Analysis of Activity Patterns and Design Features Relationships in Urban Public Spaces: A Case Study of the Old City Of As-Salt

Dr. Rana Almatarneh, Ph.D.
Assistant Professor of Architecture Chair, Department of Architectural Engineering College of Architecture and Design Al- Ahliyya Amman University

ABSTRACT
Urban public spaces have been considered an essential part of cities throughout history. Over the span of urban life, public spaces have continuously reflected the complexities of their cities' cultural, social, and economic contexts; whether as memorable, accessible, or meaningful places. However, recent researches on public spaces reveal that some are currently experiencing a decline in their physical design and in their use. Thus, in this period of change in using public spaces, it becomes important to investigate and evaluate the actual use of public spaces, how and why they are used, particularly in terms of their physical deterioration and improvement. Therefore, an opportunity exists to reveal and understand the interrelationship between physical patterns of public spaces and people's activity patterns within such spaces. As such, this research considers the design features of urban public space, focusing on people's activities and various forms of use. It employs a methodology that combines three major components; case study selection, data collection and management, data analysis to explore in depth the activity pattern related to the physical pattern of public spaces, within the case study. Finally, this research is expected to add insights into the application of urban design theories and practice which could lead to further studies to improve the public spaces design and planning process.

KEYWORDS: *The Old City of As-Salt, Public Space, Public Square, Activity Patterns, Design Factors, Case Study*

I. INTRODUCTION

Throughout the centuries, squares have been created and used for various purposes: from places to debate every-day societal issues and to exchange commodities to venues for political demonstrations or special events. Urban development would be impossible without public spaces such as squares, because they have been common exchange platforms of goods, knowledge, experience, culture, and entertainment (van Melik, 2008). Although the functions differ from square to square and from period to period, there is a common denominator: most squares function as meeting places where people spend time in. During the last decade we have been able to observe a renewed interest in urban public spaces in general, and most particularly in streets and squares both among town dwellers, theoreticians and practitioners of urbanism and architecture (Appleyard, 1981; Jacobs, 1961; Whyte, 1980). It is obvious that cities and their public spaces have a very close relationship, whereby, over the span of urban life, public spaces have continuously reflected the complexities of their cities' cultural, social, and economic contexts. Public spaces play a particular role in the life of urban areas, whether as memorable, accessible, or meaningful places (Madanipour, 2010). People may feel attached to both the social and physical aspects of public spaces. Therefore, these spaces may be places for socializing, hosting the greatest number of people's interactions (Tibbalds, 2003). Moreover, their physical attributes may indicate particular meanings to the people, having a significant impact on people's perceptions, interactions and activities (Canter, 1977).

However, recent researches on public spaces reveal that some are currently experiencing a decline in their physical design and in their use (Carmona, 2010). In his article "Contemporary public

space: critique and classification", Carmona (2010) mentions that the critiques in this realm begin with the attitude that public spaces are facing a physical deterioration. Many writers and scholars of public spaces issues identify a general decline, for which the causes and prescriptions are different according to the context of urban planning and designing. For example, one of the critiques that Carmona discusses relates to the phenomenon of "Invaded Space", resulting from the loss or lack of social function and experiences in urban spaces that is now over used by traffic and private cars. Thus, in this period of change in using public spaces, it becomes important to evaluate and investigate actual use of contemporary public spaces, how and why they are used, particularly in terms of their physical deterioration and/or improvement. As some scholars of urban planning and designing, including Jan Ghel (1987) and William Whyte (1980), have argued, the use of public spaces is an empirical result of the physical qualities of space.

Therefore, an opportunity exists to reveal and understand the interrelationship between physical patterns of contemporary public spaces and people's activity patterns within these spaces. Such empirical researches on public spaces will help to find out why and how "some places work and others do not" (Whyte, 1980). Moreover, it should be possible to find out how physical settings impact the experience of activities taking place within the public spaces. As such, this paper addresses two main questions: 1) How people's activities relate to the design features of an urban public square, and 2) How activities are influenced and encouraged by design features.

II. Overview of the urban open public space

2.1 Urban open public spaces definition and characteristics Public space is an integral part of the public realm. The physical public realm means the series of spaces and settings that support or facilitate public life and social interaction. It is considered as sites or settings of formal and informal public life that have 'physical' (i.e. space) and 'social' (i.e. activity) dimensions. The activities and events occurring within urban spaces can make it the socio – cultural public realm (Carmona, 2010, 137). For Montgomery (1998), the public realm in a city accomplishes different functions by providing meeting places, defining spaces for local traditions and identifying meaning and identity (Montgomery, 1998: 110). Public space are conceived of as an outdoor room within a neighborhood, somewhere to relax, and enjoy the urban experience, a venue for a range of different activities, from outdoor eating to street entertainment; from sport and play areas to a venue for civic or political functions; and most importantly of all a place for walking or sitting out. Public spaces work best when they establish a direct relationship between the space and the people who live and work around it" (Thompson, 2002, 61). Public space as a fundamental part of the public realm is penetrating in social sciences and humanities disciplines.

Thus, the UK government has adopted the following definition of public space (Carmona et al. 2010: 137): Public space relates to all those parts of the built and natural environment where the public have free access. It encompasses: all the streets, squares and other rights of way, whether predominantly in residential, commercial or community/civic uses; the open spaces and parks; and the "public-private" spaces where public access is unrestricted. It includes the interfaces with key internal and private spaces to which the public normally has free access. Cooper and Francis (1998) gave a definition drawn from the work of Lynch (1981) who argues that open space is open when it is accessible; "urban open spaces are defined as publicly accessible open places designed and built for human activity and enjoyment including parks and downtown plazas" (Cooper and Francis, 1998: 76). According to Carr et al. (1992), in terms of use and design, public space characterized in three main categories. Thus, these places as well as being "Meaningful" allowing people to make rich linkage and attachments with place, "Democratic" – protecting the right of user groups, and accessible to all groups and providing for freedom of action – should be "Responsive" – to address intended users' needs (Carmona, 2010, 208-209).

2.2 Activity

Pattern Regarding the concept of place, finding potential relationships between types of place and types of activities requires identifying patterns of activity in a place. Many places have clearly defined activity patterns associated with them. Some activities are appropriate to certain places, and some places may be characterized with particular activities (Canter, 1977: 116). According to Canter (1977), the issue is that some places have very specific functions and appropriate categories of activities, while for others are more difficult to identify particular activities. Their character thus derives from the range of activities they accommodate. Therefore, most places are somewhere between these two extremes and understanding place differentiation relates to the pattern of activities taking place within them (Canter, 1977: 117). For Carmona (2010), "movement" is fundamental to understanding how places work. Pedestrian flow and movement within public spaces is necessary factor for urban experience and vitality. Where people choose to sit in public space is often based on available choices for people-watching and provides opportunities for related activities such as social and cultural interactions (Carmona, 2010: 201). Carmona (2010) stated that successful "people places" may be considered as destinations (go to places) but there are also places on the way to many other places (go through places). Therefore, there is a movement to and movement through places (Carmona, 2010: 202). Hillier et al. (1993) explored the relationship between pedestrian movement and the configuration of urban space, and thereafter the relationship with pedestrian densities and land uses. Based on this research, movement densities can be accurately predicted by analyzing spatial configuration.

