Impact of Visual Pollution at the Entrances of Coastal Cities in Lebanon

Hijazi Rola (PhD)
Faculty of Fine Arts and Architecture,
Lebanese University, Lebanon

Abstract
    Visual pollution is a term given to unattractive visible elements such as non-thought-out buildings, unregulated architecture, street furniture, and random billboards. All these unattractive components have an effect on human eyes. The paper focuses on shedding light on the impact of visual pollution at the entrances of coastal cities in Lebanon to build a knowledge base for such pollution problem. Photographs were taken of the main entrances of Tyr, Saida, Beirut Byblos, and Tripoli through a camera installed on a car. These entrances were located using maps from Google, the municipality and other sources. The most important findings of this study were that cities' entrances have been visually polluted in several ways especially with facades of buildings, advertising materials, lack of aesthetic elements, and lack of street furniture. The study recommended that municipalities should carry out several actions in order to improve the visual and aesthetic aspects of the coastal cities' entrances. Creation of street furniture, organization of advertising boards, imposing of legislation and laws to regulate aesthetic aspects of building facades as well as promoting aesthetic education among the local community could help in mitigating the problems.

Keywords: Visual pollution, coastal cities' entrances, aesthetic elements

Introduction
    A city entrance is defined as the open space through which the urban mass is reached. It is also defined as a transition with a clear border between urban and non-urban areas. In other words, city entries are the first urban spaces which all individuals face when they come in (Carmona, 2003). Amiri et al. (2006) defined an entrance as a place or a combination of places through which they have a feeling that they belong to a city.
    Throughout the world, city entrance is considered as the cultural façade of each city as it leaves a first impression on the cultural, economic, and

development process (Khader, 2017). It is divided into Land entrance area, Sea entrance, and Air entrance (Khatibi & Habib, 2013 & 2015; Abdel El Salam & El Fayoumi, 2008).

The role of the city entry point has evolved and developed through the long history of civilization. It represents the most important urban element in the positive interaction of the city with those who come to it and the link between the city and its regional surroundings. It creates the impression of the beginning of the city's entry and expresses as much as possible its identity and character that distinguishes it from other cities and at the same time meets its needs. In other words, city entrances and portals clearly reflect their history, their possessions, and the things they are famous for (Grütter, 1996). The coastal cities are always proud of their beaches. However, the historical cities highlight their historical monuments and landmarks.

However, the organization of city entrances is a combination of public and private interests. The aesthetic qualities of the environment represent an important factor in the human quality of living, as aesthetics play a great part in giving meaning to life as well as improving perceived safety (Uppala, 2017). Pleasing environments have scientifically been proven to have a positive effect on people's health and well-being (Uppala, 2017).

In addition to the most talked-about land, air and water pollution, there are some other types of pollution that affect Human beings in a subtle yet significant way. One of these is visual pollution which is a relatively newer and an unconventional concept. It is defined as the whole of irregular formations, unorganized dumping of litters, unsystematic display of billboards, cables, hanging wires, worn-out buildings, unplanned buildings and display of flexes and banners for electioneering, heaped construction materials, and unattractive graffiti that might affect a person's ability to appreciate or enjoy a view.

The first impression of a community rural, suburban or urban is generally visual. For that, the visual and aesthetic aspects in a city help to achieve clean environment, better economic situation, psychological comfort, tourist activities as well as some visual and aesthetic value. Visual pollution suggests that the portion of the built and natural environment we are viewing has been downgraded and, hence, made less attractive to us. The degree to which the visual cortex of the brain is stressed is directly related to the light frequency and variety to which it is exposed (Gokhale et al., 2011). Some studies demonstrated that visual pollution may lead to distraction, decrease in opinion diversity, and loss of identity, traffic congestion, health hazards of diverse kinds, irritability and psychological disturbances, eye fatigue, loss of sense of hygiene, and aesthetics (Gokhale et al., 2011; Yilmaz, 2011). In addition, children closely associated with visual pollution from childhood are generally

forbidden of subtle aesthetics and they get used to this unsightly surroundings, even lose their natural desire to change it (Milan & De, 2015).

