

Living the Public Space, Exploring the Urban Ambiances of the Tramway of Constantine, Algeria

Ikram AHMARI¹, Nadra NAIT AMAR², Aniss M. MEZOUED³

¹PhD student, Department of Architecture, LAUTES Laboratory, Faculty of Architecture and Urbanism, Salah Boubnider University Constantine 3, Algeria.

²Senior lecturer, Department of Urbanism, Faculty of Architecture and Urbanism, Salah Boubnider University Constantine 3, Algeria.

³Faculty of Architecture, Architectural Engineering and Urbanism-LOCI, Catholic University of Louvain, Belgium.

Abstract

The deployment of the tramway in Algerian cities has considerably modified public spaces and their uses. This article questions the tramway's capacity to improve the quality of the crossed spaces and how these are perceived and experienced by users. This analysis is carried out from the exploration of the urban ambiances generated by the Constantine tramway through surveys with users of these crossed public spaces. It shows that the tramway creates reassuring ambiances, thus contributing to the security of public spaces. However, the urban ambiances generated by the tramway remain unattractive and not very lively due to the devitalization of existing commercial activity and the lack of leisure activities, consumption amenities and green spaces. The ability of the tramway to improve spatial quality and create convivial ambiances depends on architectural, landscape, functional and social factors, and requires urban planning support operations and a participatory approach.

Key words: Urban Ambiances, Public Space, Qualitative Approach, Tramway, Constantine.

INTRODUCTION

The tramway has experienced in Algeria an unprecedented craze over the past twelve years. This revival of the tramway is part of a search for an alternative to automobile dependence and its harmful effects in terms of traffic jams, which involves the development of urban public transport with exclusive right-of-way (UPT/ERW). Therefore, seven major cities have returned to this means of transport.

Beyond the transportation aspect, the tramway poses major issues in terms of its integration into the urban fabric, which remains problematic in automobile-oriented cities, as it is the case for Algerian cities. Indeed, Godard points out the particularity of the insertion of UPT/ERW in developing cities, in this case those of the Maghreb countries, where there is an increasing tendency to use the car and, in return, an inability to curb its expansion (Godard 2007). Whether in the Maghreb countries or elsewhere, the tramway could potentially encourage users to make greater use of public transport and thus contribute to modal shift. As Fritsch points out, UPT/ERW are important tools for modal rebalancing and redevelopment of public spaces (Fritsch 2007). The tramway is therefore no longer considered as a simple means of transport but also as a tool for urban regeneration. According to Wolff, this mode of transport has seen its primary function evolve in a short time (Wolff 2012). This leads us to question the role of the tramway nowadays in the making of the city and the public space. It is thus at the heart of the issues related to the search for coherence between mobility and urban planning (Kaufmann 2002). In the case of European cities, the tramway contributes to urban renewal and the reconquest of public space (González, Otón, and Wolff 2013, Hamman 2011, Laisney 2011). It also participates in the increase of real estate properties' value, particularly the price of apartments (González, Otón, and Wolff 2013, Fritsch 2007). In addition, the tramway is used for modernization and urban marketing strategies purposes (Otón 2012, Wolff 2012).

In Constantine, the first tramway line was put into service in 2013, further extended and split into two sections which became respectively operational in years 2019 and 2021. The tramway currently connects, from north to south, the Constantine city centre to the new city Ali Mendjeli. This insertion of the tramway seems to have improved the daily life of citizens and meets their demands for transport (Zebiri 2019). However, its integration into the urban space was no small feat. In addition to the fact that Constantine is entirely oriented towards automobile, the difficulty of integrating

the tramway is further compounded by the city's peculiarities. This is due, on the first hand, to the specific constraints related to its urban history and the challenges of preserving its architectural and urban heritage, also, to its extremely rugged topography on the other hand, and ultimately, to its network of old, narrow and inextensible roads. As a result, shortcomings can be observed in the urban insertion of the Constantine tramway line, where the priority in the study and implementation of the tramway project has been given to technical considerations at the expense of spatial and perceptual quality. Moreover, the development of the surrounding area was not the subject of prior studies or urban strategies. Indeed, the tramway was designed as a line, where public space is only redeveloped within the width of the road it crosses. The public spaces located along its route have not been taken into account, except when it comes to land expropriation (Mezoued 2015).

