

The Contribution of Participatory Methods : A Syntactic Approach in the Refuge Square in Marseille

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Abstract

Clearly, citizen participation is on the agenda of political agendas, an effective means for good governance. The Panier district represents the jewel of the city of Marseille, where the Place du Refuge is located and which has undergone several interventions. This led us to investigate the site, test the design proposed by the participants and to produce a model using the space syntax approach thanks to the Depth map software, as well as a field survey to observe the rhythm.

Sometimes this mode is limited to superficial actions without anchoring without method and technique to develop, but at the level of our district, different methods of participation have been used such as tele-table sessions, forums, participative workshops... etc

Our fieldwork allowed us to test the design proposals made by the participants and to support them with the space syntax model, as well as to study the characteristics of the spatial layout.

The overall objective of the study was to highlight spatial translation and the contribution of participatory methods, as well as to provide technical insights into the design process and spatial interactions in which space was a vital aspect of all human activity.

Keywords: citizen participation, Space Syntax, refuge place, modelling.

INTRODUCTION

A particular district in the city of Marseille, it is at the same time the geographical center of the city, a historical beginning of this metropolis, the heart of the city in a way. Surrounded by the street of the republic, the old port, the harbor and Joliette one discovers there progressively a mannered of Mediterranean perched village, the two sides of a mountainous and steep district. The district has kept a village aspect in the middle of the violent transformations of the city, narrow streets of three to four meters, squares that open in the middle of this labyrinth, one of them is the place of refuge.

The development of the Place du Refuge in the Panier district of Marseille (France) is a reference of experience for the consultation and participation of the inhabitants for its improvement. (Benoumeldjadj & Bouchareb, 2022) For years, the inhabitants have been trying to introduce their know-how in this district representing a certain historical and geographical particularity and in terms of sociability, the Panier is identifiable by its diverse cultures which are linked to the origins of its inhabitants.

Urban operations have been the object of a global reflection between inhabitants, organizations, professionals, electoral authorities, associations.....etc.

The idea of projection and staging during days encouraged the inhabitants to become actors, and to have the information that is the jewel of sharing and consultation.

The project of development foresees the realization of a construction on the ilot9, Consequently the urban community MPM, and the services of the city decided to realize the development of the place of refuge by stages. The last section has been reserved to adjust the project to block 9.

Through this research, we try to expose the blunders and aberrations at the base of a disappointment in relation to this citizen approach, to locate the insufficiencies at the origin of the failures in terms of results of the participative approach (Le Méner & Oppenheim, 2013b)

-Can the results of the spatial modelling of the space syntax in the development of the refuge square be in conformity with the in-situ survey and become a means of decision support?

The first part of the article presents an overview of the place of refuge and the district of the basket in the city of Marseille in France with its program and the commitment of the citizens, added to that. The second part presents the methodological framework of the evaluation through an approach with spatial syntax (Martin & Legret, 2005) that helps to better guide managers for decision making, chosen after identification of existing methods of analysis and processed with the Depthmap software. We have seen fit to support this approach with an in situ survey based on a ten-day rhythm observation and processed with a presentative matrix. The third part presents and discusses the results before concluding with a discussion of the theoretical and methodological supports of this work as well as the research avenues it opens.

Identification of the Basket: The Basket a Neighbourhood, a Place

A particular district in the city of Marseille is both the geographical centre of the city, the historical origin of this metropolis, and the heart of the city:

Surrounded by the rue de la république, the old port, the harbour and Joliette, one gradually discovers a kind of Mediterranean hilltop village, the two sides of a steep, mountainous district. The district has kept a village aspect in the midst of the violent transformations of the city, with narrow streets of three to four metres, squares that open up in the middle of this labyrinth, small passages and staircases where one can wander. The fact that there are few cars and the human size of the streets makes it easy to get used to, an irregular ensemble whose configuration makes it possible to imagine the context in which the basket was published (Augustins & Ravis-Giordani, 1987). In terms of sociability, the Panier is identifiable by its diverse cultures which are linked to the origins of its inhabitants.

The entire basket is a vestige, the only remaining fragment of the ancient city, the urban fabric has been constantly modified, demolished and rebuilt on itself, but the streets are certainly the oldest traces of the city's history . As an essential element of the district, public spaces were the subject of recommendations and regulatory constraints.

