

VITALITY IN TIME: THE USE OF URMIA BAZAAR

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ABSTRACT

Bazaar is the most liveable part of any city in middle east. Mostly covered (less uncovered streets or Rastehes) public space which was the most interactive part of the city specially in the past. Bazaar not only is as answer as economic centre in the city but also is the most socio-cultural attractive space in the city to serve people in different levels of accessibility. Spatial characteristic of Bazaar besides its role during the time in the inner city and how it affects the socio-cultural aspects of public space; is one of the scopes recently interested many researchers, professionals, and decision makers. Meanwhile, Urmia Bazaar among the others is one of the samples in northwest of Iran, experiences various transformation through the time mostly in last 100 years, specifically changes in inside and enclosed spaces layout.

Pedestrian movement through the public space is a key issue to find out how they develop and grow through the time the main spatial characteristic of the public space such as vitality and socio- cultural-economic interaction in it.

This study developed with comparing the pedestrian natural movement as it was addressed by Hillier (1993, 2012) with some syntactic and topological measures in different periods to fulfil how streets were used through after and before changing in the layout of the public space in one side. On the other hand, it tries to clarify how visual characteristic of the form of the space can invite further participants to the space in different layouts for Urmia Bazaar.

KEYWORDS: Vitality, Urban Form, Spatial Analysis, Bazaar, Urmia

INTRODUCTION

Vitality in public spaces is one of the hot argued subjects in the recent years in academic and professional fields. Although the term ‘vitality’ is focused on the success of urban spaces and the intensity of public life in the public space, but how was the role of public space considering this issue during the time is also very interesting to discover for the specialists. The transformation of the public space as its use was classified by Gehl (2011) regarding the three different categories of essential, optional and social outdoor activities can be read easily during the journey of the urban spaces through the time in the cities mostly in the old fabrics.

Bazaar as the most liveable part of the city in middle east was the most interactive space of the city typically in past. Bazaar is the most socio-cultural space responses to the economic

requests of the city not only in past but also in the present. As Habibi (2000) stressed Bazaar is the joint venture of the city which shaped the heart of the city and connecting different spaces as the most cacheable place of the city. While, modern urbanism in last decades formed unconnected built-environments, fabrics and neighbourhoods linking to the past, affected the spatial vitality and use.

Pedestrian movement in the fabric acts as a key factor to announce how the public space developed, improved, and acted through the interaction between people and the built environment as a source of socio-cultural and economic presence of the city. Meanwhile, as it was proved in earlier studies, any change in built environment will result in changes in user's behaviour. Following these, this study based on the Urmia Bazaar, in Iran, developed to compare the pedestrian movement according to the morphological analysis debated by Hillier (1996; 1993) in spatial and visual aspects in different periods of time to discover if any changes in these characteristics can affect the attraction for more use or presence in the public space.

THEORETICAL FRAMEWORK

Urban public space as the framework of the city structure is the scene for presenting the social interaction or determining the social network which can improve the progress, growth and developments of the society as well as socio-cultural identity of the publics and spaces (Douglas, 2003). Nowadays the concept of quality of environment, which is somehow representing people activities, presence and use of space; is very much argued and more emphasis by different researchers, professionals, and decision makers. The quality and success of the spaces as it was discussed by Bada & Farhi (2009), Gehl (2011); Golkar (2001), Hillier & Hanson (1984), Jacobs (1961) among the others; also guide to more use of the space, even though different cultures use public space differently.

Many agree that meanings, identity, transformation of the urban space is made through the time (Kostof, 1991; Madanipour et al., 2014; Seamon, 1994). While somehow, with looking deeply in debates by FoadMarashi & Serdoura (2021a), Gehl (2011); Gomes (2014), Ward Thompson and Travlou (2007), Hillier and Iida, (2005), Penn et al.(1998), Whyte (1980) among the others; deep relation between public spaces and people interaction and how human and built environment represent; discovered. It was confirmed that people presence in the public space invited more activities as Gehl (2011, p. 31) emphasis: "new activities begin in the vicinity of events that are already in progress".

Continually, vitality of the public space affected by the people presence there as Rahman et al. (2015) and Gehl (2011) expressed and classified for necessary activities (daily trips to work, school, shopping, waiting for in street, etc.) which are not dependent to the space or other conditions and optional activities (evening walks, sitting, taking sun bath, newspaper or book readings and etc.) which happened in good climate conditions. No doubts, there is a hybrid of activities between these two main categories, we can add social activities such as children activities, greeting, watching and hearing others, leisure, which can be in both levels (Gehl, 2010).

