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Along the water: Investigating the ambience potentials of Al-Maryouttia Canal as a linear park

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Abstract. *This research focuses on linear parks and its definition in terms of ambience, as a specific morphological typology engendering connectivity on spatial, social, ambient and ecological scales. This paper aims to investigate the ambience potentials of Al-Maryouttia Canal, in Cairo, imperiled by the urban sprawl in order to transform its banks into a linear park. Linear park concept targets to upgrade the threatened waterways located in the Cairene metropolitan context as a mean to renature the irrigation canals that shape the urban fabric in the city northern parts. The methodology depends on a photography exhibition and a roundtable session as main methods upon which different themes describing the ambience potentials were interpreted.*

Keywords: *linear parks, ambience, bluescapes, Al-Maryouttia*

Water canals: Urban element at risk

Water is a precious natural resource that configures particular landscapes both by its physical and aesthetic qualities, and by the life it brings. It is a 'former' of specific ambiances. Yet, this 'natural' element is challenged by its rarity and scarcity, especially in hot arid regions. This threat makes it a major concern in the future studies. Cairo is selected as a metropolitan city where water canals are put at risk. In fact, Cairene urban context is characterized by the presence of irrigation and drainage canals that configure the urban landscape of the city in its intersections with the agricultural lands of the Nile Delta. During the second half of the twentieth century, this part of the city was exposed to a massive informal urbanization resulting in a very dense urban fabric where inhabitants suffer from a severe lack of space and vegetation. Due to the absence of the development regulations and control, the agricultural lands have gradually lost their function and its unique interface. The water canals have become a source of pollution and environmental hazards. In addition, recent urban policies tend to cover specific canals, thus losing the direct contact with water producing a 'cut-out' effect in the 'lived experience'. These urban practices mark a real risk of disappearance and reveal a kind of abandonment of water element as a major landscape element. Introducing linear park concept may protect these vital elements and enhance the quality of life in their surroundings through renaturing watercourses via creating major green and blue urban transects.

Linear Parks and urban ambiances as emerging concepts

The keen interest in the term linear park is that it combines the concepts of 'park' as a confined space, and a 'line' that connects points may be to infinity. This combination of a landscape concept 'park' and a compositional element 'line' establishes an approach that merges the research and urban project in an identical process.

Linear park concept has started ten years ago by the planning authorities of Sao Paulo to solve environmental problems related to the dramatic deterioration of water canals in informal urban contexts. Touching worldwide metropolitan problems in the urban relationship to nature, linear park concept was spotted by several researchers in CRESSON in Franco-Brazilian collaborations³ showing its essentiality. In this respect, a scientific Franco-Egyptian collaboration (Imhotep Program) was initiated in January 2014 between DUPUD⁴ in Cairo and CRESSON Laboratory⁵.

This study depended on an international seminar and a two-week workshop entitled 'Linear Parks and Urban Ambiances: Emerging Concept to Enhance the Quality of Life in Informal Settlements', held in Cairo in December 2015. A one kilometer along Al-Maryouttia Canal in its intersection with Al-Mounib Bridge is selected as a case study for this workshop (Fig. 1). It is a morphogenetic space as it is exposed to a dynamic transformation. Such spaces are marked by a prolonged period of inactivity, and hence they attract temporary uses. Al-Maryouttia Canal shows different types of space appropriation. It has accommodated an urban intervention made by an NGO (Message: Light upon light) in order to beautify the waterway. Informal allotment gardens and other informal commercial or cultural installations are also observed. Furthermore, Al-Maryouttia Canal covers large-scale urban area traversing the city longitudinally; therefore, it is promoted to be a metropolitan garden.

If linear park concept works on the metropolitan scale, the ambience helps discovering the inhabitants' active relation with the spatial elements on a micro-morphological scale. Initiating such urban projects along waterways requires a real dialogue among all stakeholders (residents, NGOs, local authorities, designers, etc.) in order to evoke new ways of co-creating city spaces. This actually is what Pascal Amphoux highlights about the 'political ecology of the city' as a shift in tackling urban project. He emphasizes the implication of the 'usage manager', the project manager and the project owners (Amphoux, 2013). This combination confirms the momentousness of taking on urban project at large-scale strategies simultaneously with space ambience that constructs shared knowledge about the space reality.

