través de detalles que recuerdan imágenes del pasado: un camino construido con basalto de la zona se erige entre dos grandes llanos pendientes; en la parte central se define un pódium y este camino es el que lleva a la zona arqueológica, escenario de manifestaciones y eventos de la comunidad.

El recorrido se convierte en un medio que pone en relación el lugar público y las casas privadas; un largo muro de piedra limita el camino constituido por zonas verdes, arboledas, elementos de agua con los lugares de paso y de parada.

¹ Los proyectos han sido elaborados en el ámbito de los "Proyectos de calidad CIVIS". La coordinación científica ha corrido a cargo del Profesor Antonello Sanna (coordinación de proyecto, Carlo Atzeni y Maurizio Manias; equipo de trabajo: Luca Tuberi, Silvia Mocci, Elisabetta Pani, Davide Schirru, Paolo Spaga), Departamento de Arquitectura, Universidad de Cagliari.

² Nacido como lugar de producción, se mantiene una continuidad funcional en la intervención de recuperación.

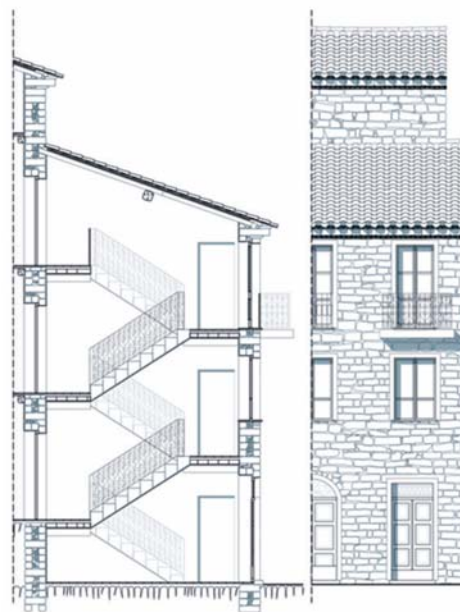


Fig.2 Relieve de Sa Domu'e su Notariu, plano de construcción.

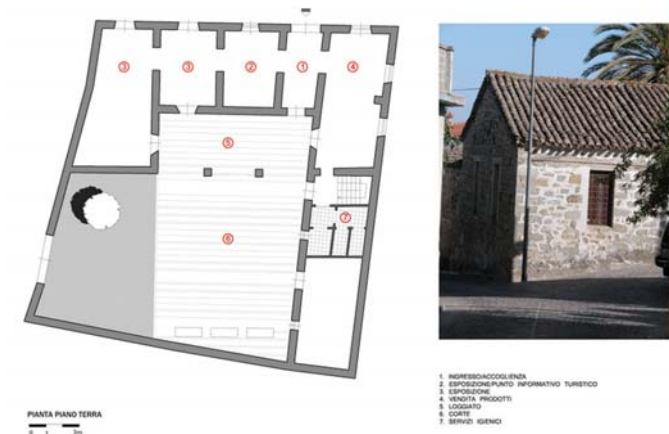


Fig.1 Rehabilitación y reutilizo de la ex almazara como centro de exposición turística para los productos enogastronómicos locales. Nueva distribución funcional de los espacios interiores y reorganización del patio.

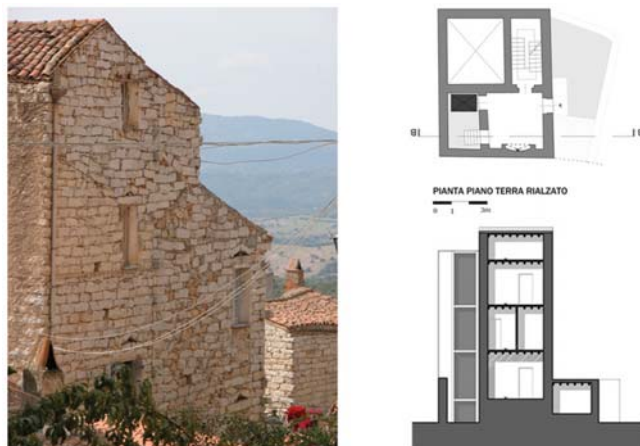


Fig.3 Rehabilitación y reutilizo de Sa Domu 'e su Notariu como centro de información turística y cultural sobre la identidad y la historia del territorio de los centros de la red.

