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## The Influence Of The Development On The Individual's Behavior In The Public Spaces: Case Of The City Of Batna / Algéria

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### Abstract:

*The public spaces are the fundamental elements for the functioning of the cities and have always played a paramount role in their construction. In this line, they are the center of life, gathering, entertainment, and leisure. Besides, they embellish the city and improve the quality of the urban aspects. Therefore, this paper sheds light on the public spaces in Batna and on the physical elements of development that affect the users' feelings and perception towards these spaces. Moreover, the paper highlights the subjective variables related to the space perception and their influence, all along with the psychological comfort elements, on the user's behaviors.*

Key words: *public spaces; behaviors of the users; space perception; space development.*

### 1- Introduction:

The human history is tightly confused with that of the cities. In this context, the history of the cities refers to the functioning of the societies in spaces where their daily life, activities, and functions take place in the appropriate private and public locations. It is possible to say that as long as the diverse stages of the civilization manifest in the city, the places show what the city is for its inhabitants (Bertrand, M.J &Listowski, H, 1984).

In this context, the public spaces have always played a key role in the cities' construction. These cities emerge from the humans will to gather to be stronger and exchange goods, information, and knowledge. This exchange takes place in the agora, forums, places, and streets, which we call today "the public spaces".

On the other hand, the public space is a place where the citizens meet freely and practice their collective life. It is a place that allows gathering and contact and assures the exchange and conviviality. In other words, it is a place where multiple daily activities and functions happen. The public space must be a place for all the types, as Oriol Bohigas states (Germain, A, 2002).

Its history started with the agora that was a city center where the essential functions of the Greeks took place. Besides, the Roman forum, which had the same roles, was a place for showing off and a theatrical stage for celebrations.

In the Medieval city, the place was named according to the function such as the big place or the market place where the most important facilities of the city were found: the city hotel, the church, the corporations, and the decorated nobles' houses.

Later during the Renaissance, considerable changes in the treatment of the public spaces took place because the places stopped being functional places and empty squares that surround the constructions; rather, they turned into open spaces. In this era, the notion of the quality of the open space and the composition of the urban space appeared.

Later in the Industrial Age, the diverse public functions were no more related to the places and changed their location to buildings. Thus, the place became a real emptiness surrounded by constructions (Bertrand, M. J., & Listowski, H, 1984).

In this context, the public space has always played a fundamental role in the city foundation and was the place where various daily activities and functions happened. Moreover, it is an aspect of the community life and represents a key point for the future of the cities.

Based on what has been said, this study aims at showing the influence of developing the public spaces on the individuals' behavior. In so doing, it is necessary to highlight the objective variables related to the urban settings, their components (vegetation, water plans, urban estate...etc.), and the subjective variables related to the perception. In other words, the study analyses how the public space and its objects affect the users' feelings, emotions, psychological comfort, and behavior.

In this line, as the other Algerian cities, Batna suffers the problem of public spaces development and faces inadequate appropriation of such spaces most of the time. This pushes us to think about how to improve these spaces and restore their initial role that consists of entertainment and leisure. As a result, we must understand the behaviors of the individuals to guarantee the quality of any development action. In this regard, we shall reveal the objective variables related to the development of these spaces, the subjective variables related to the perception of the spaces, and the influence of these variables on the behavior of the individuals.

## **2- Materials and methods:**

The choice of the method depends on the nature of the expected information. In this context, we chose the field interviews because they allow collecting and analyzing data that are relatively related to the city spaces. We shall deal with qualitative data regarding the feelings of the users towards the spaces, the satisfaction degree, the social practices, the space appropriation, the space perception, etc. The choice of this method was related to the type of data, as it is the most suitable for them. Besides, we chose both the observation and the questionnaire to get complementary information about the behaviors and know the subjective side that cannot be achieved with the observation alone.

### **2-1 The observation:**

It is a direct technique of scientific investigation that allows indirect observation of a group to get qualitative data and understand their attitudes and behaviors in real life situations. In this context, it is the study context and the characteristics of the observed field that determine the nature of the observation made (Toussaint J. Y. et al., 2001). As for our study, this technique aims at identifying the users' activities and behaviors in the chosen public spaces.

### **2-2 The questionnaire:**

It is the most frequent technique in the qualitative and quantitative studies. It is used with the individuals and allows interrogating them indirectly and getting quantitative data to find mathematical relations and make comparisons. In our study, this technique allows collecting subjective data and understanding the feelings triggered by the environment and the relations with the space.

## **3- Case study:**

Our work covers the public spaces in the city of Batna. Therefore, before starting the detailed study of the spaces, we must have a look on the general context.