The study objective is to define the site along Al-Maryouttia Canal in terms of ambience, and accordingly to establish a multi-disciplinary and inter-sectorial debate

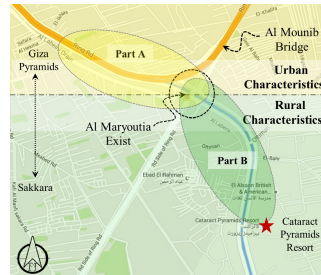


Figure 1. The selected location at Al-Maryouttia Canal

1. *PIRVE: The atmosphere is in air*, (Tixier, 2010)

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in order to investigate the location potentials as stepping-stones for large-scale strategic change in transforming such canals into a linear park.

Photography exhibition and round table

The seminar and workshop were multidisciplinary and inter-sectorial. Students, professors and practitioners (on the international level coming from Brazil and France) as well as representatives of different ministries and local authorities were invited together with inhabitants and NGOs. Defining the ambience along Al-Maryouttia Canal was tackled via three sequential immersive experiences (Fig. 2): first, *in situ* visit guided by the NGO; second, two days interactive photography exhibition. This exhibition is a result of a two-week workshop with the students of Architecture and urban design departments in Ain Shams University. Photography is chosen to represent the ambience in a form of postal cards where a space for comments was left (Fig.2b). Attendants were asked to comment their perception scripturally. This type of engagement creates a second shared experience among visitors forming a base for the discussion during the roundtable, which is the final immersive experience that was a three-hour bilingual debate (Arabic-French).



Figure 2. Photos showing the three sequential immersive experiences

In a project intention, the debate aim is to *co-project* this space via crossing the different visions and interests. The applied methodologies promoted understanding the case study via crossing the two visions of the both notions: linear park and ambience. The situ visit and the exposition handled the 'lived experience' punctuating specific sensory phenomena. On contrary, the round table generated a debate that covers transversal strategies concerning the future transformation of the canal crossing the actors' diverse approaches.

Ambiance phenomena along Al-Maryouttia Canal

It is worth to mention that our main approach to study Al-Maryouttia Canal in terms of ambience was observing the 'body presence' in relation to water as a 'former' of specific ambience. However, the initial visits revealed that the selected location seemed vacant from people. Nevertheless, water presence appeared in other sensory phenomena unrelated to body except in certain practices in sparse allotment

gardens and plant nurseries, and informal shops, cafes, etc. The interactive photography exposition disclosed more in-depth perception. The interpretive content analysis of this phase unfolded that most attendants agreed that the location has potentials to be different. The ambience varies between the northern and southern parts where the flyover marks a deviation in the ambience (Fig.1). 'Struggle' *lutte* can be described as the main attribute structuring the ambience. This can be explained in terms of a list of binary oppositions (rural vs. urbanised, automobiles vs. animal carts, bridges vs. nurseries and agricultural lands, paved roads vs. sandy streets, etc.). This main potential can be elaborated in specific themes as follows:

- **Reflection:** can be seen as an aesthetic catalyst that helps in dissolving ugliness in beauty. It affects the scenery to be perceived as a 'vibrating landscape' day and night. Artificial lightening reflections due to the commercial use bring 'life' to the quietness of the water canal at night.
- **Discontinuity within linearity:** discontinuity haphazardly intervenes the linear morphology due to the incoherence in the physical surrounding; the unplanned width variation of the canal bank, the disconnected sidewalks, the mixed uses, and the interference of the urbanised and rural features.
- **Edges:** are the most noticed built element. Seen in fences or walls with a great variation in their designs, this element reinforces the sense of linearity or in some cases impedes the physical continuity.
- **Fragile biodiversity:** exists in flora and fauna faces powerful urban sprawl that erases progressively their existence. It is worth mentioning that biodiversity exists in the rural context and disappears gradually to the north.
- **Urban agriculture:** is one of the identical practices along the canal, conceived as traces indicating former dense presence of users. This gesture reinforces the rural ambience along the canal.
- **Informality:** is the dominant attribute of the area appears in informal settlements, rural transportation (animal carts), informal retail markets, cafes, peddlers' prevalence, and forms the awkward scene.
- **Pollution:** penetrates every recess of the natural environment. Pollution detected is categorised into auditory (highway bridges, street traffic), visual (informal settlements, rubbish, construction wastes, illegal graffiti/vandalism), and air pollution (automobiles, factories, and burning wastes).
- **Refuge and shade:** are associated. Shade is a sensory phenomenon resulting here from both vegetation and built elements. Various types of vegetation allow sunrays to pass creating diverse patterns of light and shade. The highway bridges over the canal in its urbanised area, accentuates linearity creating dusky spaces that encourage different space appropriation and practices.