The main objectives of the Basket Master Plan, which apply to the maintenance of the character of public spaces, focus on the conservation of the checkerboard pattern, the preservation and continuity of the homogeneity of streets and squares and the specificity of spaces, facades, and urban art objects, while the ground unifies the different spaces.

Hierarchy of spaces and keeping the dominance of mineral spaces and materials should be natural or reminiscent of natural textures.

Two project zones have been identified in the ZPPAUP and have been the subject of a global reflection on public spaces, the restructuring of the buildings, the service and parking of cars around the refuge and in front of the monument of the old charity . These two areas could constitute a structuring internal axis of the district, the treatment was carried out by the development of two squares: Place du Refuge and Place du Pistole.

Two decisions have been ratified and have been the subject of principle plans agreed between the city of Marseille Habitat and the departmental architecture and heritage service. It can therefore be said that the Panier district is a place with a relational and historical identity.(see figure 1)



Figure 1. The immediate environment of the basket (Authors) source: google earth pro and arc Gis

The place of refuge

Rue du bon accueil, originally called Monastère des filles repenties, in 1640 (Attard-Maraninchi, 1997) In 1640, it became a refuge for women of bad character, who entered the Rue du déshonneur (now Rue des Honneurs) and then, after a period of re-education, left the establishment on the Rue des repenties.

During the revolution, the premises were converted into a craft industry. A first break took place in 1943, with the destruction of the southern part of the Panier; this was to be rebuilt by the architect Fernand Pouillon in the 1950s, which left the 29 old buildings inside the district intact, and after the destruction of the old buildings, a square was converted into a place of worship where the nuns of Notre Dame de la Charité took in single mothers.

On the east side, terracotta bleachers have been installed, the central space is used until 2010 as parking spaces, occasionally freed for events: the open-air cinema and the basket festival.

In 1998, the square of the Madeleine block to the south of the Place du Refuge was opened: the future Place Jean-Claude Izzo. A few years later, the buildings to the west of the square collapsed, freeing up a space that is now called «Ilot 9» .

During the works from 2008 to 2010, the earthen bleachers were replaced by white limestone bleachers.(figure2)

The development project provides for the construction of a building on block 9, but this building has not yet seen the light of day. Consequently, the MPM urban community and the city services have decided to carry out the development of the refuge square in stages. The last section has been reserved to adjust the project to block 9: a reason for which the central part is a raw concrete slab -on standby-(Figure2)

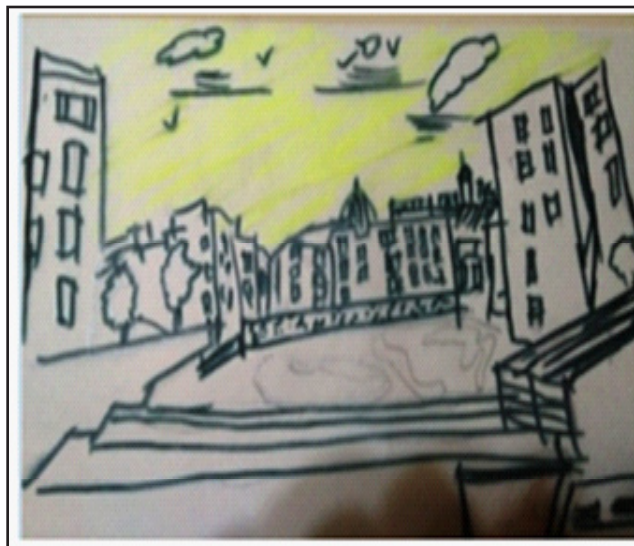


Figure 2. Sketch of the square

In 2012 the GIP de la MRU and the GIP politique de la ville involved the inhabitants in the future of the Place du Refuge and entrusted this consultation mission to the association «compagnie des rêves urbains» .

Its mission was to record the uses and desires of the inhabitants, to summarise them and to transmit them in the form of a programme to the technical services concerned. It thus ensures that the inhabitants are kept informed and will monitor the work planned following the consultation.

According to the report drawn up by the association and according to the director, the mobilisation was partly done in partnership with local structures (library, social centre, CIQ ...). The inhabitants had the possibility to contact the company directly to register for the workshops on an individual basis, and these were announced and documented on the notice boards installed on the spot.

The public that participated in the consultation was made up half of long-time residents and half of newcomers to the neighbourhood.