**Figure 1:** location of the Wilaya of Batna

**Source:** <http://www.algerie-monde.com/wilayas/batna/>

The region of Batna dates back to 1844 and grew during different phases based on the different modes of soil occupation.

**The colonial nucleus:** It dates back to the colonial era. Its spaces are more structured thanks to two important axes, namely the independence avenue and the republic avenue where highly popular commercial activities take place.



**Figure 02:** military camp plan, designed based on a checkerboard plan

**Source:** Batna downtown POS (adapted by the author)

This nucleus contains many public and meeting spaces:



**The theater square.**



**Harsous square**



**Sahat Echouhada**



**1<sup>st</sup> May square**



**Ben Boulaid alleys**

**Figure 3:** The public spaces of the central fabric.

**Source:** author.

We have selected the richest, diverse, and attractive public spaces in Batna based on criteria that help us understand the influence of the development physical elements on the behaviors of the individuals.

#### **4- Analysis and interpretation of the results:**

##### **4-1 The observation:**

We shall collect data using the observation grill in different periods of the day following an agenda of observation campaigns. During the observations, some semi-directive questions arouse without interrupting the activity of the user. In the same context, the observation took 02 steps:

**1<sup>st</sup> step:** the observation starts without participation and allows having an objective vision on the individuals' behaviors. Thus, it is necessary to make preliminary visits to the selected spaces to explore the fields and take the 1<sup>st</sup> notes that we shall write down on a notebook.

**2<sup>nd</sup> step:** making the observation in each public space according to a plan of 04 days for each one; 2 days of the week and 02 days of the weekend. The observation here is made with participation using some questions to the users in order to have information that we cannot get without this contact.

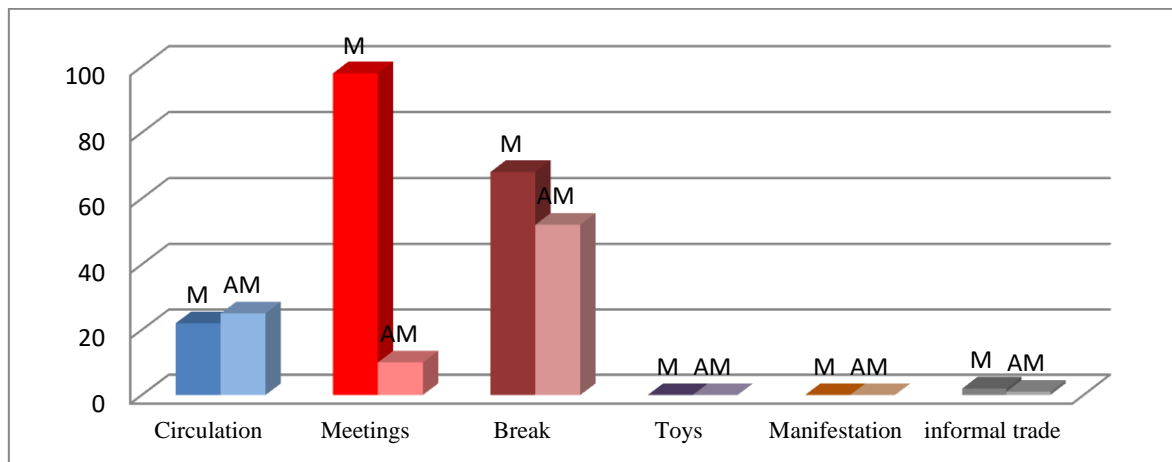
##### **4-2 The construction of the observation grill:**

The observation grill must represent all the behaviors and the activities practiced in the public space, and the degrees of intensity based on the relative intensity scale of each type of use.

Indicators	1 <sup>st</sup> day .../.../...		2 <sup>nd</sup> day .../.../...		3 <sup>rd</sup> day .../.../...		4 <sup>th</sup> day .../.../...	
	Morning	After noon	Morning	After noon	Morning	After noon	Morning	After noon
Circulation								
Meetings								
Break								
Toys								
Manifestations								
Informal trade								
Extension of commercial shops								

**4-3 Graphic representation of the observation results:**

The results in the observation grill shall be translated in the form of graphics using the histograms to compare the behaviors of the individuals.