Given these facts, we wonder about the effects of the tramway on the crossed public spaces. As Hecham-Zehioua points out in its analysis of the structuring effects of the Constantine tramway, the adoption of a means of transport raises a profound questions about the function and use of public spaces (Hecham-Zehioua and Labii 2009). Indeed, its insertion is a real boon for a major restructuring of the crossed spaces, whether it is planned or not. The tramway in essence metamorphoses, redesigns and recomposes the entire public space, but what about the quality of these transformed spaces? And how do users experience and perceive these transformations? To what extent can the tramway contribute to the improvement of the quality of the public spaces crossed?

Numerous studies carried out or still in progress have clearly demonstrated the contribution of the tramway to urban development in the broad sense (González, Otón, and Wolff 2013, Hamman 2011, Laisney 2011, Mezoued 2015, Redondo 2012, Troin 2015). However, the question of the public spaces quality that the tramway generates hasn't been sufficiently studied. Yet, the issue of public spaces and their quality is becoming a major urban concern that is today the subject of particular attention in contemporary professional or academic debates on the city. On the one hand, public spaces are at the heart of environmental problems and current issues of sustainable urban development and improvement of the life quality. On the other hand, public spaces are currently closely linked to transport infrastructures, particularly the UPT/ERW, and success of their integration into the urban fabric partly relies on the public spaces that accompany their development (Bosredon et al. 2017). As Fleury explains, the development of public spaces plays a fundamental role in urban strategies for both the mobile transition and the improvement of the living environment (Fleury 2009). However, the effects of UPT/ERW on the quality of public spaces, their socio-spatial repercussions more generally, are still poorly understood. We know little about an important aspect of the impact of these means of transport, namely their supposed effect on the urban ambiances of the spaces they cross and, consequently, their quality.

In this article, we want to explore the urban ambiances of public spaces crossed by the tramway. On the assumption that the tramway inevitably transforms the urban public space in which it is inserted, thus modifying its quality and its urban ambiances. And these latter, seem to us to be a tool for understanding and analysing the effects of the tramway on the quality of public spaces it passes through, and also a tool to evaluate to what extent this transport infrastructure has been successfully integrated into the urban space. We suggest to explore this question based on the Constantine tramway project. Our aim is not to analyse this project from a "transport" point of view. But to try to understand the way in which the tramway has shaped the public spaces along its route, modified their quality and participated in the production of new urban ambiances, and finally, adapted these public spaces to the needs and expectations of users, particularly in terms of their perception, their uses and their daily experience.

METHODOLOGY

A Conceptual Approach Centred on Urban Ambiances

The ambiance becomes a recurring notion in the field of scientific research and one of the most important domains of investigation. During the past forty years, this notion has been the subject of numerous definition attempts. Its complexity makes it difficult to establish any formal and univocal definition. In this research, we relied on two definitions of Remy and Bégout, as they approach the ambiance according to a social and qualitative approach that is consistent with our research objectives. According to Jean Remy, the urban ambiance stands for "*a transitory modality of social life assuming: a time support, a space support, a more or less extensive range of activities, a certain population density and an affective connotation, positive or negative*" (Remy, Voyé, and Biolley 1981, 69). Remy advances five complementary entries of the urban ambiance, which appears to be a kinetic phenomenon dependent on the flows of passers-by. Moreover, Bruce Bégout defines the concept of ambiance as an "*invisible dome under which all our experiences take place*" (Bégout

2020,7). He considers the ambiance as a kind of emotional microclimate that envelops us. It is both a spatial and effective phenomenon. According to Bégout, to conceptualize the ambiance approach, it is necessary to highlight this affective relationship to what surrounds us or as he calls it «affectivity». Bégout defends the thesis that we constantly live in the middle of ambiances(Bégout 2020).Therefore, any lived spatial experience is always attributed to an ambiance. Despite the difference between the pragmatic definition proposed by Remy and the philosophical one advanced by Bégout. They both agree on the phenomenological and contextual characteristics of the ambiance and on its two spatial and affective dimensions. However, Remy advances two complementary dimensions, namely the social and temporal dimensions.