To ensure that everyone had time to listen, workshops were offered to each category of public proposed (children, professionals, CIQ, inhabitants.....)(Figure3)



Figure 3. The refuge place with open street maj
(authors)

Partners on Site

The square is frequented by local residents, who are often drawn in by neighbouring local structures that programme activities (according to the report).

The fêtes du panier and the open-air film association Tilt take over the square several times a year by setting up a projection screen or a stage, schools visit the basket library and other structures run workshops while taking advantage of a large, open space without cars. The place of refuge and the local structures involved in the consultation

The Residents' Programme

Following the various consultations and discussions, the inhabitants drew up a programme of proposals, and the company's architect Saskia Lindenau formulated a joint proposal which was presented to the technical services for a possible technical and financial feasibility study.

Taking into Account the Proposals of the Inhabitants

In October 2012 the inhabitants of the basket were invited by Tabasco video for a teleplateau session, to discuss proposals and financial availability for a participatory teleplateau with the MRU urban renewal in the presence of elected representatives, technical services, inhabitants, the library and the association compagnie des rêves urbains.(Figure 4)

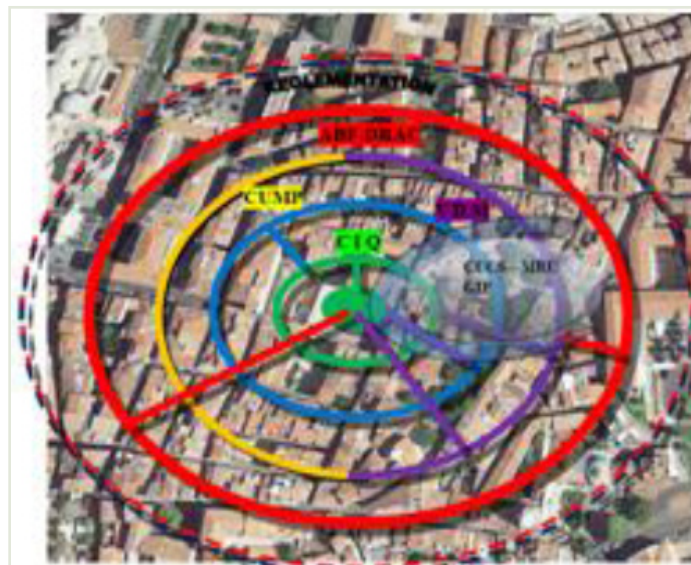


Figure 4. Diagram of the intervention perimeters (taken from the author) Source: The project architect

The TV set served as an alternative to the group interview, or *focus group*, (Corbi & Larivi, 2014) an interview technique that brought together participants (who are technicians, elected representatives.....) with a facilitator in a structured discussion on the subject of consultation and citizen participation.

This method presents opinions, motivation, attitudes, recommendations and new ideas.

An opportunity to depict interactions and capture the language used.(Corbi & Larivi, 2014).

METHODOLOGY

he question of the use of citizen participation methods in neighborhood planning is emerging. This research is based on a planning study using the results of the spatial syntax method.

Applied to planning and integration, considered fundamental to human spatial organization, spatial syntax is defined as a set of techniques and tools for modeling architectural and urban conformation (Porta et al. 2006), This theory proposes a methodological and analytical structure to study the relationship between users and their physical environment, the social dimension (Mazouz, 2013).a decision-making tool to support decision-makers to develop the space and avoid spatial segregation, imbalance between spaces and ensure their control, boost local development (Aoul & Kebir, 2020). The degree of visibility of space affects the safety and viability of space. The formulation of the spacesyntax guides the decision makers for a good configuration of space in terms of location, shape, orientation of territorial mix, confrontation of space, a good model for a good use of space the right use....

We have opted for two measures; connectivity and integration whose membership and identification are local, each pair of point and / or space has a relationship of inter visibility, for this we used two modeling; A modeling map by the VGA (visibility graph analysis) of all isovists of a spatial system and which allows to measure the accessibility and connectivity and a modeling by the axial map Allowing to measure the visual integration ...