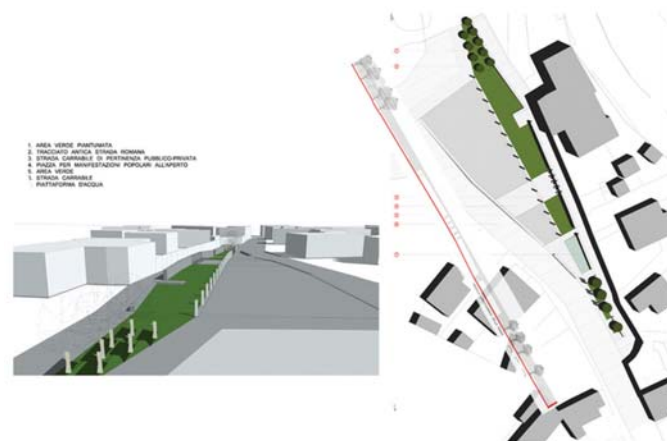


Fig.4 Rehabilitación de la plaza Funtana Majori de Usellus.

Urban Voids and connectivity of the city core: the case of Kavala

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In the mid-seventh century, Thasians established a colony in the area which is now known as the historic core of Kavala. Owing to its strategic and economic importance, the city became an important fortified port of the Mediterranean east, and it is encountered in the sources under various names (Neapolis, Christoupolis, Kavala), which may have arisen from changes in the city's form. It began to take on its present aspect when the Ottoman Turks recolonised it at the beginning of the sixteenth century. It was then that the original Byzantine walls of both the city and the acropolis were repaired and the walled city was extended north of the original enceinte. The aqueduct was also built. The city centre was shifted to the new part, and comprised a large religious complex consisting of the Mosque of Ibrahim Pascha (now church of st. Nicholas) and a number of religious, social, and commercial buildings. After this, Kavala's development continued apace throughout the period of Ottoman rule. This was due to the expansion of external commerce through the port, which seemed to act as a magnet for most of the agricultural produce from the surrounding region. There was a commercial boom in the eighteenth century, and an expansion of foreign trade, chiefly with French trading houses. The principal exports were grain, wool, cotton and later tobacco. As a result of the city's economic development, the area inside the city walls became more densely built and the city itself began to expand outside the walls, as the fortifications' defensive function declined. New districts soon came into being. The city's expansion was accompanied by new building and townplanning regulations, which the Ottomans issued in 1863.

The peninsula of Virgin Mary holds an outstanding position in the urban system of Kavala. The area of the neighborhood enclosed within the boundaries of the listed traditional settlement is 240.000 square meters, according to the estimates of the Urban Reconstruction Campaign [Ministry of the Environment, Planning, and Public Works, 1986]. Three

areas can be distinguished in the neighborhood: The area defined by the Byzantine enceinte (a), the extension area, dating from the 16th century, which was surrounded by the now demolished trapezoidal wall of the outer enclave (b), and the extra muros quarter reaching up the historic shipyard (c). The peninsula is protected by a general decree that describes the area as a "historic place" and a "place of particular physical beauty" [no.F.31/27174/2521 / 10.8.74 – Government Gazette 822/13/ 22.8.74].

Within the system of the city we find the sub-system of the historic center restricted by the decree of preservation and isolated, as the respective integration maps show. For the visualization of behavior on the peninsula, we considered it useful to use the diagrams of urban analysis that were made for the historic center of Kavala with the method called Space Syntax¹. This method states urban behavior in terms of relations and movements, which reveal the forces that determine the development of the city.

If the core of the city is shown with red lines, the most isolated areas are characterized by the blue color. It is clear that the enclosed city is not found in the core and does not have traffic going through it because of their particular geographic position with respect to the current development of the city. This exception of the historic center from the core is one of the reasons why the peninsula has retained its organic medieval fabric, in spite of the changes in buildings.