In addition, ambiance involves sensitivity. According to Bégout, ambiance is an invisible phenomenon that we cannot observe, but can perceive through its prism, as a sort of perception filter(Bégout 2020). It, therefore, mobilises simultaneously all the modalities of perception (light, sound, heat, smell, touch) and can, in no way, be summed up to visual aspects only. Many researchers who approached this notion from a sensitive and multisensory perspective (Augoyard 1998, Thibaud 2018)have highlighted the perceptual dimension of ambiance. Moreover, ambiance is a constantly changing phenomenon. It fluctuates according to time, spaces and individuals and also prefigures future developments. The “International Ambiances Network” is one of the pioneers to have evoked the prospective dimension of ambiance during their third congress titled “Ambiances, tomorrow”(Rémy and Tixier 2016). The aim of this congress was to place this notion in a prospective dynamic, by questioning its future to deal with major changes and evolutions that our living environments are undergoing today and the role it could play in these changes.

The ambiance is therefore revealed as an interdisciplinary field which encompasses several dimensions (spatial, affective, social, temporal, perceptual and prospective) (Figure 1). In this research, we will explore the urban ambiances through these six dimensions according to a systemic approach that we adapt to our questions and objectives.

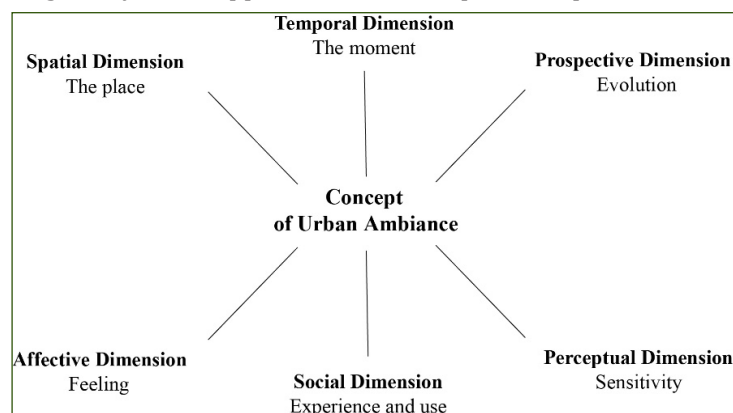


Figure1. Dimensions of the urban ambiance concept. Source: Author’s diagram based mainly on definitions by Remy, 1981 and Bégout, 2020.

Our interest focused on the notion of urban ambiances, which, in our opinion, could help us to better understand the research question relating to the effects of the tramway on the quality of crossed public spaces, on the perception and the experience of users. As an interdisciplinary approach, the urban ambiance allows us to approach this question from different angles. As Christian Sacré reminds us, the success of the tramway’s integration is closely linked to the way in which it is received by users and inhabitants, which in turn is closely linked to the ambiance’s concept(Sacré 2006). This necessarily leads us to question the urban ambiance’s capacity in evaluating the success of a new tramway line integration and in measuring the quality of the produced public spaces. All the more so since this notion seems to provide keys to understanding reality and possible solutions for better planning and management of public spaces, particularly in transport infrastructure projects and as a new form of consultation and citizen participation. According to Pascal Amphoux, the ambiance’s concept proves to be a double theoretical and pragmatic tool for understanding and acting on public space(Amphoux 2007).

Presentation of the Case Study: The Constantine Tramway

The Constantine tramway project was carried out in three stages. The first line was put into operation in July 2013. Connecting the city center from the “Ben Abdelmalek Ramdhane” station to the peri-urban area “Zouaghi Slimane” over a distance of 8.1 kilometers. It includes 10 stations, 02 Poles of exchange and 01 viaduct, which spans the oued-Rhummel, thus reinforcing the image of Constantine as the «city of bridges». In addition, the tramway expresses the

will to connect the mother-city of Constantine to the new city of Ali Mendjeli. The extension in question is divided into two sections. The first was put into service in June 2019, extending over a 7 linear kilometers distance, connecting the Zouaghi Slimane station to the entrance of the new city Ali Mendjeli, and having 05 stations. The second section, for its part, was recently put into operation in September 2021. It includes 06 stations over a distance of 3.4 km connecting the entrance of Ali Mendjeli from “Shahid Kadri Brahim” station to “Abdelhamid Mehri” University. The Constantine tramway line now serves 21 stations on a total distance line of 18.5 Km. This project was initiated by the Ministry of Transport, which delegated the realization to the province of Constantine, in collaboration with its transport department and the Algiers Metro Company.