This pollution is a comparatively recent concept with some worldwide uproar. Many cities worldwide are taking various measures to minimize this pollution. In Sao Paulo, Brazil, billboards, outdoor video screens and ads on buses and taxis as well as pamphlets have become illegal. In Japan, there are plans to strengthen the already strict rules for outdoor advertising, including a ban on rooftop advertising in certain cities. The aim is to preserve the skyline (Gilani, 2015). However, in Egypt, the government's attempts to stop the visual pollution in Cairo failed due to the absence of a strict implementation mechanism for the laws regulating advertising in Cairo, which obligates the owners of various activities (Center for Environment and Health Studies, 2016).

However, in Lebanon, where this research took place, the size of visual pollution on cities' entrances has significantly increased as a result of multifarious causes such as administrative negligence, the absence of laws and legislative frameworks governing the construction process, the lack of coordination among state institutions, the absence of aesthetic vision to make additions or to coordinate the streets, and the marginalization of the role of planners and specialists in the field of urban design when carrying out any construction projects.

Research Problem and Objective

Worldwide cities' entrances usually face various problems (political, social, economic and natural). Such problems could be considered as threats to the architects developing an entrance.

In this present research, the lack of design and layout of the coastal Lebanese cities' entrances is highlighted. This is aimed at developing criteria and indicators for the design of city entrances through which the vision is intensified by using the elements of the site coordination and also intensifying some of the activities and uses necessary when approaching the city using the vocabulary of planning and urban design. Hence, this is in parallel with meeting the needs of the citizen inside the city.

From this point of view, it is possible to lay the foundations and applied criteria for the entrances of the cities that vary according to the types of entrances and their characteristics and according to the classification of the surrounding cities and territories through a methodology that accommodates Lebanese coastal cities.

Material and Methods
Documentation through Photography
Photographs were taken of the main entrances of Tyr, Saida, Beirut Byblos, and Tripoli not through aerial photography or different angles or technical images, but through a camera installed on a car in order to give the scene exactly as viewed by the visitor before entering the city.

The identification of entrances of coastal cities, municipality, and other sources was made possible by locating positions using maps from Google. However, there were difficulties identifying the entrances of cities without reference to maps. This is due to the absence of signs indicating the entrances of the cities in most cases.

Visual Comparison
Visual comparison was done between coastal cities' entrances with visual pollutants and those which were free from it. This was also achieved by asking locals whether or not they can identify the entrance of the city to match with maps.

Results
Visual Pollution from Different Sources
The different figures clearly show the hazardous visual environment in the specific entrances of the five selected Lebanese coastal cities where the clutter and confusion create a state of continuous disturbance.

The figures depict clearly the hazardous visual environment where the clutter creates a state of continuous displeasure. As we can see, the presence of some billboards at different areas and the garbage on the roadside, skylines, and also coloration reveals how all-pervading their unpleasant effect on the entire visual horizon is. Also, in all of these different figures, we cannot determine the beginning of any of the cities due to the absence of signs.
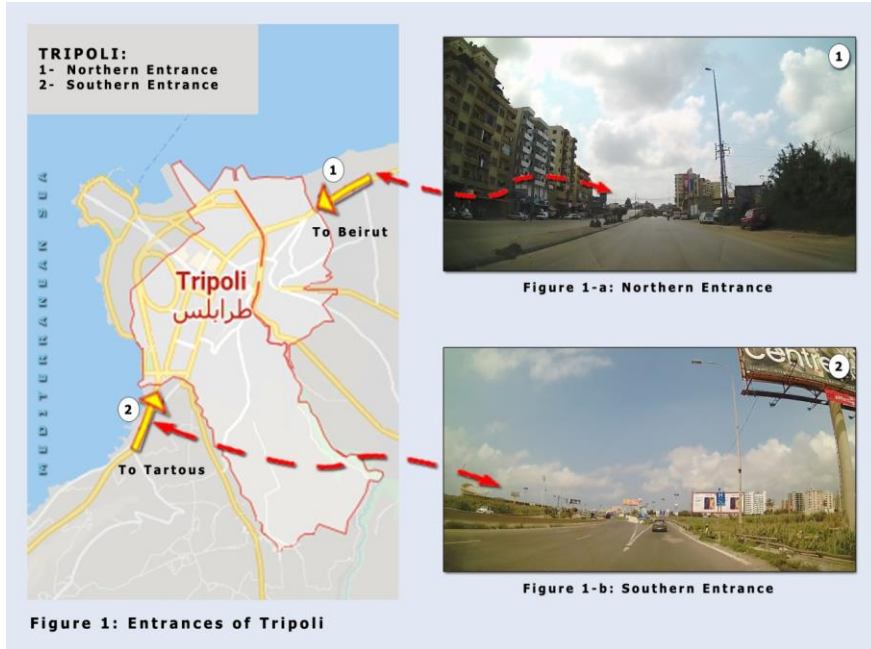
Background map taken from Google Maps
Figure 1. Entrances of Tripoli