The configuration of space, particularly its effect on visual permeability, is most important in determining movement densities. To encourage pedestrian movement and support a vital and viable range of uses connectivity among active places is essential. This connectedness with the surrounding thus identifies the density of use and forms the activity patterns (Carmona, 2010). Within such spaces presence of people and the number of them who chose the space to use also identifies the success level of space in terms of use. Jacobs (1961) argued that bringing people to the street will lead to vitality. Therefore, the design of successful spaces will support and facilitate the people's activities (Carmona, 2010: 208). Urban designers, thus, need to learn how to make better people places by observing existing places and through dialogue with their users and stakeholders (Carmona, 2010: 132). Vital and peopled urban public spaces provide people's need and desires. In other words, people need to feel psychologically comfortable or engaged enough to want to stay and play within the space (Carmona, 2010: 206).

In terms of being engaged to stay in a place, Carmona (2010) identifies two major types of engagement: Passive engagement: this type of engagement with the environment relates to a sense of relaxation which will require appropriate physical settings in a place while there is no need to become actively involved. Sitting and people watching are among the primary form of passive engagement (Carmona, 2010: 209). Whyte (1980:13), for example, found that "what attracts people is other people", which will also bring life and activity to a place. This type of engagement often takes place next to the pedestrian flow while design features also provide sitting choices such as fountains, benches on walkways. Active engagement: this type of engagement represents an active experience within a place and will often result in social interaction among the involved people. Successful "people places" provide opportunities for different levels of engagement and the design of a space can create such opportunities. Thus, the arrangement of different design elements leads to social interaction. These elements could include small-scale components; public artworks, play equipment, street furniture, sculptures, fountains and stairways which will create places for meeting (Carmona, 2010: 211). According to Jan Gehl (1987), one of the most important attributes of public spaces is people activity.

In terms of activities typology, Gehl (1987) distinguishes three main types; necessary/functional activities, optional/recreational activities and social activities that take place based on public space characteristics. According to this typology, the optional activities reveal the relationship between design features offered by the space and people activities. It is the potential activities that defined

people places with different opportunities such as eating, sitting, playing. As the third typology, social activities are the result of other types of activities and rather depend on the involved people within the space than physical features of the space. It is worth mentioning that optional activities are most affected by the environmental qualities and often lead to "social cohesion" of space. As such, spaces become meaningful and attractive when all activities of all types occur in combination (Golicnik, 2010). 2.3 Physical Pattern Lynch (1981) offers basic design qualities in place making process: Vitality, Sense, Access, Control and Fit. Through vitality he believes that a city allows range of diverse activities within the city. For Lynch, sensible city is achieved through from and functions relationships which make it legible. Accessibility for a city allows all different groups of people to use resources and services. Lynch stated that a city with good control is organized in way that citizens have a role in spaces management as they are working and living. The fifth criterion, fit, refers to creating the relationship between activities and physical form of a place. Considering the physical pattern, fit provides the building, spaces and networks for people who are using them and activities are taking place within them. In his research, Lynch (1960) identified five key physical elements – paths, edges, districts, nodes and landmarks – that contribute to configure the image of a city: "districts are structured with nodes, defined by edges, penetrated by paths, and sprinkled with landmarks…elements regularly overlap and pierce one another" (Lynch, 1960: 47-49).Thus, these key physical elements are essential in creating relationship between physical and activity pattern. 3.

III. METHOD

3.1 Conceptual

Theoretical Framework The current study investigated the way in which built environment qualities as well as patterns of particular qualities affect people activity within the urban spaces. It discusses the actual use of urban public spaces, particularly public squares, how and why they are used in terms of their physical Setting. Therefore, it employs an empirical methodology that combines three major components; case study selection, data collection and management, data analysis. As such, this study provides a conceptual framework based on physical and functional attributes described by physical and activity principles such as population density, mixed use, accessibility, human Scale, connectivity, Imageability and legibility, landmark, enclosure, complexity, architectural style and green space (Table 1). It also investigates the inter-relationship between the physical design features of urban public space and people's activities and various forms of use – from active to passive engagement.

Table 1. Case Study Selection Criteria

Place Components	Principles			
Activity	Types of Activity	Necessary	Active Engagement	Population density
				Pedestrian flows and movements
		Optional		Vitality and Diversity
				People attractors
				Cultural and Social events
		Social	Passive Engagement	people watching
Physical Setting	Population density			
	Mixed use			
	Human Scale			
	Accessibility			
	Connectivity			
	Imageability and legibility			
	Landmarks			
	Enclosure			
	Complexity			
	Architectural style			
	Green/Water space			

A case study was selected and employed as the qualitative strategy of inquiry to explore in depth the ***activity pattern***– from ***active*** to ***passive engagement***– related to the ***physical pattern*** of public spaces (Table 2). In addition, ***the detailed information*** was collected, using *direct field observation*, a *questionnaire survey*, *maps* and *photos*, based on the activities of people at the selected study sites and during a certain period of time. *Field observation* was utilized to record activities in an unstructured or semi structured way and often notes were augmented with visual materials. The collected data was gathered and tailed for the activity typology and physical components based on the selected urban design principles as represented in Table 2. The percentages of each reference are then calculated to refer to each activity. This methodology contributes greatly to the understanding of the physical structure of the cases in this study.

Table 2. Activity typology and physical components based on the selected theoretical principles

<table>
<tr><th colspan="2">Activity Component</th><th>Activity Principles</th></tr>
<tr><th>Activity Level</th><th>Activity Types</th><td rowspan="14">Vitality and Density of population: Number of people using the space

People attractors

Diversity of space use</td></tr>
<tr><td rowspan="6">Passive engagement</td><td>Sitting</td></tr>
<tr><td>Sitting with a child</td></tr>
<tr><td>Sitting on a wheelchair</td></tr>
<tr><td>Standing</td></tr>
<tr><td>Standing with a child</td></tr>
<tr><td>Laying down on lawn or bench</td></tr>
<tr><td rowspan="8">Active engagement</td><td>Cycling</td></tr>
<tr><td>Exercising</td></tr>
<tr><td>Taking photo</td></tr>
<tr><td>Playing</td></tr>
<tr><td>Playing music</td></tr>
<tr><td>Walking</td></tr>
<tr><td>Walking with a child</td></tr>
<tr><td>Walking with a wheelchair</td></tr>
<tr><th colspan="2">Physical Component Physical Principles</th><th>Physical Principles</th></tr>
<tr><td colspan="2">Design Features</td><td>▪ Design lay out
▪ Landmark
▪ Grass and water space</td></tr>
<tr><td colspan="2">Paths, Edges, Furniture, Natural Features</td><td></td></tr>
</table>

3.2 Case Study Selection Procedure

Case studies allow exploration of theories and provide opportunities understanding and in examining them at the ground (Baxter & Jack, 2008, p. 544). Thus, within this study, where the goal is to provide insight into how peoples' activities relate to the physical pattern of public spaces, a case study is appropriate since it serves as laboratory for testing theoretical and methodological theories and concepts (Cresswell, 2009). The Old City of Salt was selected as the study area among other Jordanian cities due to its strategic, geographical, political and cultural position as the most historic town in Jordan. Furthermore, Old Salt is a multicultural and diverse city that has a variety of proportions of uses and needs regarding public space use. Public Squares in The Old City of Salt consist of a range of design configurations that lead to ***various types of activities***. In order to understand the relationship between ***physical*** and ***activity*** *patterns* within a public space, Al-Ain Square, Al-Hammam Square and Al- Baladiyyah Square were selected as the study sites. The goal is to select public squares with varying levels of physical features and activity patterns.