The exploration of the urban ambiances of the Constantine tramway was based on fieldwork that was completed in June 2021. This work focused on the stations that were operational during this period, in this case, the first fifteen stations from Ben Abdelmalek Ramdhane to Shahid Kadri Brahim (Figure 2).

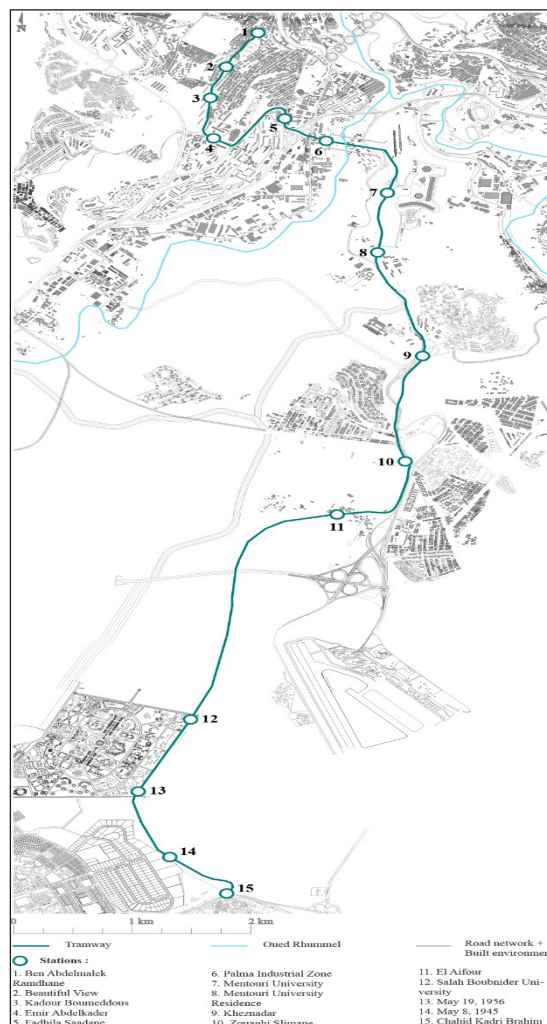


Figure 2. Route of the Constantine tramway concerned by the study. Source: Author, 2022. Base map: PDAU, URBACO 2019.

A qualitative approach focused on semi-structured interviews

In order to explore the urban ambiances of the Constantine tramway, we carried out a field survey by semi-structured interviews on fifteen stations and their surroundings with a variety of users (inhabitants, merchants, students, workers, etc.). The choice of a qualitative approach and semi-structured interviews frames the conversation while allowing freedom and subjectivity to the interviewees. This method is all the more justified since the aim is to access the urban ambiances felt by users and their experience and perception of the restructured public spaces by the tramway. These notions, which engage sensitivity and subjectivity, fundamentally require a qualitative approach to better address them.

Interview Guide

The choice of themes addressed in the interview guide that we designed was based on the ambiance's dimensions. We have thus identified six themes in reference to the six dimensions of the previously retained urban ambiance concept (Table 1). These themes were chosen in order to obtain users' opinion on the quality of public spaces around the tramway line, from the prism of urban ambiances on the one hand. On the other hand, to analyze the effects of the tramway, both on the crossed public spaces, as well as on the perception and the daily experience of users and inhabitants.

The first theme is the "spatial transformations linked to the tramway" which is linked to the spatial dimension of the ambiance and in which we highlight the spatial change caused by the tramway. The second theme focuses on "spatial experiences and practices" and is linked to the social dimension. In this theme, we want to explore the effects of the tramway and the spatial transformations it brings about on users' daily lives, use and practices of space, and also define how these aspects have adapted to the changes that have occurred. The third theme is entitled "frequentation and temporality" and relates to the temporal dimension, where we study the frequentation of public spaces crossed by the tramway according to temporal dynamics and the possible influence of the tramway on their frequentation. The fourth theme is related to the perceptual dimension and concerns "perception and appreciation of space", through which we seek to learn more about how users of public spaces around the tramway perceive these spaces and evaluate them, particularly in terms of quality of layout and overall comfort. The fifth theme addresses "feeling and affect" and relates to the affective dimension. We will identify the ambiances and feelings that users feel in these public spaces crossed by the tramway and explain how the latter impacts them emotionally. While the sixth and last theme titled "expectations and suggestions" is related to the prospective dimension. Through this theme, we seek to identify the needs, aspirations and proposals of the users of public spaces around the tramway, with the aim of improving the urban ambiances and the quality of these spaces and thus promoting the quality of the living environment.