Thanks to the data provided by Google Earth Pro, we could choose two later and spaced periods; the one before the development of the square (year 2003) and the other one after the development (year 2019) and that to be able to compare the development process and to make an experiment with the Space Syntax and to conclude if this method can enlighten and/or enrich the local and global ideas and that it is a good decision support tool for the development operations

By transposing the maps to the Autocad software and then to the Space Syntax, we were able to produce the following maps (see Figure 5, Figure 6, figure7, ..)(see Figure 8)

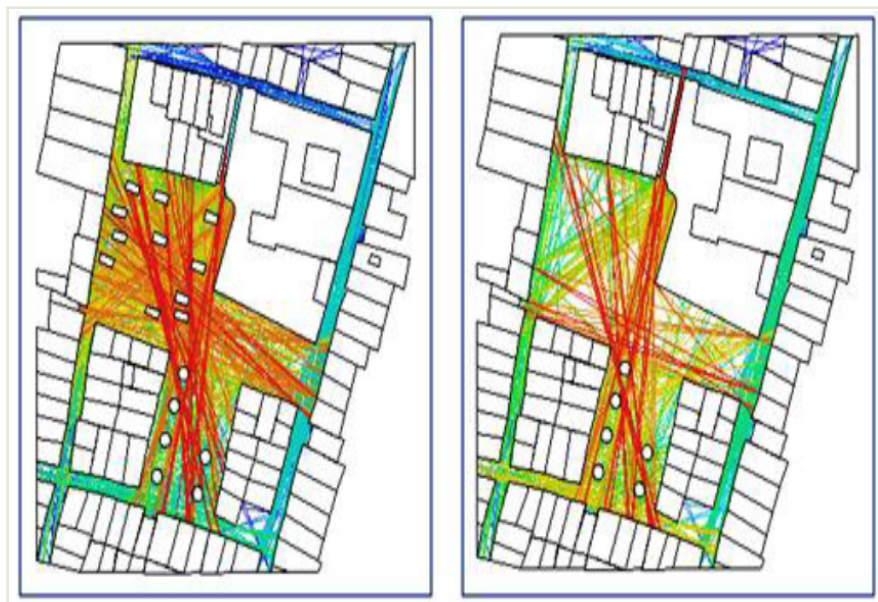


Figure 5. Deep space connectivity(in order 2003, 2019 Authors)

***Modelling with the axial map** is a dimension of global identification with a dynamic visual aspect. Measuring the connectivity of spaces and their visual integration according to structural properties.(Mazouz, 2013)

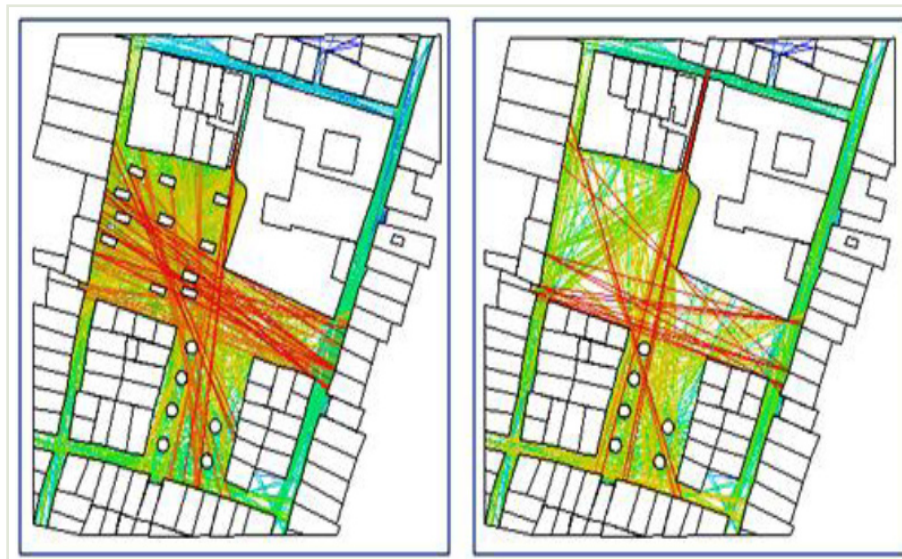


Figure 6. Deep space connectivity(in order 2003, 2019 Authors)