Large-scale strategic scheme

In the light of the above-mentioned micro-morphological findings a cross debate took place during the roundtable session. The objective was to highlight the emerging potentials via contemporary emerging strategies that may open new dimensions on the urban political plan as follows:

Linear park as a link tool

The urban space along Al-Maryouttia Canal traverses heterogeneous parts of the city. Applying linear park concept is capable of unifying this current urban fragmentation by reinforcing water continuity with green transects. Linearity as a spatial configuration forms a potential of continuity in the urban experience. The 'line' materialised by the canal and the built edges marks in its spatial thickness a variation of ambiances in both space and time depending on its permeability and interaction with the surrounding urban context. Sequences, nodes, contrasts, thresholds can be recreated to punctuate the 'line'.

Co-creating urban spaces

The relatively large-scale urban space along Al-Maryouttia Canal also encourages multiple stakeholders to be involved in a real dialogue. Linear park concept constitutes an identical passage between research and project. Space ambience helped mobilise different knowledge coming from the 'lived-experience'. The round table showed a different interest in the site as the NGO develops an aesthetical approach, while the inhabitants meet an economical demand through allotment gardens and nursery plants. On the other hand, the decision makers develop other economical vision through integrating certain commercial activities like restaurants and cafes along the canal, or prefer in cases where watercourses are polluted to cover them. This latter approach was opposed by the attending international experts, since the contemporary strategies in Europe aims to renaturing waterways averting such 'cut-out' effect. Hence, there is a necessity for new relational pattern among city actors that may enhance the concept of co-projecting urban spaces tapering informality and pollution. A reconciliation between the top down vision (designers and decision makers) and inversely, the bottom up needs (site potentials and inhabitant practices) should be achieved to draft an end requirements specifications for co-creating linear parks.

Reinforcing urban agriculture

The *in situ* visits showed that inhabitants were interested in planting allotment gardens seeking to profit from the presence of water while fighting against its disappearance. Such practice can be considered as a fragile action to enhance hosting nature through social and urban contexts as described by Chelkoff and Paris 2015. Despite being informal, this social practice embeds the seeds of recent approaches towards sustainability such as urban agriculture. Thus, it is worthy to consider this community practice within a legal framework.

Water as sedimented layers of memory

The essence of water as a source of life is still ambiguous. Interweaving the material and immaterial, water creates an identical sense of belonging; it constitutes places where memories live. Despite being a residual space, Al-Maryouttia Canal can maximise the urban experience creating lively context. The memory of water in the Egyptian context crossing several times going back to the Pharaonic times reveals the sacredness of water. This gap between the past and the present indicates a memorial rupture. The relation to water should be revived through its power of being an appealing refuge, addressing the uniqueness capacity of the reflection phenomenon that could be capitalised for the sake of returning water authentic position.

Reinforcing nature, rehabilitating watercourses, upgrading informal settlements

One of the main keynotes that were tackled during the seminar is the possibility to upgrade informal settlements through the creation of linear park and urban ambiances. This particular approach aims at one hand to upgrade informal settlements through the rehabilitation of nature in public spaces, and on the other to create a green and blue transect accessible to people while providing habitat for flora and fauna biodiversity. On the city scale, Cairo is facing a strong phenomenon of isolation. On one hand, the increasing emergence of higher class gated communities, and on the other, more informal settlements are surrounded by walls in order to hide them, becomes a compulsion fact. On the contrary, linear park concept targets to reinforce accessibility while interlinking the city diverse territories.

Conclusion

Approaching linear park concept in terms of urban ambiances constitutes an identical passage between research and project based on the 'lived experience'. The latter creates a medium of shared knowledge upon which a cross debate could be initiated. In this context, the research revealed that Al-Maryoutia Canal that covers large-scale urban area boosts connectivity at different levels. First, spatial, it links different territories potentially. Secondly, social, as the 'line' passes through different urban areas that vary in their socio-economic attributes. Thirdly, ecological, since linearity provides ecological continuity and reinforce the role of nature in the city. Finally, political and multidisciplinary, as such residual areas invite an inter-sectorial dialogue among different stakeholders, which has an impact on tapering informality. Thus, such morphogenetic spaces necessitate a new process of co-creating urban spaces. In short, the concept of transforming the banks of the waterways into linear parks of interwoven green and blue transects, has two beneficial aspects; first, it can revive the water identity highlighting its importance in creating new urban atmospheres. Secondly, it can help improving the quality of life in the surrounding context, especially in dense informal areas that lack urban public spaces.

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