IV. OVERVIEW OF THE URBAN PUBLIC SQUARE IN THE OLD CITY OF AS-SALT

4.1 The Old City of As-Salt

Salt lies 20 kilometers to the east of Jordan Valley at an altitude of 800 m (Fig. 1). Its foundation is based on a merchant city, developed from the towns of Middle Age. It was of great importance in the 19th and early 20th century during the Turkish rule in Jordan, where served as the chief administrative and trading center for the surrounding area. During this period of time, it became the most important trading and market Centre serving Gilead on the East Bank, with links to Nablus, Jerusalem and the Mediterranean to the west and Damascus to the north. Salt's heyday was when traders arrived from Nablus to expand their trading network eastwards beyond the River Jordan.

As a result of the influx of newcomers this period saw the rapid expansion of Salt from a simple peasant village into a town with unique landscape, new land-uses and architectural styles. It is now the administrative Centre for the Balqa Region, only 30km north-west Amman with which it has a close inter-relationship. The present population of Salt is approximately 62,109 of whom some 15,000 live in the older central districts: "Old Salt". Old Salt developed around the spring in the Akrad Valley, on three hills- Al-Qal'a, Al-Jad'a and As-Salalem- separated by the flood plain of Wadi-Akrad and Wadi As-Salt; and composed of a web of footpaths and stairways running across the slopes and limited number of roads following the slopes where the contours allowed (Figure 2).

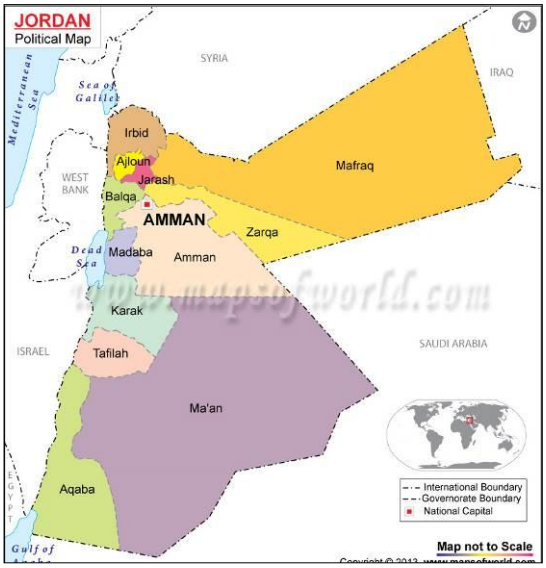
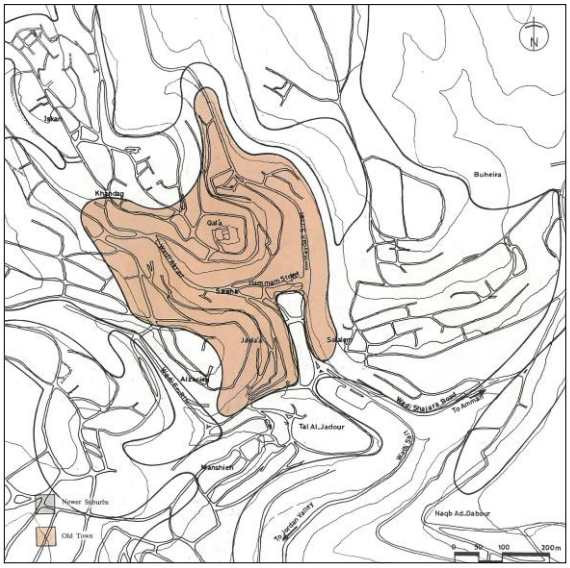


Fig. 1 Location of As-Salt, Jordan. Source: http://www.mapsofworld.com.



ig.2 Urban form of Old City As-Salt

The ***main patterns of land use*** of the old central districts: "Old Salt" focused on a *multifunctional core structure* enveloping surrounding the *central mosque* by different layers of interconnected suqs (Figure 3). As a rule, these are interspersed with a number of hammams, madrasas, and caravanserais, which constitute the support for the mosque and retail shops (Figure 4).

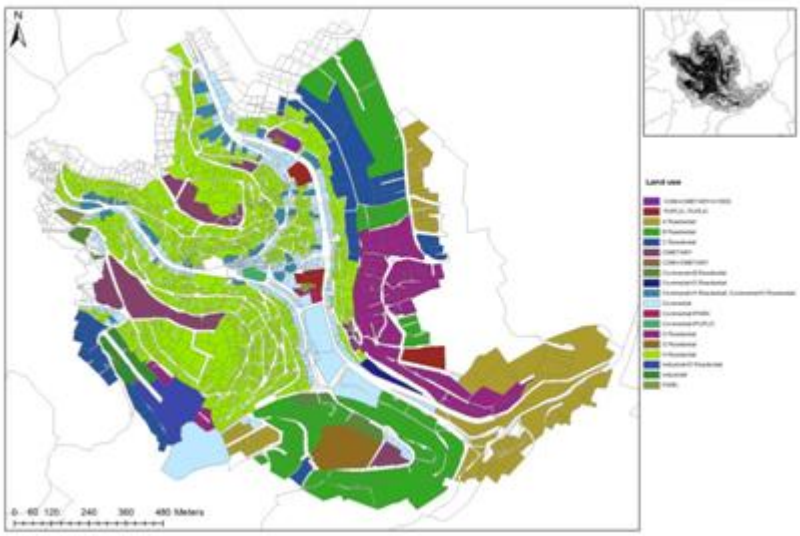


FIG .3 Land Use of the Old Salt City

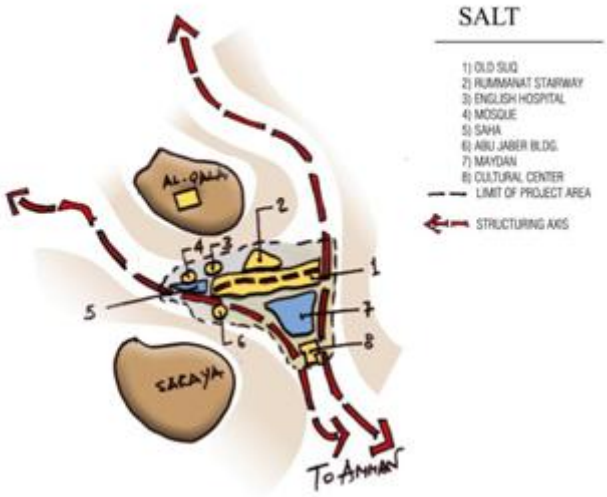


Fig. 4 Urban Structure of Old Salt City

4.2 Public Open Spaces in the Old City of As-Salt

The analysis of the traditional urban form of Arab cities can be applied, to a great extent, to the historic city of Old As-Salt and to its public open spaces. The old city of As-Salt developed without large-scale public spaces—and resisted symbolic notions of the public typical in western cities. Instead of a single, static central space, it accommodates diversity and contradiction. Urban squares in the Old City of Salt were developed during the reign of the Ottoman Empire. Three squares of a great important were developed in this period of time were *Sahat Al-Ain, Sahat Al-Hammam, and Sahat Al-Baladiyya* (Figure 5); which are distinctive at the city scale due to their *centralized position* and their association with major civic or religious buildings.