The core of the historic center is crossed by T. Poulidou and Mehmet Ali Streets, as well as a number of secondary roads. The significant monuments are also located in the core, such as the mosque of Halil Pasha [the Music Building] and the Imaret² (1817-21), a late charitable institution of the Ottoman period. In an expansion that took shape after the collapse of the Greek quarter around the church of the Virgin Mary, there is a palace that is attributed to Mehmet Ali³, founder of the last Egyptian dynasty, as well as the respective interwar layout (1925-1948) of the squares that has degenerated nowadays. Mehmet Ali Street ends at the monument of the Music building [mosque of Halil Pasha and seminary].

The outline of Poulidou Street renders the mixture of formal choices at various periods, but also the transformations brought on by construction, after the application of urban planning to Zalongou Street [1939], which existed previously on the same site. Mehmet Ali Street, which was not subjected to planning, stands out for its architecture, characteristic of the last years of the Ottoman period. Although there is great complexity, a common characteristic of the construction is the fact that the lighter structure of the upper floor of the building could be differentiated from the plan of the ground floor. Thus, the rooms face the street or the view with many openings, while the upper floor is on a projection. The result is an exceptionally plastic urban image, reinforced by the slope of the land and the roofs of the upper floors.

Today, besides residence, the ground floors spaces on Th. Poulidou host functions that are limited to hospitality and recreation, without indications of tendencies for the spread of common uses, either in the core of the neighborhood or in more isolated areas. Mehmet Ali Street, which is a branch of Poulidou Street, mainly a residential street, ends at the important Moslem monument of Halil Pasha, with a mosque and an Islamic seminary [madrasa]. Recently, the ruins of a basilica were discovered there after an excavation carried out by the Ephorate of Byzantine Antiquities. The monumental complex, property of the Municipality of Kavala, has been integrated among the projects of the Municipality of Kavala that are financed by the Regional Operational

Programme of Eastern Macedonia and Thrace, with the goal of transforming it to a museum.

In 1990, a team from the School of Architecture of Aristotle University of Thessaloniki⁴ generally adopted the guidelines of previous studies and proceeded to proposals for the urban reorganization of the neighborhood, always in the direction of the preservation of the neighborhood's morphological character but also of its existing social life. A map was elaborated based on the data of the URC [1986], indicating three distinctive categories of existing residences: a) those (brown) proposed for listing [mostly examples of Macedonian architecture], b) those (yellow) dating from interwar period [mainly built by refugees], and c) postwar houses (grey) [usually with an attic]. The record made in 2005⁵ by Aristotle University as well identifies the position of the houses that were rebuilt or expanded after the Urban Reconstruction Operation. The impact on the fabric is dramatic and affected both the view of the quarter from the sea and internal routes. The wealth of the organic parameters of the original system was lost and the ratio of open to built spaces or the ratio of road width to building heights was altered. Additionally, since the changing limits of the building blocks have become definite, the network is characterized today by the clear distinction between public and private, which was unknown at the time of the settlement's formation, and under these conditions all the transitional areas of the building blocks have been turned into private courtyards.

The confrontations resulting from construction procedures in this settlement are intense, since the supporters of preservation consider that an architectural discipline supported by a respective institutional framework can preserve the townscape and therefore the atmosphere there, while more recent views consider fighting against this utopia to be their obligation.

In order to avoid the fragmentation of inspection and decisions, an open and reliable procedure needs to be found supporting a master plan that will not be adopted in order to 'freeze' the neighborhood according to one certain image, but in order for it to change, almost automatically and according to the results of each particular negotiation. A planning institution monitoring the site may offer sustainable answers to the current impasse.

If the prerequisite for the social "life in the neighborhood" is the support of the traffic network and its connections with other networks, in order to achieve a balance from the "synthesis of heterogeneities"⁶, a limited redistribution of the building blocks and a flexible plan would ensure the space that will host all those things that when they are absent, cause a "deficit of urbanity".

This is a plan that mainly pursues a balanced mixture of programs and a more connective system of walking routes that is combined with other forms of movement.