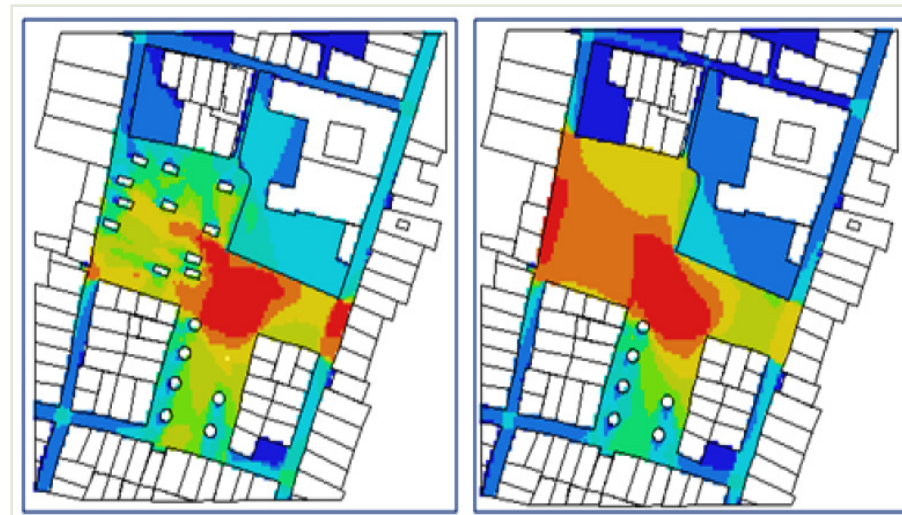


Figure 7. Deep space VGA (in order 2003, 2019 Authors)

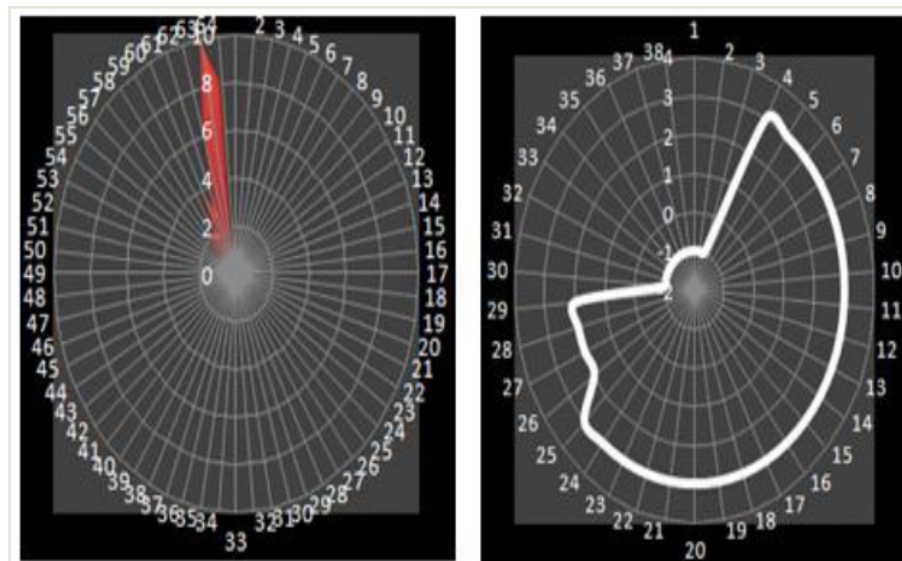


Figure 8. Deep space radar (in order 2003, 2019 Authors)

Connectivity

After calculating the spatial syntax with the Depth map software ,the output shows us the syntactic properties of this square, i.e. the most connected lines (in red) are located on the periphery and inside the lanes, two other short lines (blue) are segregated, one representing small, less frequented staircases and another penetrating towards spaces that are not very important in relation to the function of the square.

Integration and Choice

From the background plan almost all choice lines are red, out of 76 we have 10 that are poorly chosen for displacement and mobility, and on the output they are represented in blue. Although the spaces are unstructured in form (built and unbuilt), the spatial structure is very significant following the analysis of the space syntax, an open space in the middle of the streets. On the rue du refuge which runs along the square, we are faced with a large open space opening onto the urban landscape, we see the sea between two buildings.