In Tripoli city, the Northern entrance (Figure 1a) clearly reveals the polluted visual environment with the presence of uncontrolled parking, billboards, powerlines, mosaic of colored and informal buildings, plus the absence of signage, streetscape, and a landscape. Also, we can notice the undetermined beginning of the city.

On the other hand, in the southern entrance (Figure 1-b), generally the landscape feels dry and exposed, and does not stand out visually or distinguish the area strongly.

Figure 1c clearly reveals the polluted visual environment which shows the presence of billboards, electronic billboards, inconspicuous and unappealing signage, absence of a streetscape, a landscape or any landmarks.

Figure 1c. Southern entrance – zoom in

Background map taken from Google Maps
Figure 2. Entrances of Byblos

The figure above (figure 2a) shows that the Northern entrance of Byblos city is not considered to be visually polluted. This is because we can observe the well-designed nature of some elements at the entrance such as clear boarders, planted berms, landmarks, signs, etc. (Figure 2c).

Moreover, one of the most important features of Byblos is its extraordinary landscape and streetscape. When the passengers approach from North to Byblos, they will observe an amazing perspective of the general landscape in comparison to other Lebanese coastal cities.
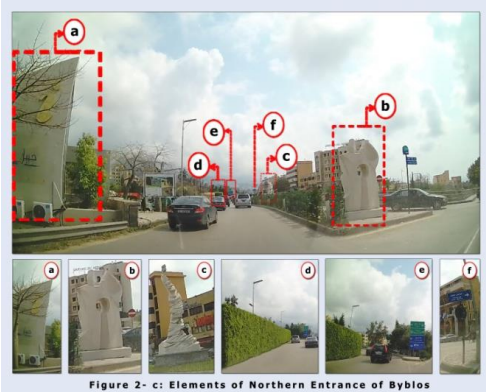

Figure 2c. Elements of Northern Entrance of Byblos

However, this is not completely the case for the Southern entrance due to the presence of minor visual pollution elements (Figure 2b) such as few billboards, powerlines, and landscape that are not as organized as in the

Northern entrance. In general, the southern entrance of Byblos is considerably good in comparison to other cities, due to the presence of a clear sign which indicates the beginning of a main city.
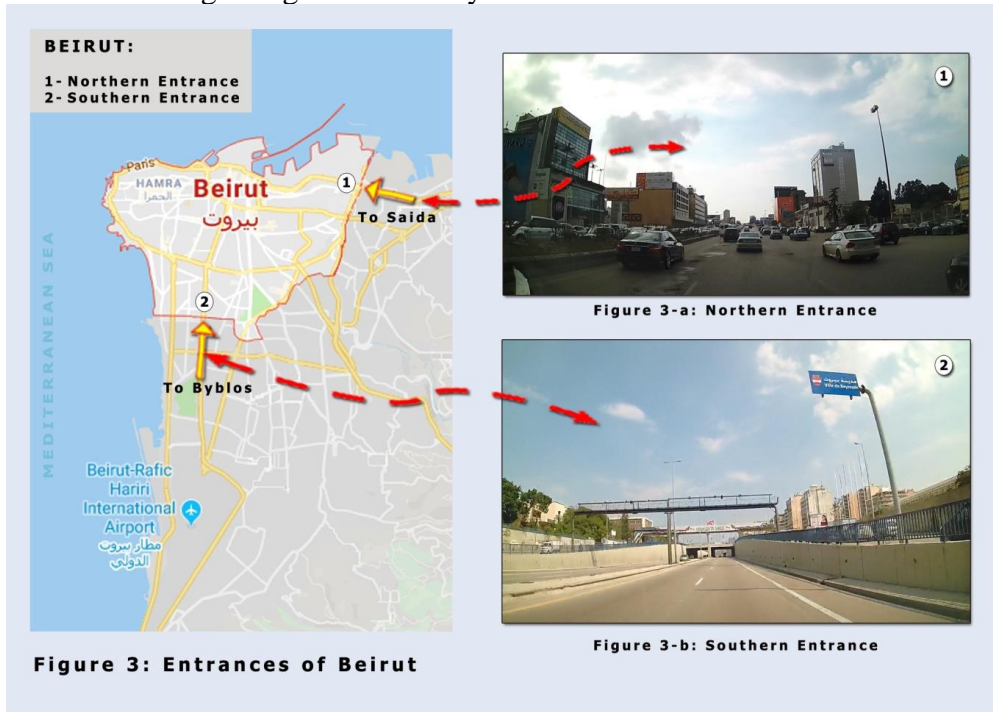
Background map taken from Google Maps
Figure 3. Entrances of Beirut