Besides, since the old port area is now inappropriate for the modern requirements of boat moorage and is limited to the Passenger Terminal, the planning services of the city and the port should utilize the available land, which may be connected with the neighboring urban center, in order for it to obtain a new and considerable waterfront. The project may be organized in three phases: (a) mapping of the dynamics of the areas, (b) a program, and (c) construction. Intervention to connect the points of division will allow both areas to develop simultaneously, in order to provide a living nodal point for the city in the place of an urban void.

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- ¹ B. HILLIER and HANSON, *The Social Logic of Space*, Cambridge University Press, 1984.
 - ² EMILIA STEFANIDOU, "The Imaret of Kavala", *Makedonika*, 25, 1985-86.
 - ³ EMILIA STEFANIDOU, "The Palace of Muhammad Ali Pasha in Kavala", *Famous Mansions from the Time of Turkish Rule*, National Polytechnic University, Athens, 1986.
 - ⁴ Aristotle University of Thessaloniki team, *Kavala intra muros*, Municipality of Kavala, 1992.
 - ⁵ <http://web.auth.gr/kavala-networks>
 - ⁶ G. DELEUZE, F. GUATTARI, *A Thousand Plateaus*, University of Minnesota Press, Minneapolis, 1987.

Environmental Rehabilitation of the Mediterranean Urban Road Spaces

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1. Urbanization degrees and use modalities

To propose layout criteria for the great connection open spaces and their contexts environmental requalification, we can read the Mediterranean city structure according to three great areas.

I. The historical, stone city, that is crystallized both in its superficial appearance and its morphologic structure and building typology.

II. The consolidated modern concrete city, that's incomplete, not autonomous, because of zoning, which has separated the different functions, expelling the productive activities out of the residential suburbs.

III. The periphery and the suburban areas, asphalt domain, not defined in their morphologic and typological structure. Here, the edge of the city identification often is not allowed by the fragmentation and urban sprawl.

This model is applicable in general terms to the European city, but in particular to the Mediterranean region, in which the contrast between the centre and the periphery comes out by the cultural weight of the dominant monocentric vision of the town. The main reason of the contemporary dysfunctions of the great inhabited centres drifts from the strong hierarchy of the urban structure, no more compatible with the current metropolitan developments. Actually, the policentric city model has already been pursued for a long time, just in order to mitigate these failings. However the historical and semantic stratification, what we call "identity", still are searched also in "liquid" contexts, like those of the great metropolitan periphery. This is a truth above all in Mediterranean background, where the social function has an important weight in the citizens appropriation of spaces and in the consequent formation of the "identity of the place". This is a result of the favourable climate and the social uses of aggregation, that allow the fruition of the open public spaces in an intense way, extended all over the year, deeply different from what happens in the Northern Europe rigid climates.

On the contrary, in the new city extensions, just in Mediterranean areas, a ungluing between the road and its traditional social role is found currently. The perception of the public place as space of nobody, rather than as space of everybody, is due to the difficult appropriation of the space in "isomorphos" and not hierarchical contexts.

Therefore, if in the historical city the road has answered in balanced way to the functions of morphologic structuring, infrastructuring, social and identity place, as the city is expanded, the need of mobility is increased, changing the characteristics of the road and its ways of fruition. What remains is the pure function of fast connection between distant places, carried out mainly from city primary road infrastructures.

The loss of the others two functions is not painless; although the improvement of the studies on the road efficiency and safety in its transport function, the social problems caused by urban area road crossing are completely ignored. The neighbouring areas of primary roads are currently places of nobody all over the world.

To set up some strategic proposal about the environmental requalification of the road spaces in Mediterranean cities, we consider the complex system constituted from the road and its edge areas, focusing attention in particular on the two contexts less inquired: the city of concrete and that one of asphalt, together with the remedies for them.

The outcomes vary mainly relating to the sedimentation of the urban structure, the definition of its margins and, consequently, the possibility of action and sustainable transformation.

2. Environmental features and design criteria

The modern consolidated city, formed beginning from the end of the XIX century, spread after the Second World War, is deeply conditioned in its aspect from the building typology: the dwelling blocks distinguish the Italian as other Mediterranean towns, differentiating them deeply

from the modern and contemporary city landscape of many North-European areas, in which housing is still of one-family type, according with tradition.