**Figure 04:** the number of users of different appropriation modes of the theater square

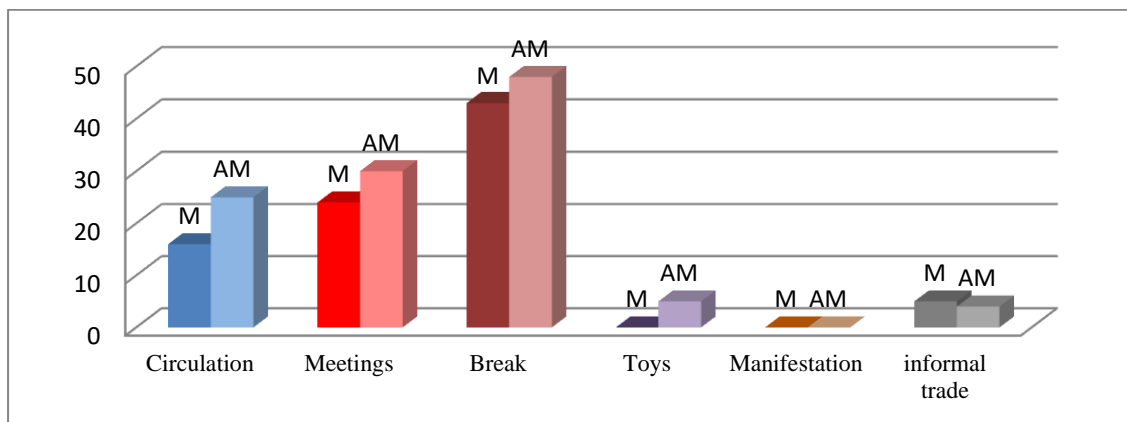
**Source:** author

We notice from the observation campaigns that the majority of the users of this square are men coming from different districts of the city. They go daily to the market and use the square as a meeting, circulation, and break place. As for the periods of these types of appropriation, most are practiced daily with different intensity between the morning and the

afternoon. Besides, we have noticed that the intensity is high in the morning and that the market has a big influence on this intensity as the interviews found out.

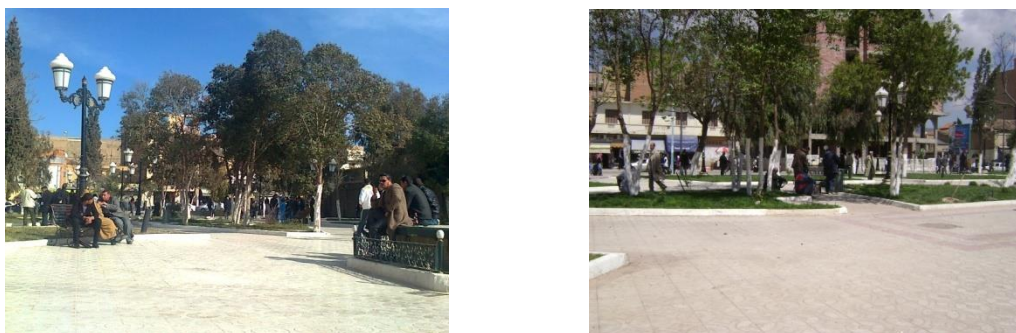


**Figure 05:** different appropriation modes of the theater square  
**Source:** author

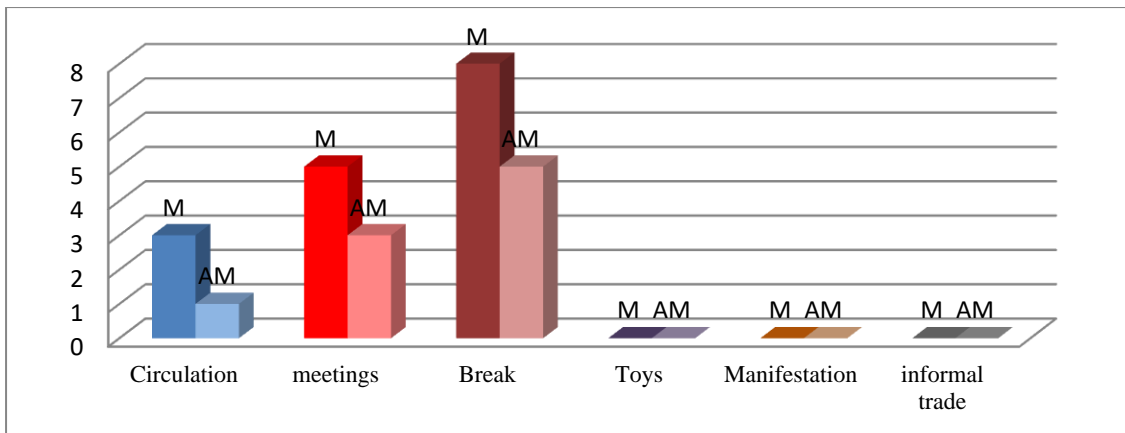


**Figure 06:** the number of users of different appropriation modes of 1<sup>st</sup> May square  
**Source:** author

We can deduce from the observations that the people who go to 1<sup>st</sup> May square are women and men who come from different districts of the city. In addition, most of the users go downtown for shopping and use the square for break.