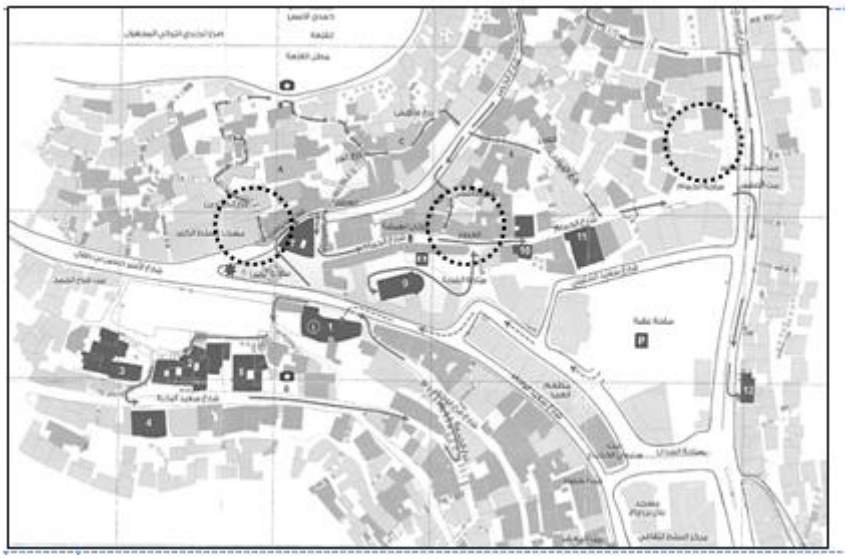


Fig. 5 The selected public Squares in the Old City of As-Salt: Al-Ain, Al-Hammam, and Al-Baldiya. World heritage sites

Through history, they had woven together many types of public life for the city's many publics. They played a critical social, economic, cultural, and political role. These spaces typically were used for multiple purposes, such as cultural events, military assembly, local trade, and social interaction. Names of these three squares coalesce into text and define the city on a sociological level. They tell the history of a city and act as "a system of representation through which the collective identity defines itself. *Sahat Al-Ain* referred to the name of the main water spring in this neighborhood and it has all the memory of women going to it for their daily needs. *Sahat Al-Hammam* referred to the name of Turkish founded during the Ottoman era that ruled Salt between

19th and 20th century. *Al-Baladiyya Saha* referred to the Greater Salt Municipality, which is opposite to the *Saha*. The value of such historic places resides in the complexity of their structures, which are impregnated with the record of life and human thoughts and activities.

The following sections present empirical analyses of public open spaces in the historic city of As-Salt. The questions of how '*Sahat Al-Ain*, *Sahat Al-Hammam, and Sahat Al-Baladiyya*' as open public spaces are appropriated by the various segments of the population, what are the main components which integrate to create these squares? and 2) What procedures are available for identifying places and their attributes? are addressed here through the following sections.

4.2.1 Al- Ain Square

The Al- Ain Square was developed by Nabulsi traders in the early quarter of the 20th century. Sahet Al-Ain is a physical node of public space that has been used by its local community. Sahet Al-Ain has been subjected to many changes during the last decade. In 2004, in its first effort to rehabilitate the historic city, the Municipality of As-Salt, with funding from the Japan Government, initiated a project to provide a space for civic activities and link the surrounding mixed uses such as shops, restaurants and public transport; and to enhance the aesthetic quality of the square.The square provides an environment compatible for passive engagement such as sitting, relaxing and eating lunch. Al- Ain square is distinctive at the old Salt scale due to its centralized position, large size (with a total area of 5000m$^{2)}$, and association with major civic or religious buildings. Al- Ain square is located in the heart of the old Salt next to the great Mosque at the west side and along Said Abu Jaber Street, Al-Khader Street, and Al-Hammam Street that leads up to the square's eastern entrance. Thus, Al- Ain square provides an appropriate visual setting for these three historic streets in the old town (Figure 6). Ringed by religious (Deir Latin cathedral which was the first Latin Church in Jordan), governmental, administration buildings, and educational buildings and home to large markets and recreational activities, the square is in an excellent location where many potential users exist.

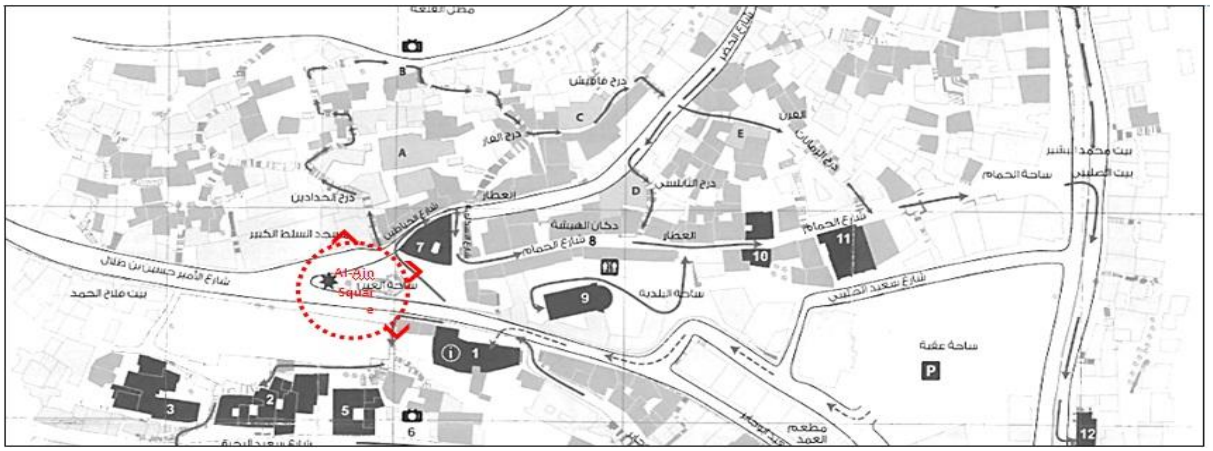


Fig.6 Al- Ain Square Map. Heritage buildings around Square: 1.Salt's Historic Museum; 7. Dawoud Building; 9. Deir Latin cathedral

Fig.7 Al- Ain Square Satellite Map

Fig.8 Al- Ain Square: a physical node of public space

4.2.1.1 Analyzing Activity Types and Design Features relationship in Al- Ain Square

To find out how design features affect people's activity type, consideration of how many people were using the space regarding the design features throughout the all observation sessions is required. In the other words, to understand the activity type and the use of the design features relationship determining the activity frequency is needed. The Table 3 is the outcome of working with "Symbology" and using the "Frequency" tool by selecting two attribute fields of activity type and design features. Thus, the result displayed how many people were doing what (activity type) and were using what type of design features.

Table 3. Activity Type and Design Features_ Al- Ain Square

Activity Level	Activity Type	Design Features	Frequency	Percentage
Active	Cycle	Walkway	0	0
	Exercise	Grass Space	0	0
		Walkway	70	5.6
	Photo	Grass Space	0	0
		Walkway	1	0.08
	Play	Grass Space	0	0
		Walkway	24	1.92
	Play-Music	Walkway	23	1.84
	Walk	Grass Space	0	0
		Walkway	266	21.24
	Walk-Child	Walkway	21	1.72
	Walk-Wheelchair	Walkway	0	0
	Total		**405**	**32.40**

Passive	Lay	Bench	4	0.32
		Grass Space	0	0
	Sit	Bench	320	26
		Edge	175	14.08
		Grass Space	0	0
		Table	210	16.8
	Sit-Child	Bench	4	0.32
		Edge	1	0.08
		Grass Space	0	0
		Table	3	0.24
	Sit-Wheelchair	Walkway	1	0.08
	Stand	Grass Space	0	0
		Walkway	120	9.6
	Stand-Child	Walkway	1	0.08
	Total		**840**	**67.6**
	Total		**1245**	**100**

As can be seen from the Table 2, for the ***active level*** of activities, the highest rank went for walking within walkways which in total was 23% with the frequency of 287 out of 1245 and the second rank belonged to playing at 2% and revealed that children constituted small percentage of the involved population (almost 2%). Activities such as Cycling, taking photo, and Walking-Wheelchair had no place here.It is worth mentioning that most of the observed people were adults and noticeably, almost 33% of them were seniors who were mostly sitting and playing traditional games such as "Zaher Table"; enjoying the peaceful environment (Figure 10. A).
Turning to the activity level, for the passive activities, sitting on a bench with 26% took the highest rank among the other passive activities whereas sitting on a bench with a child and standing with a child took the least percentage which is less than 1%.