Table1. Interview guide

Themes	Questions
1. Spatial transformations linked to the tramway	<p>Q1.1: Did you notice any change in public space after the arrival of the tramway?</p> <p>Q1.2: What do you think of this spatial transformation related to the tramway?</p> <p>Q1.3: In your opinion, what are the effects of the tramway on the public space?</p>
2.Spatial experiences and practices	<p>Q2.1: How did you experience this spatial transformation related to the tramway?</p> <p>Q2.2: How has it affected your uses and practices of space?</p> <p>Q2.3: In your opinion, how accessible is this space?</p>
3. Frequentation and temporality	<p>Q3.1: How often do you visit this space?</p> <p>Q3.2: In your opinion, what are the factors that influence your frequentation of this space?</p> <p>Q3.3: Have you noticed any changes in your frequentation of this space after the arrival of the tramway?</p>
4. Perception and appreciation of space	<p>Q4.1: How do you perceive this public space particularly in terms of layout and materials used?</p> <p>Q4.2: What do you enjoy most about this space? And what are the aspects that you don't like?</p> <p>Q4.3: What do you think of the overall comfort in this space, especially in terms of heat/cold, weather protection, shade, lighting, noise and smells?</p>
5. Feeling and affect	<p>Q5.1: What do you feel when you visit this public space?</p> <p>Q5.2: What is your impression about the ambiance in this space? In your opinion, has the tramway had an effect on these ambiances?</p> <p>Q5.3: How safe do you feel in this space? Did that feeling change after the tramway arrived?</p>
6. Expectations and suggestions	<p>Q6.1: What are your needs and aspirations for this space? And what elements are missing that you wish you had?</p> <p>Q6.2: In your opinion, is the existing urban furniture in this space sufficient?</p> <p>Q6.3: If you were to make changes or add elements to this public space, what would they be?</p>

Source: Author, 2022.

Interviewees

In view of the purpose of these interviews, we sought to approach a variety of people of different genders and from different age groups and occupations. The objective is to try to reach all categories of users of public spaces around the tramway, because each user has his own vision and opinion based on his own experience and perception of urban ambiances, and also the public space as well as the tramway. The people that we have picked for these interviews were randomly selected based on their availability and acceptance to take the survey. In short, 138 individuals agreed to answer our questions as part of this survey. More specifically, they were 74 women and 64 men. The interviews were conducted anonymously. Audio recordings were registered with the consent of the interviewees.

RESULTS AND DISCUSSION

This section summarizes the analysis of what was heard in this survey. It consists of six components related to the six themes covered in our interview guide.

The Tramway, a Tool for Urban Transformation

The interviewees unanimously confirmed that they had noticed a change in public space and urban ambiances after the arrival of the Constantine tramway. Nevertheless, their opinions on this transformation are divided, particularly regarding their nature and extent (Figure 3).

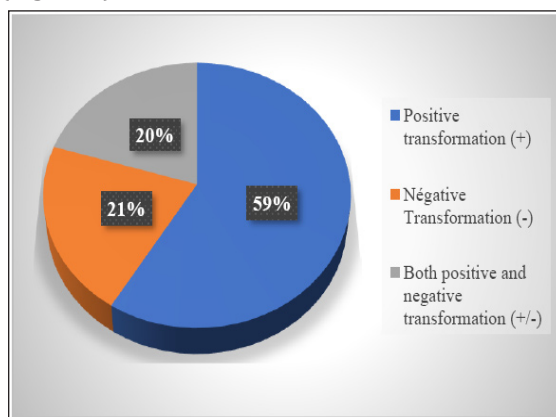


Figure 3. Opinions of interviewees on the spatial transformation related to the tramway. Source: Author, 2022.

The majority of interviewees (81 out of 138) believe that this is a positive transformation and that the tramway has radically and pleasantly changed the crossed public spaces and has improved their ambiances by making them more welcoming (Figure 4).



Figure 4. Revitalization of public space around "Fadhila Saadane" Station. Source: Author, June 2021.