Talen (2011, p. 955) addressed the vitality in the society for urban spaces in five different measures named as "accessibility, connectivity, density, diversity and modality", while Zeng

et al. (2018) debated density, habitability, accessibility, and diversity as spatial indicators to addressing the understanding of the vitality in a community.

However, the visibility of the space and how it attracts people to more participation in the space is another issue that for the first time has been studied by William Whyte in 1980. He confirmed more use of the spaces has strong relation to more visible spaces and how the lay out and its configuration affected by people presence in various day times.

Wide range of researchers believed that urban form and its characteristic also can affect the social behaviour and people interaction. As Zumelzu & Barrientos-Trinanes (2019) cited the work of Moulay et al. (2017), the social communication can be defined as passive and active interactions considering the amount of time people presented in the public space. They also confirmed that denser or compact forms may have well-distinguished vitality in the urban space.

How vitality can be influenced by form also confirmed on the study and design of EL Houria Plaza, in Baghdad by Bendjedidi et al. (2019) or Shen & Wu (2021) when stated public space is considered by observable spaces and included the visible activities, creating the atmosphere that people may notice, understand, and practice. Ventura et al. (2017) on defining new methodology to study the liveliness of some open spaces in Portugal. Likewise, Bada and Farhi (2009) deeply stated urban spaces need: the consideration of the space layout and all its components, and land topography. All these discourses are more confirming the statement: “[...] how well the spatial configuration fits real pattern of human behaviour [...]” explained by Hillier (2004).

Regarding the same streamline, Bazaar in Iran, and most of the middle eastern countries as a most liveable, dynamic urban space of the city plays a key role in the journey of vitality, urban dynamic, its transaction, and intersection of socio-cultural also economic interaction between people and the city fabric during the time. Centuries of experience of the built environment of Bazaar announced that this space supports different necessities for habitants (Najari and Mehdinejad, 2020) and indeed it was the main actor in shaping, generating and distributing various socio-cultural/socio-economic interactions (and presence/interaction of the three forces at the same time) in the neighbourhood and/or urban spaces. It was also confirmed by FoadMarashi and Serdoura (2021a, b) how vitality of the bazaar affected by spatial changes in the city layout and its spaces.

CASE STUDY AND METHODOLOGY

Brief Introducing to Urmia Bazaar

Urmia is one of the oldest cities embedded in north-west of Iran close to the Urmia Lake (figure 1). Although the roots of the city return to 5000 years ago but what remained as the city-built environment in past belongs to 120 years ago except the Bazaar which according to the chronological documents saved the form in most parts for 200 years ago and had faced to more soft changes. The form of the city concerning the modernisation impacts, experienced various imposed changes regarding new streets, squares and following those changes in the roots and passes in Bazaar and inner city. Although, these changes have been fully imposed to the monocentric city shape of the city but dramatically affected the social interactions, identity, and characteristic of the built environment (figure 2).

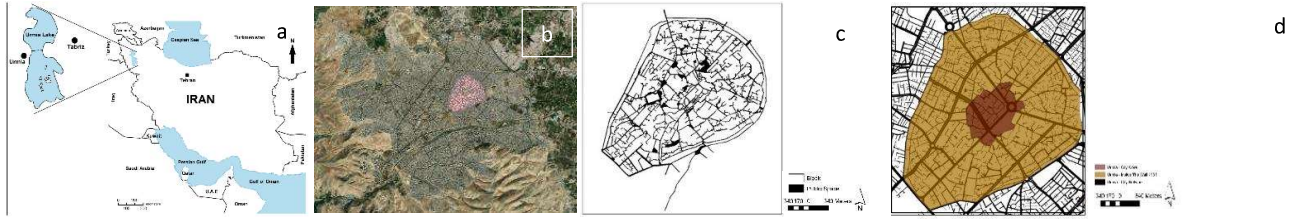


Figure 1. Location of Urmia in Iran(a), Location of the inner city at present(b) and Urmia city through the History (Foadmarashi, 2018) Urmia Built environment in 1933 (c) and inner city and commercial centre 2018 (d) (Foadmarashi and Serdoura, 2021)