Sitting on a table, on an edge are among the second preferable design features that people choose to use (Table 1). Another passive activity that can be seen and is noticeable is standing on the walkway which constitutes almost 10% of the activities within the space with the frequency of 121 out of 1245. Through these comparisons and results of observations one of the major findings is beginning to shine through as "*Sittable Space*". William Whyte (1980) in his landmark book on urban public space "The Social Life of Small Urban Spaces" wrote that "people tend to sit where there are places to sit" as they do like to use "basics" within a space. Through the detailed observations of plazas and parks in New York City, Whyte (1980) found comfortable seating choices to be the primary and essential component of urban public spaces. He examined many correlations between space use and the physical environment and found that one of the major factors in space use is *sittable space* that should be designed for people to sit, not for "architectural punctuation". People are adaptable to use space in a way they feel comfortable and are able find a place to sit whether it is a bench or it is a concrete *sittable edge* if the dimensions are right. According to the timing of the activities during a regular day, morning was the most populated time (39%) whereas evening and after work hours were not as populated as lunch time (Figure 10).

A. Al-Ain Square's Entrance from Abu Jaber St.

Morning time around 10:00 AM

Morning time around 10:00 AM

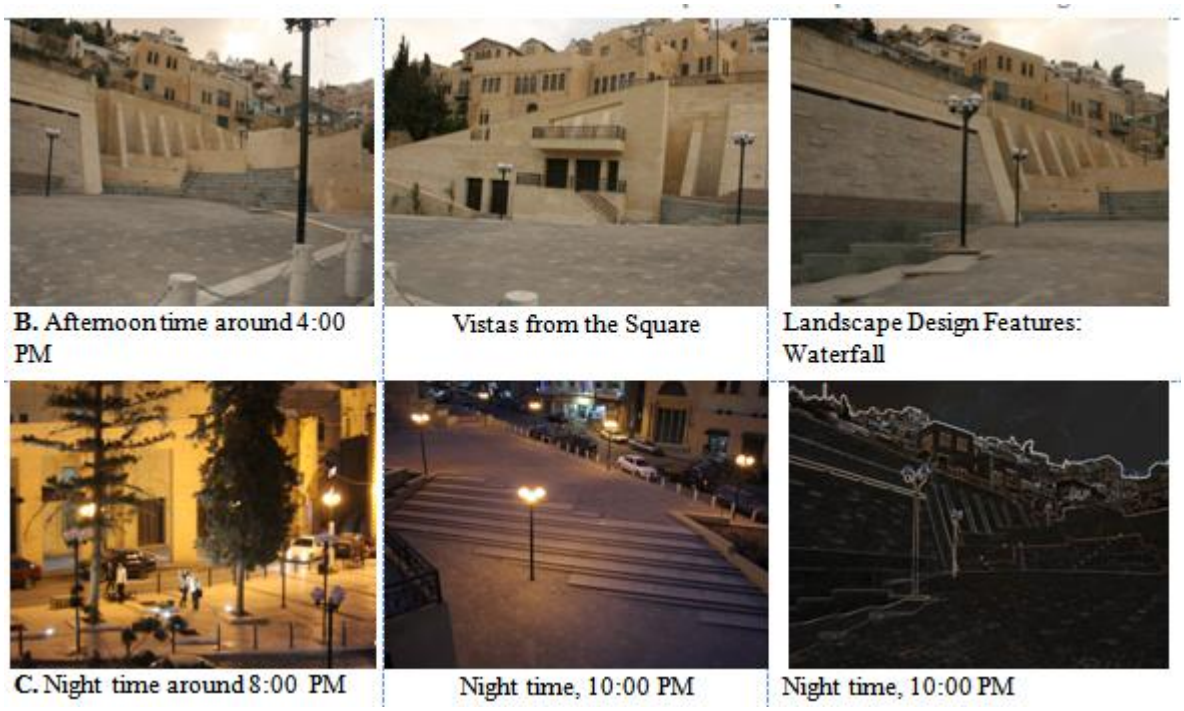


Fig.10 Activity type and Design Features at different times of a Weekday–at Al- Ain Square

Regarding the use of design features during a regular day, walkways were allocated to leisurely walking and benches had the highest rank of occupation for the sitting activity which was 29.18%. It is also worth pointing out that edges had the second rank in using for sitting at 14.72% (Table 4).

Table 4. Design Features' Frequent Use at Al- Ain Square

Design Features	**No.**	**%**
Bench	365	29.18
Edge	184	14.72
Grass Space	0	0
Table	37	3
Walkway	729	58
Total	**1315**	**100**

According to the timing during the weekend's day, it can be seen that weekend morning (around Friday pray) had the highest number of involved people (47%) whereas in the evening the lowest numbers of people were presented.

Successful features and potentials: sunny and shady sitting places, diverse use settings, water element, good maintenance with a centralized management, legibility, accessibility for disabled and other user categories with special needs, good accessibility from closest surroundings, walkability, relatively new and upgraded design of urban furnishings, mixture of user categories.

Unsuccessful features and problems: lack of adequate seating variety and orientation, protection against adverse weather conditions, lack of potential secondary seating and outdoor food services, lack of programmed events to draw the users into area, vegetation variety, access to food facilities is limited, parking areas is limited, and the square does not encompass many features encouraging use to make it a publicly accessible space. However, the positive elements that currently exist in the plaza provide an excellent base for a well-used space and the negative design aspects leave room for improvements. The recommendations below are changes that could enhance Al- Ain square and begin to attract regular users to the space.

Recommendations

Appearance

- Addition of *landscape design elements* (such as variety of vegetation, water feature, pergolas, etc.) to create a more interesting space.
- Improve *vegetation* near some benches
- Trees can contribute greatly to the attraction and character of a space by providing shade
- Encourage increased *animation* and *programming*
- Develop *public art* provision within public spaces and along public routes, which will attract people to visit the space. A range of event based activities to occur within the space will foster *social capital* and increase levels of activity
- Provide a *memorable icon* for the space.
- Improve *lighting coverage*

Security

- upgrade *night-time safety*

Microclimate

- Encourage greater use of public spaces in winter/colder weather. This can be achieved by providing facilities to allow people to sit in sheltered/sunny locations under partial or glazed cover.