Conversely, 29 interviewees believe that the tramway has generated ambiances that lack attractiveness and animation and has led to a negative transformation that does not meet their needs. This opinion is shared by the merchants who have been directly affected by these transformations and who have experienced a decline in their activity, like this merchant who reports: *"I have been working at this pharmacy for years. The tramway has stifled our activity, because the tramway station is hiding our agency. Unfortunately, we were forced to close our night agency, the narrowing of the*

road killed our business because people could no longer park their cars" (interview with a shopkeeper at Beautiful View station) (Figure 5). While 28 interviewees believe that this transformation is both positive and negative. They consider that the tramway has both advantages and disadvantages, because it has modified public spaces and their ambiances, which they consider insufficient, and in return, has generated problems.



Figure 5. Beautiful View station hides the pharmacy (left on the photo), the road and the sidewalk have been narrowed by the tramway. A local restaurant has closed. The ambiance is limited to a passing ambiance. Source: Author, June 2021.

According to the interviewees, the effects of the tramway on the public spaces crossed are many and varied. Its positive effects are: the redesign of public space, the embellishment and improvement of its image, the increase in safety, the revitalization of these spaces, particularly the most isolated, the contribution of modernity, the reduction of pollution and noise from road traffic. On the other hand, the negative effects are: the narrowing of the roads and the elimination of some shortcuts and accesses to certain neighborhoods, the lack of parking spaces, the deterioration of commerce, the noise that some inhabitants complain about and the problem of insecurity in the crossing.

The Tramway, A Vector of Urbanity and Conviviality

The interviewees adapted to the spatial transformations generated by the tramway. The majority say that they have lived it well and that this transformation makes their lives easier. A minority made up of merchants who had to change their business or close down permanently and a few inhabitants, on the contrary, lived it badly and remain nostalgic of the initial state of public spaces and their ambiances before the arrival of the tramway. The interviewees confirm that their use of space has changed following the arrival of the tramway. They have noticed that the mentality of citizens has changed and that they are beginning to adopt new, more civilized behaviors. These public spaces crossed by the tramway have become landmarks and privileged meeting places (Figure 6). The tramway is a catalyst for urbanity and conviviality.



Figure 6. The public space around the "Ben Abdelmalek Ramdhane" station has become a place of sociability. Source: Author, June 2021.

In addition, the tramway has made it easier to access public spaces, however, these facilities are not well suited for people with reduced mobility (PRM) or the visually impaired (Figure 7).



Figure 7. “Ben Abdelmalek Ramdhane” Station is difficult to access due to the succession of steps and the invisibility of the PRM ramp. Source: Author; June 2021.

Influence of the Tramway on the Frequentation of Public Spaces

The rate of frequentation of public spaces around the tramway varies from one interviewee to another, depending on the respondent's relationship to these spaces (Figure 8). According to the interviewees, the factors that influence their frequentation are safety, calm, cleanliness, amenities and the fact that the public space is open and not landlocked. These factors constitute elements of ambiance, which allows us to note the importance of the influence of the ambiances and the user's feelings on their spatial frequentation. The majority of interviewees say that since the arrival of the tramway, they have been frequenting these public spaces more often. As the tramway attracts more users to public transport, it contributes to increasing the frequentation of the crossed public spaces.

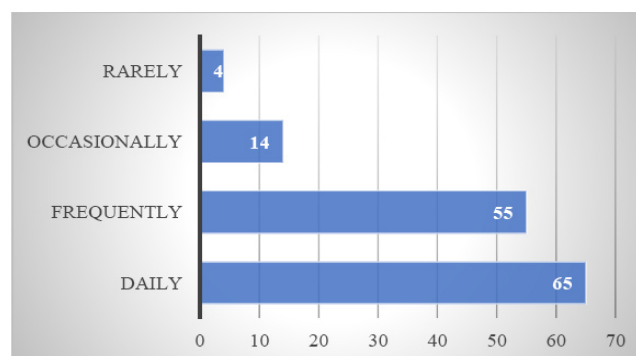


Figure 8. Rate of frequentation of interviewees of public spaces crossed by the Constantine tramway. Source: Author; 2022.

Tramway generates new spatial perceptions

The interviewees confirm that their perception of public spaces changed after the arrival of the tramway. The majority see them as medium-quality developments that could be improved. In addition, they do not appreciate the materials used (concrete and steel) and find that they have a way too mineral and poorly vegetated aspect (Figure 9).