Consequently, the city of Beirut is considerably the biggest city in Lebanon because it is the center of economy as well as the Capital of Lebanon. Figure 3 shows that the entrance spaces of Beirut mostly lack visual attraction and there is not motivation while entering into the city. In other words, they are not well defined. Also, Figure 3 shows the absence of a factor or a special property which makes an entrance space of the city different from other cities, as well as inconspicuous and unappealing signage, absence of feature elements, architectural highlights, streetscape, landscape, and an outstanding natural appearance.

However, it is noticeable that the entrances contain huge grey areas of asphalt or concrete, which makes it in need of natural elements such as vegetation, trees and flowers. On the contrary, if vegetation exists, it is not taken into account because it is too distant (Figure 3b).

Background map taken from Google Maps
Figure 4. Entrances of Saida

The Northern entrance of Saida (Figure 4a) has an organized set of powerlines and a very few number of billboards. The signs are clear, but they do not represent the location of the entrance. However, there is a lack of organized streetscape, landscape, or green area such as green wall. Also, there is an army barrage in the area which contains barriers that split the road and prevent cars from changing lanes as well as an army tower, which block a significant portion of the general view. Also, there is the absence of any architectural landmark or highlights to represent the identity of Saida.

Concerning the Southern entrance of Saida (Figure 4b), it suffers from the absence of any of the elements which indicates the presence of a city entrance.
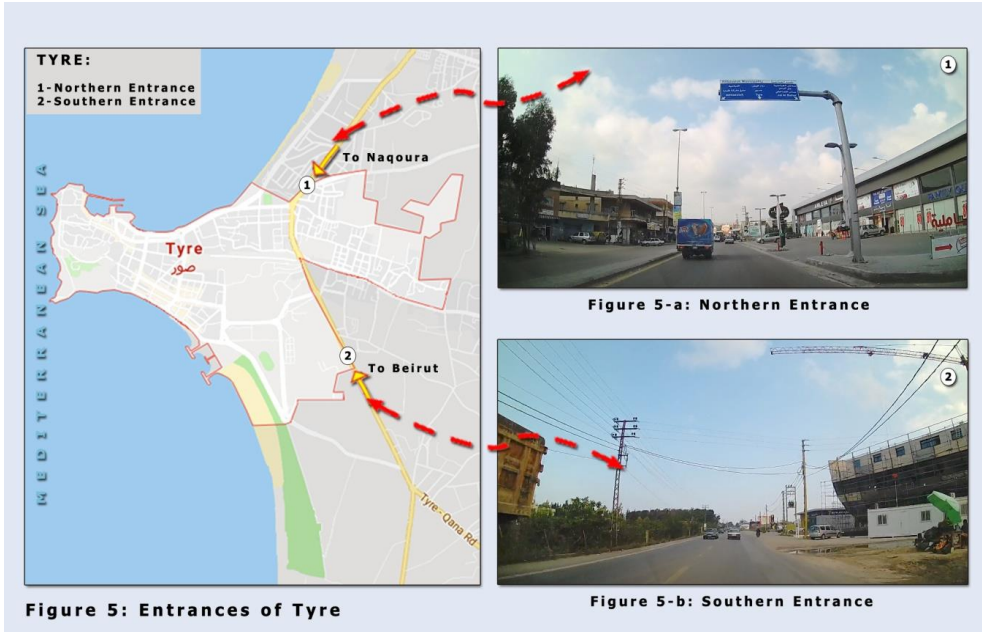
Background map taken from Google Maps
Figure 5. Entrances of Tripoli