4.2.2 Al-Hammam Square

In traditional towns such as As-Salt, the **Al-Hammam Square** forms a strong civic focus which is important in setting the town's image and identity. The Al-Hammam **Square**, with a total area of 750 m^2, is located on the eastern side of the old town along the first commercial street in Salt _Al-Hammam Street_ that leads up to the western gate of the Square. This square has another entrance located along the Prince Hamzeh Ben Al-Hussein Street (Figure 11). Its location at the center of the old city made it very convenient for trade and the moving of goods to and from buildings in this area; it was thus the commercial hub for light industry. This **Square** was developed by Nabulsi traders in the last quarter of the 19th century; where the main social activities and center of government were located**.** Today, the **Al-Hammam Square** is a multifunctional area that, in association with the **Al-Hammam Street,** offers a continuous pedestrianized shopping area**.**

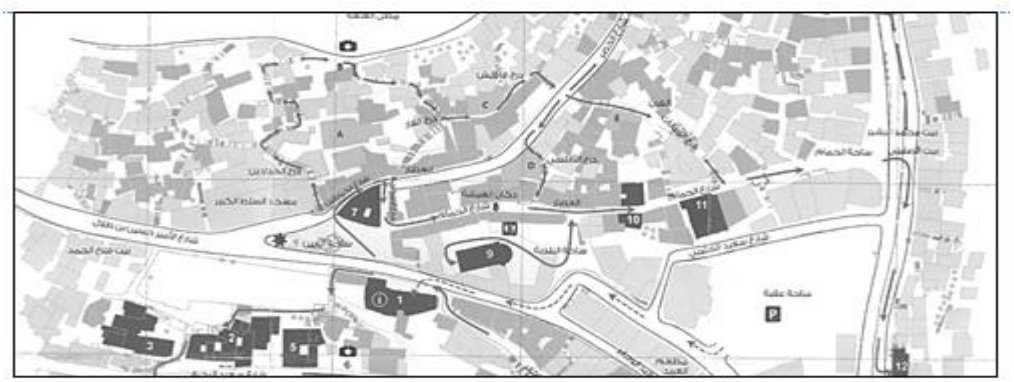


Fig 11. Al-Hammam Square Building 11. The Small Mosque.

Al-Hammam Square is a pedestrian square, integrated into a network of streets and squares which are mostly pedestrian. The square has supportive land uses that provide users to the space. However, its situation is such that a large number of trades and services are accessible to the dwellers at a short distance. At the present time it is surrounded by twenty-two trades, of which all can be considered as being necessary to fulfill every day needs; most of those trades are banks, medical centers, pharmacies, groceries and foodstuff, clothes, shoe ware and home appliances (Figure 12). Also, number of heritage buildings existed around this square such as Muhiyar building, and Toukan building. In particular, Al-Hammam Public Market and The Small Mosque at the end of this street are the major draw to this square. In addition, the adjacent cultural centre is particularly important because it provides the space with numerous weekly events that are a major draw to the square.

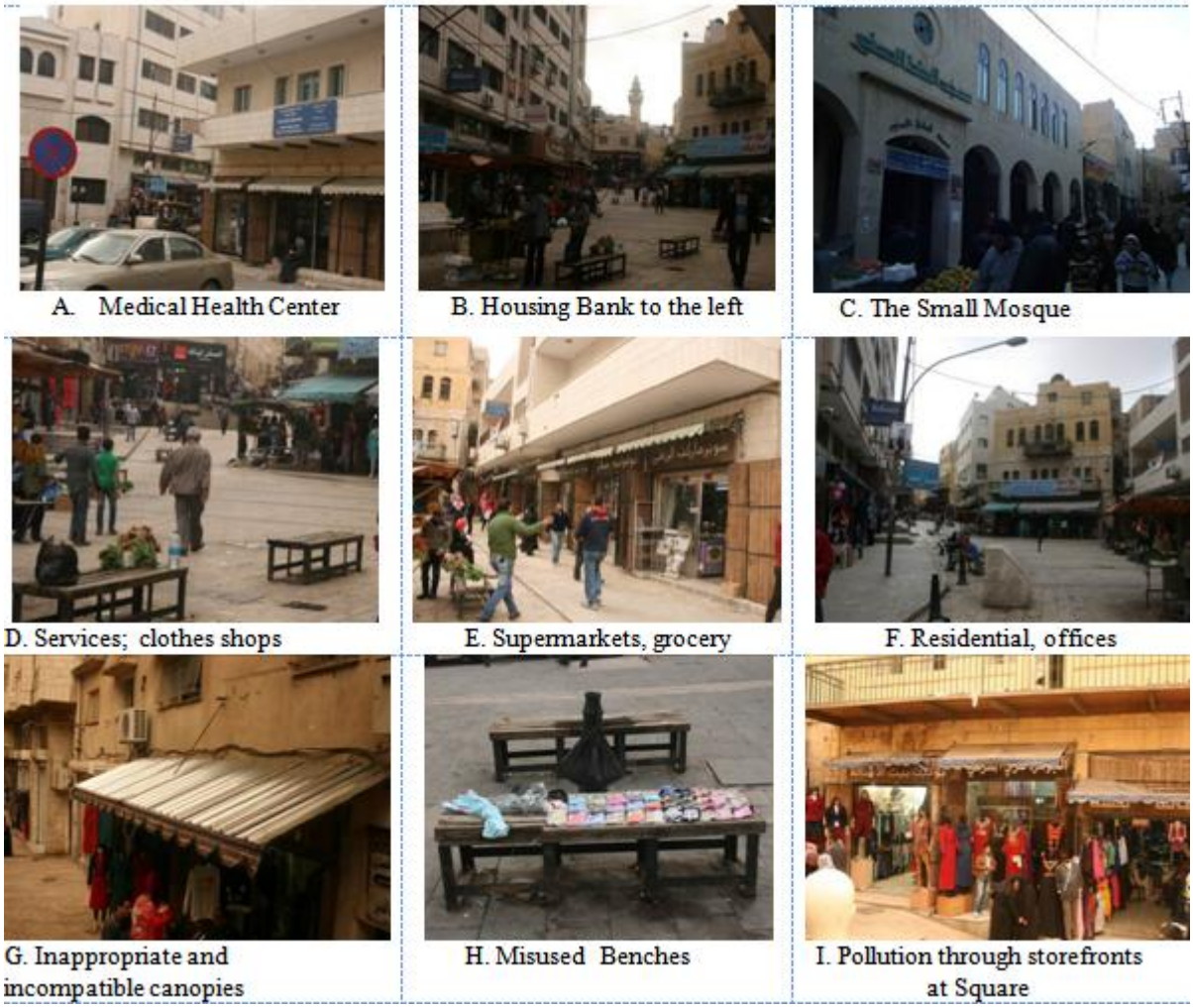


Fig.12 Al- Hammam Square: Activity types and Design Features at different times of a weekday

Analyzing Activity Types and Design Features relationship in Al- Hammam Square

Beginning with the activity level during the weekdays, as the collected data reveal, approximately 85% of activities were taking place at the ***active level***. First of all it is clear that ***walking*** activity had the greatest percentage of activities which is almost 62% including all types of walking (Table 5). The worth pointing out results regarding the active level was that at the second place after walking playing had the highest percentage among other activities which was 2% and revealed that children constituted small percentage of the involved population (almost 2%). Similarly during weekdays the collected data revealed that approximately 15% of activities belonged to the ***passive activities*** (Table 5). Obviously, among passive activities, ***sitting*** had the rank which constituted only 10% of all activities; this is due to their dirt and misuse. Most benches are used for other activates rather than sitting such as putting bought items on.