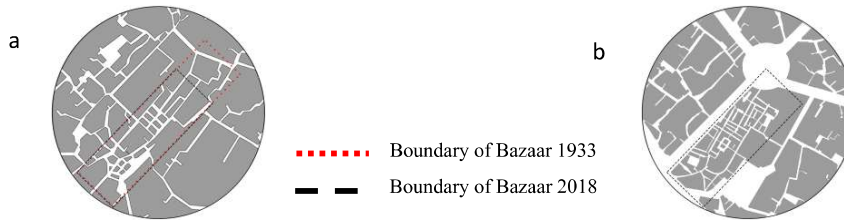


Figure 2. The fabric of Urmia Bazaar in 1933 (a) and 2018 (b)

Methodology

This study based on the descriptive analytical investigation to illustrate the link between the spatial use of the urban spaces and its transformation and changes in layout during the time. It is stated on the spatial analysis of the fabric confirmed by space syntax theory and methodology as linear representation of the form of the old core of the city of Urmia specially bazaar in two different periods before the falling of the city wall and recent years after different periods of imposing of modernisation changes to the built environment. It is also supported with the Visual Graph Analysis (VGA) to deeply study if the form of the city and following that its visual perspective, experience any changes in use of the urban space.

For this purpose, the whole oldest map of the city limited in the walls in 1933 and the city map in 2018 after long time passed of the modernization changes in layout, with buffer area of the 2000 meter (to reduce the edge effects) were used to calculate and analysis the topological measures of the linear representation of the city regarding the axial maps. Following this to understanding how morphological changes announce any changes or relation in visual understanding of the inner city, Visual Graph Analysis (VGA) for the Bazaar in the buffer area of 400 meter were applied.

RESULTS AND DISCUSSION

Following the liner analysis of the city model in axial map some topological and local measures like integration HH, entropy, integration HH2, control and controllability were calculated and deeply watched in both periods for the inner city and Bazaar (figure 3). Integration as a representation of accessibility and more use and presence in the space as defined by Hillier and Hanson (1984) in both local and global levels increased. While entropy as a measure of how spaces are coherently distributed regarding their accessibility (Hillier

et al., 1987) announce a decrease in value (table 1). Also, the value of control as a local measure to reading the choice of any space for being selected by the users according to its neighbourhood spaces shows a dramatic increase. Deeping in the figure 4 shows how the coherence and compactness of the fabric changed regarding as we have more spaces with more diversity in 2018, and how the distributed of the controlled spaces considering their choice of being selected shows more compactness on specific values.

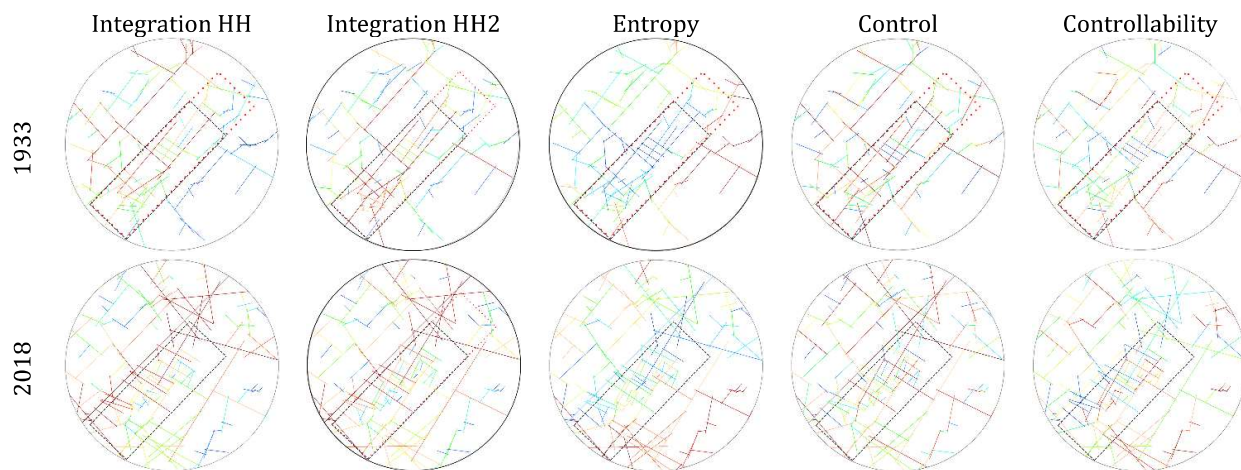


Figure 3. Comparison of topological measures in two periods of Bazaar in inner city in 1933 and 2018

Table 1. Global measures versus local measures in linear representation of the inner city in 1933 and 2018

Year	Level	Control	Controllability	Entropy	Integration HH
1933	Max	4.1706	0.75	3.9171	1.0986
	Min	0.1111	0.1111	3.4437	0.5554
	Average	1.0238	0.2958	3.5937	0.8543
2018	Max	27.4980	0.6667	2.7734	2.9421
	Min	0.0348	0.0163	2.5302	0.9463
	Average	1.3682	0.2109	2.6321	1.8368

Also, the diagram shows any increase in integration HH2 as local measure was well announce how that space is more controlled as it is more explained by the meaning of the controllability.