Figure 9. The mineral appearance of the materials used (steel and cement). Source: Author; January 2021.

According to the interviewees, the main aspects that appeal to them in these public spaces are: safety, calm, cleanliness and daily maintenance. On the other hand, the unpleasant aspects are: the lack of urban furniture and greenery (Figure 10). Most respondents felt that these spaces lacked thermal comfort. They find that they are exposed to the sun, to the weather and do not have protection in winter or cooling in summer. The question of thermal ambiances often comes up in the speech of the interviewees.



Figure 10. The lack of urban furniture and greenery at the large esplanade of Kadri Brahim station.
Source: Author, June 2021.

A few residents complain about the noise caused by the passage of the tramway inserted at a short distance from the residences in certain districts and the maintenance work carried out from time on the rails at late hours or early in the morning (Figure 11).



Figure 11. The insertion of the tramway in the city Centre at a short distance from the residences. Source: Author, January 2021.

The Tramway, Towards the Renewal of Urban Ambiances and Safety

Most of the interviewees feel comfortable in the public spaces around the Constantine tramway. They find that the urban ambiances of these spaces are pleasant, reassuring and bright. They believe that the tramway has had a positive effect on the ambiances of the crossed spaces by making them more welcoming and convivial, allowing an intergenerational mix, especially the isolated spaces that have become livelier and more eventful. According to the interviewees, these spaces have been more secure since the arrival of the tramway thanks to surveillance cameras, and constant presence of officers at stations, night lighting and the fact that these spaces are more crowded than before. The tramway is therefore a factor in securing public spaces and generating new, more reassuring urban ambiances.

User Aspirations and Search for Improvement

The interviewees noted that there were gaps in public spaces around the tram, particularly in parking lots, green spaces, commercial activities, consumption and leisure spaces. They consider that the existing urban furniture is insufficient especially in terms of benches. They suggest to add urban furniture to allow to people to have a rest by choosing lighter and more ecological materials (wood), to plant trees and develop green spaces, also to create playgrounds and recreation areas, the construction of underground parking lots and to enliven trade. Based on these interviews, we found that civil society has been little involved in the process of implementing the Constantine tramway project.

CONCLUSION

This research shows that the tramway is a catalyst for irreversible spatial transformations. These transformations vary from one place to another and each of them has different effects on the quality of public spaces, on their urban ambiances and on users. In Constantine, the tramway has contributed to urbanity, modernity, embellishment and security of crossed public spaces. In return, it has caused traffic, parking and trade deterioration problems. This survey shows that the tramway alone cannot improve the quality of public spaces or create convivial ambiances. It needs to be accompanied by urban requalification operations, quality developments, energizing trade and a participatory approach. It seems necessary to engage urban and architectural approaches that take more into consideration users' opinions and feelings, because they are the first ones affected by the produced spaces and the transformations generated.