Table 5. Al- Hammam Square: Activity Types and Design Features

Activity Level	Activity Type	Design Features	Frequency	Percentage
Active	Cycle	Walkway	0	0
	Exercise	Grass Space	0	0
		Walkway	0	0
	Photo	Grass Space	0	0
		Walkway	7	0.56
	Play	Grass Space	0	0
		Walkway	10	0.80
	Play-Music	Walkway	11	0.10
	Walk	Grass Space	0	0
		Walkway	765	61.23

	Walk-Child	Walkway	11	0.77
	Walk-Wheelchair	Walkway	0	0
	Total		**577**	**84.90**
Passive	Lay	Bench	1	0.08
		Grass Space	0	0
	Sit	Bench	128	10.28
		Edge	3	0.24
		Grass Space	0	0
		Table	0	0
	Sit-Child	Bench	1	0.08
		Edge	0	0
		Grass Space	0	0
		Table	0	0
	Sit-Wheelchair	Walkway	0	0
	Stand	Grass Space	0	0
		Walkway	54	4.40
	Stand-Child	Walkway	0	0
	Total		**187**	**15.10**
		Total	**764**	**100**

Successful features and potentials: good accessibility from closest surroundings, walkability, mixture of user categories, clear differentiation between pedestrian and vehicular traffic.

Unsuccessful features and problems: today ***legibility*** of traditional ***Al- Hammam Square*** is threatened by inappropriate and incompatible modern activities. For instance, all street-vendors remain illegally creating disturbance and pollution through bringing their storefronts to the ***Square*** to attract buyers; and left places along the ***Square*** in a state of mess. This increased illegal commercialization has resulted in loss of its legibility, identity, original symmetry and harmony in the physical environment of ***Al- Hammam*** square. Therefore, ***Al-Hammam*** square ***requires a great deal of attention to land use, streetscape, and ground-floor activity (as confirmed by the Public Life public space survey; to ensure that mixed-use developments are functional, attractive, and withstand the test of time***. Other minor negative aspects are the noise levels from the cars at the adjacent intersection, limited food choices and limited lighting in the plaza after dark. Overall, lack of adequate seating variety and orientation, protection against adverse weather conditions, lack of potential secondary seating and outdoor food services, and presence of "undesirables" turns the square into a transit character where passing through is a predominant activity rather than a place where people like to spend time, perform various activities.The recommendations below are changes that could enhance the plaza and begin to attract regular users to the space.

Recommendations

Appearance: Improve the appearance and attractiveness of Al-Hammam square; and this could be achieved through:

- **Avoiding** the clutter and visual barriers that are existed in the space, which **restrict** people's enjoyment and creating unsafe blind spots.
- Limiting land use and ground-floor activity for the adjacent buildings
- Improving quality landscape treatment:
  - Create well-defined footpaths within the landscape for **passive recreation and activities**.
  - Appropriate street furniture
  - Improve lighting coverage
  - Improve signage
- Encaging positive interaction with buildings
- Improving well define edges
- Creating small scale **landmarks**
- Creating and enhance positive and memorable entrances:
  - Entrance at the west end of Al-Hammam square needs improvement

Security

- upgrade night-time safety

Condition

- Improve high levels of maintenance
- Address cleanliness

4.2.3 Al- Baladiyyah square

Al- Baladiyyah Square is distinctive at the old Salt scale due to its centralized position, and association with major civic or religious buildings. Al- Baladiyyah Square is surrounded by Al-Hammam Street to the north, the Al-Midan Street to the south, and the Deir Latin cathedral to the west and provides approximately 620m^2 of a space provides an appropriate visual setting for these two historic streets and number of heritage buildings such as Al-Dawoud, Mihyar and Deir Latin buildings (Figure 12). The main entrance is landmarked with a Clock Tower at the Al-Midan Street (Figure 13).

Ringed by religious, governmental (As-Salt Greater Municipality), administrative buildings, and educational buildings and home to many traditional trades such as groceries and foodstuff, clothes, shoe-ware and home

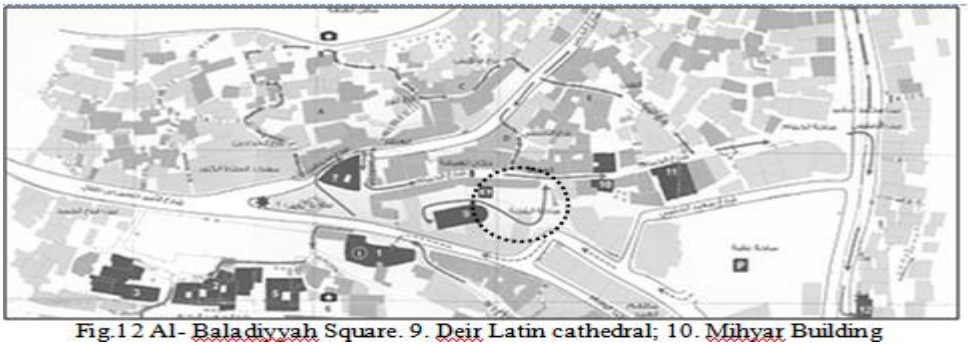


Fig.12 Al- Baladiyyah Square. 9. Deir Latin cathedral; 10. Mihyar Building

appliances, and other traditional handcrafts that are considered as basic elements of its architectural and social network (Figure 13).