For the correlation between integration (local) and connectivity (global), in this graph (see figure 9)

the correlation coefficient is high $R^2 = 0.87$, $0.87 < R^2 < 1$ this means that the place of the refuge as a system is intelligible

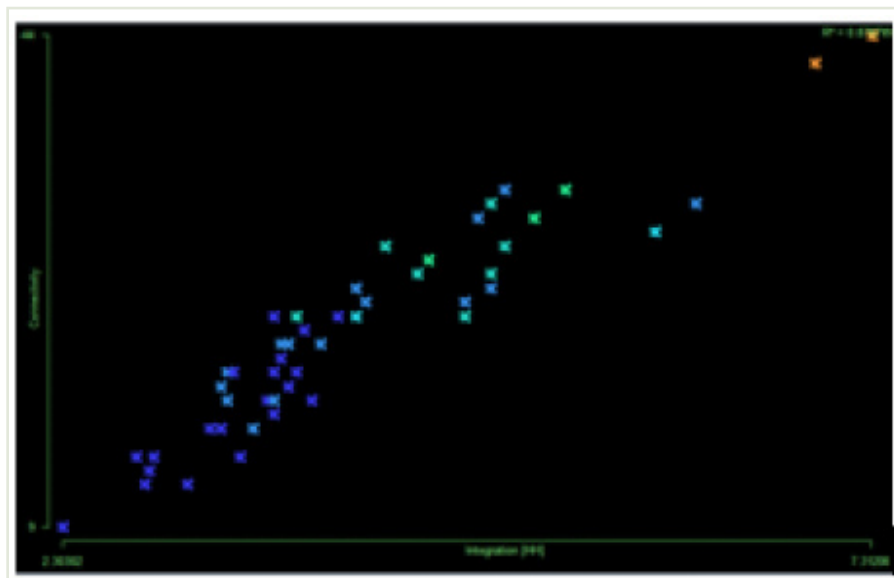


Figure 9. The scatter diagram of intelligibility

***VGA** (visibility graph analysis) modelling of the set of isovists in a spatial system, which allows us to measure accessibility and connectivity, gave us :

Connectivity: This output gives us isovists that communicate with all the other points of the system, obtaining the visibility graph, the points in red on the square next to the library communicate with the points in orange, yellow until arriving at the farthest points, in blue where the connection becomes very weak, this software adapts a spectrum of colour going from red which means very connected with high values, to the low values or the connectivity is very weak.

So this experience of space depends on each pixel and/or small square and its connectivity to the whole system of the square, and to which it is visually accessed, so some areas are accessible, others moderately accessible and others highly accessible.

A minimum value of 30 and a maximum value of 875. So good external connectivity and internal visual segregation This place includes the connected, the not so connected and the not so connected.

***Convexity modelling :** a measure whose membership and identification is local, each pair of points and/or space has an intervisibility relationship. A convex map will consist of the largest and smallest space covering the system.

Integration: the spaces with a red colour are the most visually integrated, we find the space that borders the refuge square and the juxtaposed space with an approximate value of 3.2 where there is a single mechanical access.

The central square in orange has a value of 2.8, which is also visually exposed but to a lesser degree, while the spaces in blue and green (built-up) are moderately exposed. This syntactic analysis showed the non-existence of isolated or segregated spaces (no dark blue colour). (figure 10)

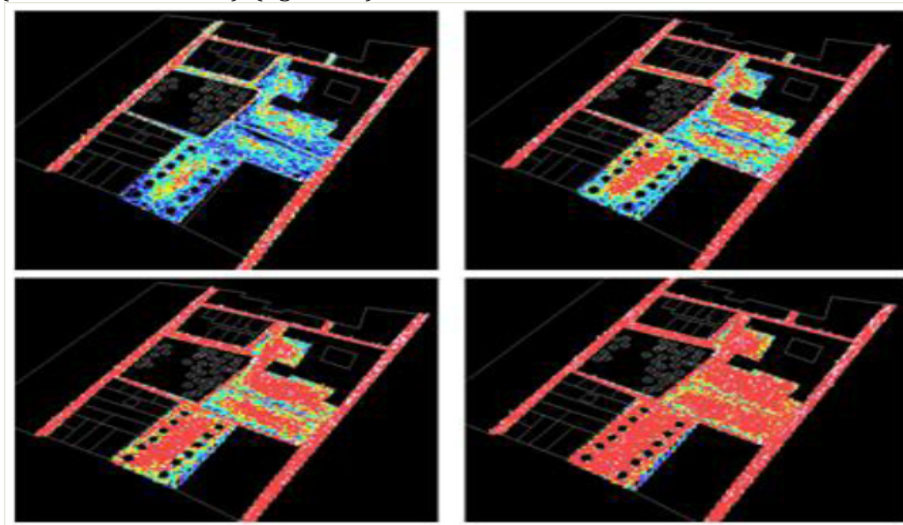


Figure 10. The genesis and evolution of colour (Add Agent) (Authors)

DISCUSSION AND CONCLUSION

After a syntactic analysis of the spatial system of the refuge square and thanks to the Depthmap software which calculated the syntactic properties of the global and local system; the degree of intervisibility relationship, connectivity, integration, convexity, connected and not so connected points, a graph modeling, factors allowed to make visible the syntactic measures.