In Tyre city, the northern entrance (Figure 5a) shows the visual environment which contains billboards set in a hazardous way on both sides of the road, inconspicuous and unappealing signage, absence of a landscape, business centers, and mosaic of colored and informal buildings. On the other hand, the southern entrance (Figure 5b) shows the absence of signage, the excessive presence of powerlines which make them visually dominant as the cables cross over the street with suspended streetlights in several locations, and the presence of costermonger or peddler. Also, the beginning of the city cannot be determined as there is no sign.

Discussion

Entrance is not a joint because the joint is an independent identity apart from the outside and inside. However, the entrance is not an independent identity; rather, it is a combination of identities (Bagheri & Mansouri, 2018).

The roles and meanings of city entry include the significance of arrival, safety, home-coming, and the sense of completing a journey. The entrance way conveys an immediate impression which for many becomes the measure of all their later impressions of that place. Through history, a city's values or self-image, such as its power, might and wealth, its culture or openness, have been represented in the form and expression of its entry gates. In the past, entrance spaces always included gardens, farms, suburbs, fort, and fence (Rahnama & Beheshti, 2015).

The routes of daily trips by citizens in their own cars, buses or undergrounds to the outside of the city are formed by undesirable and ugly views. As a result, nobody pays attention to these regions which should have been considered as parts of desirable and important urban spaces. In addition, a citizen should be able to feel and experience city events while passing through these routes or going to work or spending free times outside the city (Habib & Khatibi, 2012).

The design of the entrance should be such that the physical and mental permeability is possible and should create a feeling of transformation for the passenger. In fact, it should induce the end of an area and the beginning of another one (Rahnama & Beheshti, 2015).

City entrance design should be such that the information required by the audience is provided as symbols, signs, and metaphors step by step. Thus, once entering the city, the required preparation will be created and the usual stress in entering from suburban highway to urban streets will be minimized. In fact, to design a city entrance is to plan a two featured project: one feature to nature and another to the city (Noraei et al., 2015).

This entrance is linked to the actual urban boundaries of any city. Since these borders change over time, in theory, the city's entrances are changed over time according to the urban development of the city's extensions. Based on this, when selecting the location of the city entrance, the long-term urban development strategy of this city should be viewed so that the site is chosen based on the agreed urban boundaries of this city through a long-term strategy. For that, the possibility of updating the location of the city's entrances is then reviewed once the strategy or long-term plan of the city has been updated.

Furthermore, this kind of visual pollution in a developed country may not match with the visual pollution in a developing country, neither the consciousness of the inhabitants in these two types can have equal bearing. For example, in developing countries, garbage may be a menace of much larger magnitude than in developed country, whereas the sources of visual pollution may be of different types in a developed nation (Milan, 2015).

It is envisaged that Lebanese cities' entrances will contribute positively to their image and presentation; to welcome and direct visitors to points of interest; to articulate cities' past, present and future; to enhance points of historical, cultural and natural interest; and to be valued by the community who contribute to their care. For that, it is imperative to establish the foundations and standards for planning and designing the entrances of our cities at all levels and the type of ports. The municipalities are committed to these bases and standards. At the same time, they are committed to developing and implementing plans that develop these approaches. These include the type of use and the design of the urban design, such as sidewalks, poles of lighting and landscaping, welcoming and guiding paintings, and landmarks that reflect

the character and identity of the city. Such foundations and standards lead to the improvement of the urban landscape of our cities.

Conclusion

The field observations of entrance spaces of cities in Lebanon show that they lack distinguishable and specified structures. In addition, they lack identity and cause damages to the identity of cities due to their visual and environmental disorders.

It is also showed that places with undesirable appearance like repair shops, warehouses, and costermonger or peddler form the entrance scenery.

On the other hand, there are not enough guidelines for newcomers on different parts of the city, and the signs which introduce the cities are mostly in unsuitable places and are of unreasonable sizes that are not easily in sight.