This condition makes the difference both in the city aspect, in the relationship between built and empty space, and in the open spaces lifestyle: where the private garden is fundamentally the open space of relation (as for example in the Benelux area), the fruition of the public space is contracted. In Mediterranean area, instead, for the great part, dwellings have not private open space and the relation space is fundamentally the public one. Therefore the various uses condition the image and the character of the city, if also diluted at a bigger scale than in the historical centres.

The suburban periphery is often a result of an unprogrammed increase, as the only frontier for peripheral urbanization horizontal development is the metropolitan area, to which built areas often link in accidental and disorderly way.

On one side, this situation determines the total ungluing between the open space and the "place", meant as public space equipped of identity; moreover the "Mediterranean character" completely gets lost, in an indiscriminate suburban landscape, connoted by the presence of industrial and commercial sheds, whose typology and shapes are everywhere the same. On the other hand, the greater availability of free spaces in the modern city, but above all in the suburban areas, allows planning at more wide scale. The same primary road system, crossing and ringing the periphery, is equipped of wide protected bands on its sides by rules, allowing to prefigure new developments for the city.

Therefore, beginning from bad environmental and social conditions of the spaces around primary roads, it is possible to improve the same spaces through a city scale requalification, with architectonic quality.

We propose the application of four fundamental criteria for the environmental requalification of the road spaces, as design guidelines:

- study and modulated application of permanence, temporariness, reversibility
- network planning
- hybridization of functions
- use of vegetation as element of environmental re-balancing.

The key strategy for Mediterranean primary urban road system requalification is its temporal management, studying and modulating the application of permanence, temporariness, reversibility of uses. Time becomes a material of design, allowing the studied system (the road space) to modify itself in evolution, answering functional, social and structural variations of the city. This way the temporariness becomes the hinge on which the relations between the road and its context are played.

Transience is the predisposition of a technological system (or part of it) to be assembled and disassembled; it involves mainly all requirement relative to integrability and management.

Reversibility, instead, is the quality for which, once the program and the environmental conditions of the context are changed, simply removing of the whole technological system (as an example of a pedestrian route) avails a spontaneous process of environmental recovery of the place. Reversibility, in particular, is one of the design qualities more directly finalized to the environment safeguard.

3. Integrated strategies for environmental re-balance

The modulation of permanence, temporariness and reversibility strengthens its meaning in relation with other design criteria: the network planning, the principle of hybridization and the use of vegetation as element of environmental re-balance.

3.a. The network planning

This is recognized as the sustainable mobility infrastructures design model, both structuring macro-territorial or local level, and for promotion, recovery and conservation of the environmental qualities of landscape, through the constitution of ecological nets.

Therefore, reading the city as the superimposition of various systems, according to nets and nodal elements (the settlement system, the vegetation system, the infrastructures system, to mention those mainly structuring), it is possible to propose a hybridization of different functions, where the elements coming from different networks are overlapped or travel in parallel.

3.b. The hybridization of functions

The wording "hybrid system" means a joining of different elements, placed side by side, in which the different components maintain their identity and remain independent the one from the others. The difference between the concepts of "hybrid" and "integrated" is that the integration of various elements in one system makes it completed, "closed". On the contrary, the hybrid object maintains differentiated and recognizable its components, leaving the chance of successive modifications.

The hybridization concept, applied to infrastructures for urban primary roads, becomes the chief requalification strategy. It proposes a new architectonic object for the city, an infrastructure-corridor that receives various uses at the same time (road's users for the fast connections, cycle-pedestrian users for a slow and contemplative fruition), various means (infrastructure of transport to urban and local scale, ecological corridor) and various references of scale (local scale, city scale).

The city motorways are particularly suitable to this subject, because they have marginal protected spaces, wider by law than the other primary roads, also when they are enclosed by the city. As an example, the project of mitigation along the road verge (the settlement of vegetation fitted for typology and pattern to the creation of noise dampening barriers, or the anti-erosion system of vegetation on slopes), could be integrated in a wider landscape design, finalized to the constitution of the ecological corridors.