Through this analysis one can know the global relationships of a space and what can be observed, spaces can be ordered from the most integrated to the most segregated, for a highlighting of the most visually connected spaces, axial maps (representing the spatial system) and convex maps, can be used to represent the whole system, the layout of the convex spaces, their accesses (penetrations), the movement and control of these accesses and spaces, as well as the segregated spaces. A model with the ability to measure relational details.

The analysis applied to this square followed by a syntactic approach that models the inter-relationships and layout of spaces and paths according to their degree of integration a symbolic representation for decision support.

By comparing the proposals of the inhabitants with the spatial projection we can argue that space syntax can help in the social and spatial planning of squares and spaces, with an observation of the rhythm this method can be used to facilitate the task of the designers to control the spaces and bring them well.

In the absence of appropriate methods for space, this analysis is an aid to decision making for the implementation of projects and developments, starting from the house to the big cities.

The conformation that includes form, location, orientation, will be a potential and fruitful answer,

This method has allowed us to verify the effect of the refuge square and the set of spaces, the relationship between the components from a structural point of view, what the refuge square offers as a configurational product.

Currently it is a square, despite its lack of development is used a lot by the inhabitants. They participated in the proposals of development, they were actors and they still are. Space is a support for relationships and a structuring factor (Gumuchian et al., 2000).

This analysis would be richer and more useful if it were to be confronted with other sources of data, allowing it to invalidate, confirm or refine its results.

Following the result of the syntactic projection, the simulation that will be presented to the communities will guarantee the continuity of the spatial integration of this place in its surroundings a simulation the place of refuge

This study has been supported with an observational study of pedestrian movement and stationary activities, and the

main functional issues and capacity of the entrances reveal that there is a need to define the constraints and opportunities for development and provide evidence to propose design recommendations.

The spacesyntax has provided design recommendations including a major new stairway to the old port, selective pedestrianization and reconnection of this area. Given its historical significance of the context, solutions require a technical argument, an interpretive model of space and movement allowed us to quickly test the design solutions

For eventual research spacesyntax can define the syntax of rhythm and support investigations.

During our internship in Marseilles, in order to finalize our thesis, we proceeded to an in-situ survey of rhythm, we worked during ten days, spread over 2 hours of time, in order to have a reliable score. For that we supported our syntactic method with this survey, and by comparing the two results, we confirm the contribution of this approach for a development in accordance with the spatial and structural requirements of the site, indeed the spatial syntax is a means of decision support. (see figure11)

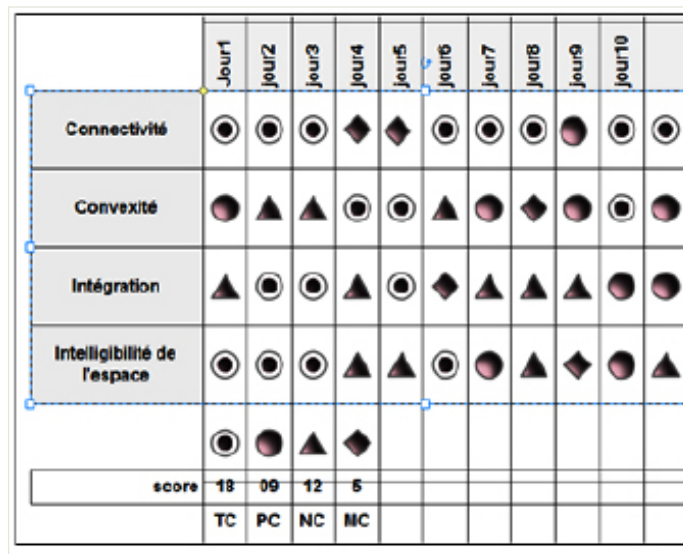


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