All of these city entrance spaces mostly lack visual attraction and do not create any motivation for entering the city.

References:
1- Abdel El Salam, O.M.El.H., El Fayoumi, M.A.H. (2008). "Foundations and Criteria for the Design of Urban Entries in the Arab Republic of Egypt. Case Study: Road Entrances. Second International Architectural Conference "Architecture, urbanisme and Time". Ain Shams University, Cairo, Egypt.
2- Amiri, S., Manouchehri, K. (2006). *History and Culture Gate of Shiraz Project*. Master's thesis in architecture, university of Tehran.
3- Bagheri, Y., Mansouri, S.A. (2018). City entrance, as an element for creating an independent identity for the city landscape. *Bagh- e Nazar*, 15 (60), 5-16.
4- Carmona, M., Heath, T., Oc, T., & Tiesdell, S. (2003). *Public Place – Urban Spaces: The Dimensions of Urban Design*. Oxford, UK: The Architectural Press.
5- Center for Environment and Health Studies. (2016). Visual pollution in Egypt and the Arab world: Problem and Solution. *Journal of Environment and Health*.
6- Challis, J., Morgan, D., & Morgan, R. (2006). *Ballarat Entrances Strategy*. Austria, Ballarat VIC 3350: THA Landscape Architects Pty. Ltd.
7- Gilani, I., (2015, October). *The Nation*. https://nation.com.pk/13-Oct-2015/visual-pollution-vitiating-urban-views.
8- Gokhale, V.A., Raichur M., Rowtu, I. (2011). Examining Impact of Visual Pollution on City Environment: Case Study of Pune, India. Dr. B.N. College of Architecture, Pune.

9- Grütter, J.K. (1996). *Aesthetics in architecture*; translated by Pakzad, J. Tehran: Shahid Beheshti University Press.
10- Habib, F., Khatibi, M.R. (2012). Exploring the city entryways and thresholds as the lost spaces in today's urban design, case study: Entrance of Sanandaj – Iran. 2nd international conference-workshop on sustainable architecture and urban design 2012, school of housing, building and planning, universiti sains malaysia, penang, Malaysia 3rd - 5th march 2012, 583-592.
11- Khader, R.A.R. (2017). *Planning and redeveloping cities' entrances. The case study of the Eastern Entrance of Tulkarem city*. Master's thesis in Urban Planning Engineering, Faculty of Engineering & IT, An-Najah National University, Nablus, Palestine.
12- Khatibi, S.M., Habib, F. (2015). Defining a structural model for the revitalization of the lost urban spaces (City Entrances) in contemporary urban design. Case study: Entrance of Sanandaj. *Space Ontology International Journal, 4* (14), 35-42.
13- Khatibi, S.M., Habib, F. (2013). Defining a structural model for the revitalization of the lost urban spaces (City Entrances) in contemporary urban design. Case study: Entrance of Sanandaj. *Space Ontology International Journal, 1* (1), 55-62.
14- Milan, K.J., Tanaya, D. (2015). Visual pollution can have a deep degrading effect on urban and suburban community: A study in few places of Bengal, India, with special reference to unorganized billboards. *European Scientific Journal*, *1*(special edition), 1-14.
15- Noraei, S., Shekarforoush, Z.S., HESARI, B.A. (2015). City entrance as suitable potentials to gain identity: A case study in west entrance of Bojnoord. *Science Journal, 36* (4), 1213-1219.
16- Rahnama, M.R., Beheshti, A.T. (2015). Applying Spatial Planning In Organizing Entrances. Case Study: Southeast Entrance of Mashhad Metropolis, Iran. *Asian Journal of Research in Social Sciences and Humanities, 5*(1), 224-237.
17- Uppala, E. (2017). *Aesthetic considerations in localization decisions of city entrances – The Southern approach to Greater Stockholm Region as an example*. Master's thesis in Landscape Architecture, Faculty of Landscape Architecture, Swedish University of Agricultural Sciences, Alnarp.
18- Yilmaz, D., Sağsöz, A. (2011). In the Context of Visual Pollution: Effects to Trabzon City Center Silhoutte. *Asian Social Science*, *7*(5), 98-109.