An example for the approach to environmental requalification is in the Plan of Primary Road Net of the City of Naples, which previews the integration of the primary road net with the free green areas, contiguous to the road corridors. After an environmental analysis at urban scale, the study shrinks on the green areas nearby the street paths. It proposes to connect these "fragments" of green in a unique plan, through which the connection between the zones of greater value of the city will be reconstructed. Therefore, conciliating the requirements of rubber mobility with citizens' quality of life, the whole city achieves an environmental advantage.

3.c. Use of the green as environmental re-balancing element.

The temporal modulation of the phases of project deals also with the vegetation design: this means a selection of the plants and their pattern, coherent with local typologies and with the natural potential of vegetation.

According to the new landscaping theories, that use the time as matter and tool for the project, we want to help the spontaneous settlement of the pioneer vegetation in the residual road areas, or *délaissés*¹⁰, featured from fast and changeable cycles and whose quality, mobile and "nomadic", strongly conforms these places. If we promote the natural processes, the vegetation and landscape evolution times will not be linear, but rather correspondents to complex curves, following the biological environment modalities and changing by progressive adaptations.

Therefore, to modulate the landscape project along time in the roads green areas means to strengthen the function of the ecological corridor, included in the system of the hybrid infrastructure.

This contribution is a formulation of research fields, to detect the correct design and technological solutions, time for time, according to the context.

The feature of the Mediterranean connective spaces as places of social relation must be the guide strategy for the environmental requalification. For this, the new identity for the deprived of space, social and ecological quality contexts will arise from the interlaced consideration between the degree of urbanization and the integrated application of the illustrated criteria.

Nota: Este artículo no se ha podido publicar en su totalidad por falta de espacio



Figure 1 A big infrastructure junction near the harbour in the Eastern zone of Naples, Italy (photo Paolo De Stefano)

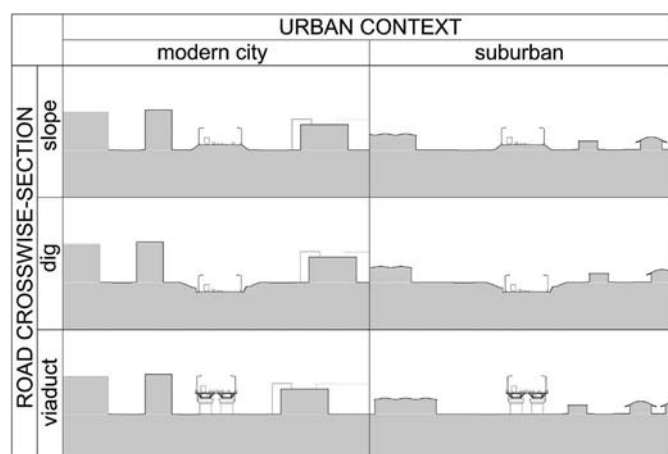


Figure 2 The relations between the road and the context in some of the possible variations. The mutual relations change with the geometrical proportions and dimension of the road section and with the crossed city structure. In particular the density and the heights of the buildings are important, the proportions between empty and full spaces, and the destination that the margin area receives (residential, commercial, industrial, etc)

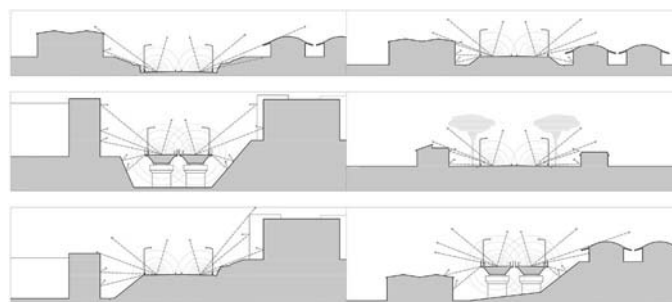


Figure 3 Example of the relation between the road and its context. The noise impact changes with the form of the road section, the morphology of the ground and the type of urban context.



Figure 4 Primary road infrastructures mark the Neapolitan