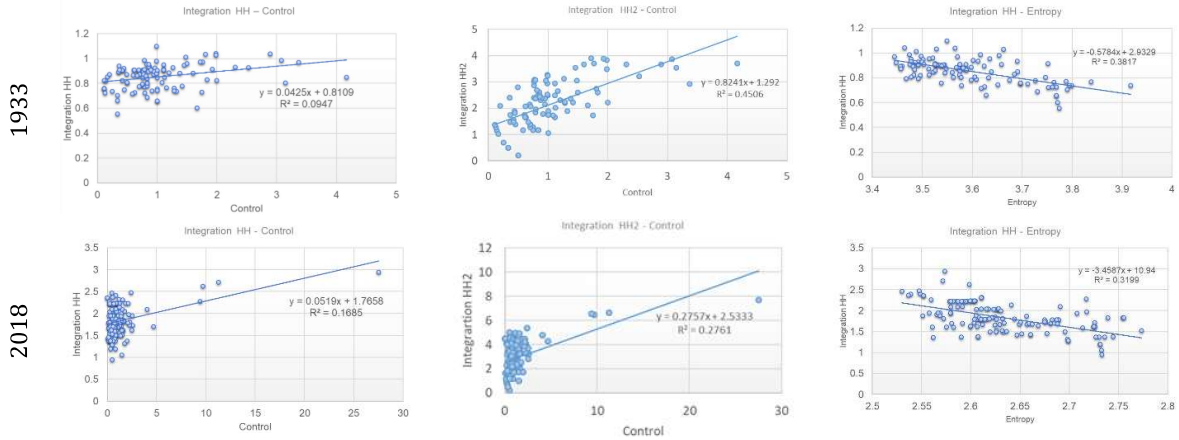


Figure 4. Distribution integration HH versus control and entropy in inner Bazaar in 1933 and 2018

Modelling the inner city in the 400-meter buffer area in VGA, announce three times increase in the visual integration which defines more visual spaces regarding to the pedestrian movement (table 2) though most of the values, regarding the changing in the layout, in the VGA reduced. Focusing on the figure 5 and table 2 also shows more changes in entropy and controllability of the area which shows the area became more visual to the users, and more spaces are visually accessible.

VGA analysis on the area also announces (figures 6,7) mean straight path of the area is more interconnected to the bazaar and its surrounding spaces in both periods even with more changes in lay out, mostly in 250 and 75 meter which is more confirms straight visual distance for walking and bazaar gates in current time.

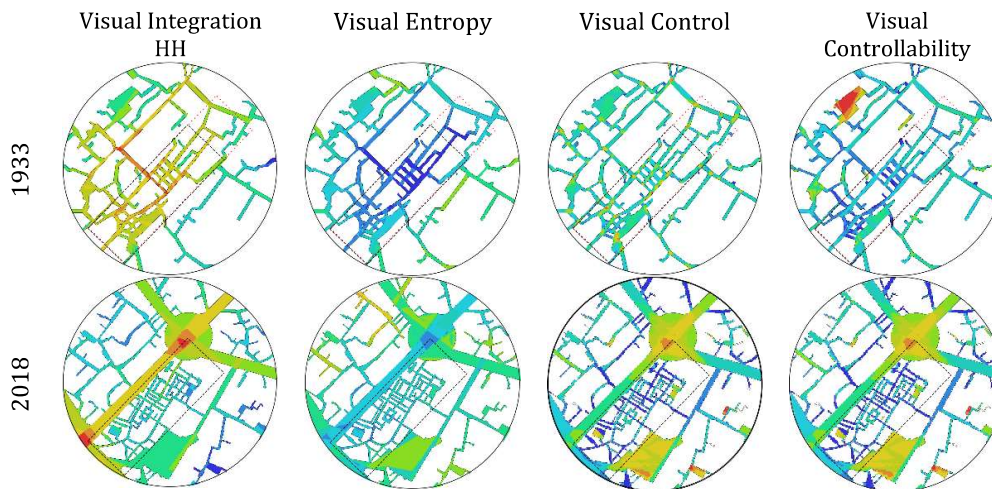


Figure 5. Comparison of visual measures in two periods of Bazaar in inner city in 1933 and 2018