**Figure 07:** different appropriation modes of 1<sup>st</sup> May square  
**Source:** author



**Figure 08:** the number of users of different appropriation modes of Sahat Echouhada  
**Source:** author

We can deduce from the observations that the people who go to Sahat Echouhada are women and men who come from different districts of the city. However, the majority is made up of youths who use the square as a meeting space.



**Figure 09:** different appropriation modes of Sahat Echouhada  
**Source:** author

For more objectivity and reliable results, we have to use another technique. Thus, we opted for the questionnaire.

#### 4-2 Construction of the questionnaire form:

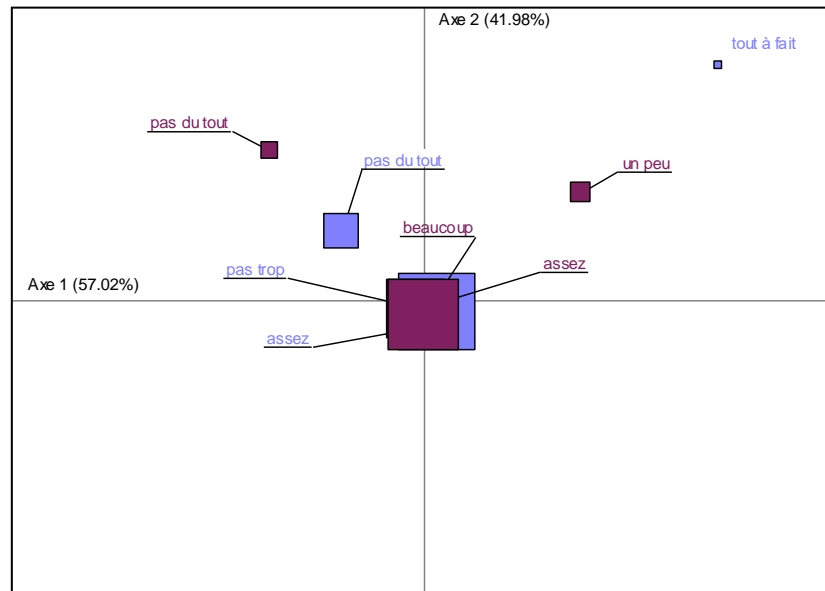
The questions are either closed or MCQs. Besides, we included a number of open questions to give more liberty to the informants. The questions aimed at knowing the influence of each indicator on the user of the public space. Before processing the collected data with Sphinx software, we used the answers' codification.

#### 4-3 Analysis and interpretation of the results:

The last step of the questionnaire analyses the data after ordering them. In our study, the analysis determines the influence of the answer modalities. This process is called the



univariate analysis. Besides, we used the bivariate analysis that determines the dependence between two variables. In order to give a visual representation, we use the factorial correspondence card whose interpretation depends on the positions of the modalities of the ones compared to others.



**Figure 10:** example of a factorial correspondence card between the two variables,  
The theater square, source: author

## 5- Discussion:

This analysis allowed us to get the following results:

- The perception of the public space is influenced by its form. The formal characteristics of its components can be summed up in the height of its facades and the nature of its limits, which influence its opening and closing. In this context, the opening degree of the space influences its appropriation and attraction.
- The physical elements of the public space (green spaces, water plans, urban estate, soil treatment, architecture of the facades, and the used materials) ensure the satisfaction of its aesthetic aspect and the psychological comfort of the user.
- The availability of the urban estate and the benches in the covered places ensures the appropriate use and the comfort of the users.
- The rates between the space objects and the respect of the scale ensures the readability of the different components.
- The security shall be felt in the open spaces where the pedestrians walk and create a dynamic movement.

- The intensity of the social relations in a place manifests through diverse activities such as games, gatherings, meetings, and conviviality; these elements incite people to visit the space and make them feel well.

## 6- Conclusion:

Based on the findings of our study, we can make some recommendations to improve the quality of the public spaces as such:

- It is necessary to attract space developers before making any intervention in the public space because the development has an effect of the perception of the place.
- The intensity of the social relations has a position that manifests in the diverse activities such as the games, gatherings, meetings, and conviviality between the users. All this incites people to visit the space and feel well.
- Understanding the modes of relation with the space helps understand the different human feelings in the public space.
- Knowing the functional needs of the users such as the comfort, security, and utility is necessary.
- The sociologic study is necessary to know the needs and feelings of the users. Furthermore, it allows a better improvement of the public spaces quality.

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