REFERENCES

1. Amphoux, Pascal. 2007. «La notion d'ambiance. Un outil de compréhension et d'action sur l'espace public.» In *L'espace public urbain : de l'objet au processus de construction*, 71-81. PU du Mirail. URL: <https://hal.archives-ouvertes.fr/hal-00995436>.
2. Augoyard, Jean-François. 1998. «Éléments pour une théorie des ambiances architecturales et urbaines.» *La recherche sur les ambiances architecturales et urbaines, Les cahiers de la recherche architecturale* 42 (43):13-24.
3. Bégout, Bruce. 2020. *Le concept d'ambiance : essai d'éco-phénoménologie*. Paris, Éditions du Seuil.
4. Bosredon, Pauline, Bianca De Marchi, Divya Leducq, and Aniss Mezoued. 2017. La fabrique des espaces publics dans les villes "non occidentales". *URBIA. Les cahiers du développement urbain durable*, Vol. 20, p. 147.
5. Fleury, Antoine. 2009. «Espaces publics et environnement dans les politiques urbaines à Paris et à Berlin.» *Annales de géographie* 669 (5):522-542. URL: <https://www.cairn.info/revue-annales-de-geographie-2009-5-page-522.htm>.
6. Fritsch, Bernard. 2007. «Tramway et prix des logements à Nantes.» *L'Espace géographique* 36 (2):97-113. URL: <https://www.cairn.info/revue-espace-geographique-2007-2-page-97.htm>.
7. Godard, Xavier. 2007. "Some lessons from the LRT in Tunis and the transferability of experience." *Transportation Research Part A: Policy and Practice* 41 (10):891-898.
8. González, Rubén C Lois, Miguel Pazos Otón, and Jean-Pierre Wolff. 2013. "Le tramway entre politique de transport et outil de réhabilitation urbanistique dans quelques pays européens: Allemagne, Espagne, France et Suisse." *Annales de géographie* (6):619-643.
9. Hamman, Philippe. 2011. *Le tramway dans la ville. Le projet urbain négocié à l'aune des déplacements. Collection «Espace et territoires»*. Rennes, Presses Universitaires de Rennes.
10. Hecham-Zehioua, Bernia, and B. Labii. 2009. "De l'effet structurant du projet urbain à l'analyse prospective des projets du PMMC à Constantine." *Sciences & Technologie D* (29):9-18. URL: <https://www.asjp.cerist.dz/en/downloadArticle/409/0/29/58179>.
11. Kaufmann, V. 2002. «Les politiques de transports urbains au carrefour de nos contradictions.» *Pouvoirs locaux* 53.
12. Laisney, François. 2011. *Atlas du tramway dans les villes françaises*. Paris, Editions Recherches.
13. Mezoued, Aniss M. 2015. «La mise en récit de l'urbanisme algérois, passé, présent, futur. A la recherche des conditions d'institution de l'espace public comme médiation et comme projet. Cas du tramway d'Alger.» Thèse de Doctorat. UCL-Université Catholique de Louvain.
14. Otón, Miguel Pazos. 2012. «Le retour du tramway dans les villes espagnoles: situation actuelle et perspectives.» *Revue Géographique de l'Est* 52:1-2. URL: <http://journals.openedition.org/rge/3524>.
15. Redondo, Belinda. 2012. «Tramway et territoire: quel urbain en perspective?» *Revue géographique de l'Est* 52 (1-2).
16. Remy, Jean, Liliane Voyé, and Inès Biolley. 1981. *Louvain-La-Neuve. Ville nouvelle et innovations*. Louvain-La-Neuve, Centre de Sociologie Urbaine et Rurale.

17. Rémy, Nicolas, and Nicolas Tixier. 2016. «Ambiances, demain - Ambiances, tomorrow - Ατμόσφαιρες, αύριο.» 3rd International Congress on Ambiances, Volos, Greece 1: 11 - 28. URL: <https://hal.archives-ouvertes.fr/hal-01428653>.
18. Sacré, Christian. 2006. «Mise au point d'une méthode d'évaluation de la perception et de l'appropriation d'une voirie urbaine par les riverains et les usagers, après un réaménagement lié à l'implantation d'une nouvelle ligne de tramway : Étude de définition.» In *Quatre ans de recherche urbaine 2001-2004*. Tours: Presses universitaires François-Rabelais. URL: <https://books.openedition.org/pufr/539>.
19. Thibaud, Jean-Paul. 2018. «Vers une écologie ambiante de l'urbain.» *Environnement Urbain/Urban Environment* 13. URL : <https://journals.openedition.org/eue/2135>.
20. Troin, Jean-François. 2015. «Quand les «marges» territoriales, sociales et économiques bougent. Le rôle du métro et des tramways dans les métropoles maghrébines : quelques pistes de recherche.» *Les Cahiers d'EMAM. Études sur le Monde Arabe et la Méditerranée* (27). doi: <https://doi.org/10.4000/emam.1078>.
21. Wolff, Jean-Pierre. 2012. «Le tramway: au cœur des enjeux de gouvernance entre mobilité et territoires.» *Revue géographique de l'Est* 52 (1-2). doi: <https://doi.org/10.4000/rge.3498>.
22. Zebiri, Imad. 2019. «La politique des transports en Algérie : l'impact du tramway sur l'aménagement urbain de la ville de Constantine.» Thèse de Doctorat. Université de Lyon, Lyon.

Citation: Ikram AHMARI, Nadra NAIT AMAR, *et al.* *Living the Public Sspace, Exploring the Urban Ambiances of the Tramway of Constantine, Algeria.* *Int J Innov Stud Sociol Humanities.* 2022;7(8):198-208. DOI: <https://doi.org/10.20431/2456-4931.070819>.

Copyright: © 2022 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license