Table 2. Global measures versus local measures in visual representation of the inner city in 1933 and 2018

Year	Level	Connectivity	Visual Control	Visual Controllability	Visual Entropy	Visual Integration
1933	Max	1133	2.3889	0.8275	3.5368	3.09155
	Min	0	0.1601	0.02	2.8598	1.06763
	Average	202.5088	0.9966	0.2837	3.1225	2.2065
2018	Max	21816	2.0507	0.7805	2.6812	9.7480

	<i>Min</i>	3	0.0627	0.0056	2.1209	1.4535
	<i>Average</i>	5609.3933	1.0000	0.3321	2.3910	5.6591

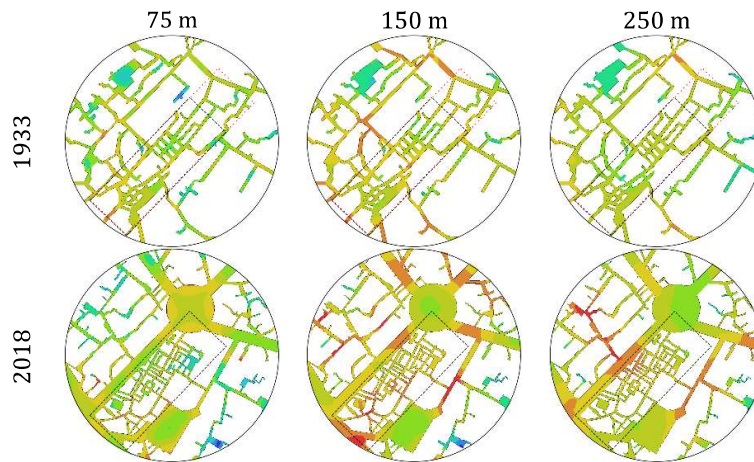


Figure 6. Comparison of the Metric Mean Straight Distance in 75, 150 and 250 meters in in two period of Bazaar in inner city in 1933 and 2018

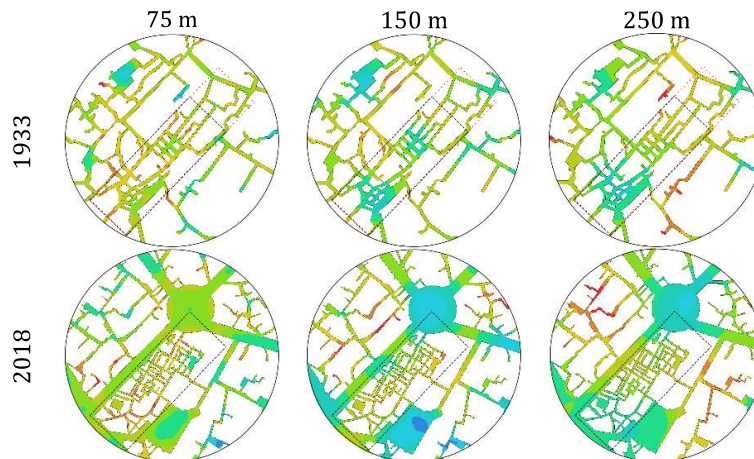


Figure 7. Comparison of the Metric Mean Shortest Path Distance in 75, 150 and 250 meters in in two period of Bazaar in inner city in 1933 and 2018

CONCLUSION

Public spaces have a great role in urban environment and its vitality. It is confirmed by the changes observed in the fabric and how it affects the people presence in the space. Considering the monocentric form of the Urmia it was predicted that most of the new hard and fast changes in old fabric layout resulted reduction in use of the old public spaces, which was not completely usual regarding previous investigations (Foadmarashi and Serdoura, 2021a; 2021 b). The study reveals that although imposed new layouts accept the better distribution of the spaces and more visual coherence in the space by having less topological

differences among spatial layouts and less fortuitous of being selecting by the people movement in small distances, but the visual openness of the fabric for the pedestrian dynamic was increased. The obtained results also corresponding with the outcomes of the axial map analysis for the inner city to confirm that the Bazaar still save its vitality during his journey in time.

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