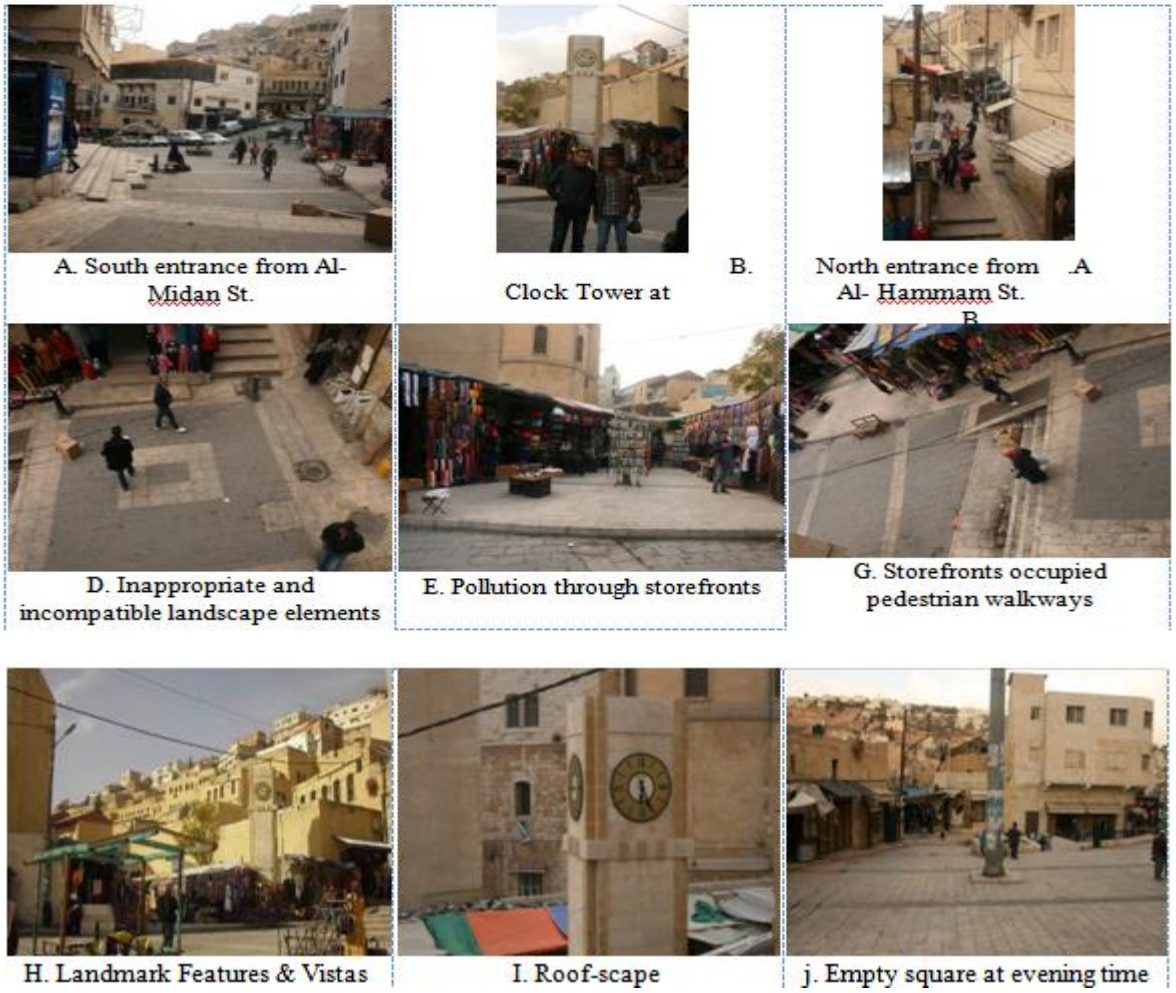


Fig.13 Activity types and Design Features at different times of a day_ Al- Baladiyyah Square

4.2.3.1 Analyzing Activity Types and Design Features relationship in Al- Baladiyyah Square

Beginning with the activity level during the weekdays, as the collected data reveal, approximately 83% of activities were taking place at the ***active level***. First of all it is clear that ***shopping*** activity had the greatest percentage of activities which is almost 55% including all types of walking. Obviously, the observation data shows that *playing*, *playing music* and *taking photo* were also taking minimum place and constitute 2% of all the activities. In this observation session one fifth of activities was passive including ***standing*** which was most popular with more than 12% of the total. Among active level of activities, ***sitting*** was noticeable even though constitutes approximately 5% of the total counted people (Table 6). Approximately, 95% of the observed people were adults and noticeably, almost 33% of them were seniors who were mostly shopping. According to the collected data, with regard to the timing, Friday morning was the less populated time, 81 people were out within the space. The following table illustrates how activities vary by activity type during the observation sessions (Figure 13).

Table 6. Activity Type and Design Features_ Al- Baladiyyah Square

Activity Level	Activity Type	Design Features	Frequency	Percentage
Active	Cycle	Walkway	0	0
	Exercise (Shopping)	Grass Space	0	0
		Walkway	694	55.52
	Photo	Grass Space	0	0
		Walkway	3	0.24
	Play	Grass Space	0	0
		Walkway	2	0.16
	Play-Music	Walkway	19	1.52
	Walk	Grass Space	0	0
		Walkway	300	24
	Walk-Child	Walkway	21	1.68
	Walk-Wheelchair	Walkway	0	0
	Total		**1040**	**83.00**
Passive	Lay	Bench	0	0
		Grass Space	0	0
	Sit	Bench	32	2.56
		Edge	17	1.41
		Grass Space	0	0
		Table	0	0
	Sit-Child	Bench	7	0.56
		Edge	9	0.72
		Grass Space	0	0
		Table	0	0
	Sit-Wheelchair	Walkway	0	0
	Stand	Grass Space	0	0
		Walkway	144	11.55
	Stand-Child	Walkway	1	0.08
		Total	210	17.00
		Total	**1250**	**100**

Successful features and potentials: commercial stores and souqs, made this square important site for residents coming from different parts of As-Salt and for people who enjoy shopping and roaming within the charm of the old city. Al-Baladiyya Square has some good features such as legibility, good accessibility from closest surroundings, walkability, mixture of user categories, clear differentiation between pedestrian and vehicular traffic.

Unsuccessful features and problems: obviously, as the main active activities are the predominant, this square is not a definite ideal square in terms of social attractivity. Moreover, unsuccessful physical features incorporate to the absence of the passive activities. Example of unsuccessful features are inappropriate use of cobblestone surface, poorer accessibility for disabled other user categories with special needs, lack of greenery elements, lack of colour and texture in vegetation, lack of adequate seating variety and orientation, protection against adverse weather conditions, lack of potential secondary seating and outdoor food services, lack of programmed events to draw the users into area, presence of "undesirables", lack of aesthetic harmony in all urban element´s design. The analysis of factors revealed few issues which could be improved in order to encourage and increase the level of the social attractivity to even more extent.

Recommendations:

- provide food and other (shop) outdoor services of different types in the outer subarea of the square
- provide adequate primary seating variety and orientation as well as other secondary seating, support seating designed for groups
- open up and diversify the use of ground floors facades, provide mixed uses of shops, services, etc., support multifunctionality
- strengthen the identity and develop the attachment to the square (for example by organizing more programmed or traditional city events in order to draw the residents and users into the area)
- make use of available variety of flexible design, use temporary art and other attractions to activate users and to reduce presence of "undesirables"
- upgrade existing entry points and activate the edges of the square
- strengthen the relationship between the square and the city centre as whole, consider an impact of small-scale in a large-scale, reconsider the network of public spaces within the whole city centre according to users´ needs.

V. CONCLUSION

Public spaces are like humans beings. They have ups and downs; sometimes they are vivid, live and active, and sometimes they are dull, empty and dark. Also, public open spaces influenced and were influenced by the world around them. The value of such historic places resides in the complexity of their structures, which are impregnated with the record of life and human thoughts and activities: the whole is much greater than the sum of its parts. Indeed, the meaning of an urban entity draws on the interaction between the ***activity patterns*** and the ***design features*** of the urban space. Open spaces in ***Old Salt*** are essential components of its centre, providing a valuable contrast to the built urban environment, and afford a rich urban experience to residents. The analysis of the case study in this paper provides some insights into the strengths and shortcomings of contemporary open public squares in the "Old Salt" in terms of urban design. Design criteria that can be readily incorporated into open public squares has been demonstrated. Conversely, some entrenched barriers to certain design principles have been highlighted while areas of potential use for the planning and development industry, such as innovation incentives, have also been flagged. The analysis of ***activity patterns*** and ***design features*** revealed few issues which could be improved in order to encourage and increase the level of the social attractivity to even more extent.

General recommendations:

- Effective public open space should not, where possible, be designed for a ***single physical activity***. Rather, effective public open space should cater for a ***diverse range of activities and uses***.
- The ***functionality*** of the open space is very important to fostering ***physical activity***. Open space needs to be considered as fulfilling a range of ***functions***. For example, a range of event based activities to occur within the space will foster *social capital* and increase levels of activity.
- The ***attractiveness*** of the open space is very important to fostering ***physical activity***. Open space needs to be designed as high quality spaces with appropriate street furniture, well define edges and small scale **landmarks**
- Open space designs should take account of the ***variety and intensity of potential uses***.

Users of open space need to feel s***afe regardless of sex or age***. Designs should take account of safety principles to ensure security.

REFERENCES

[1] Applyard, D., (1981),"Livable Street", University of California Press, Berekeley.
[2] Baxter, P., and Jack, S., (2008),"Qualitative Case Study Methodology: Study design and implementation for Novic researchers", The Qualitative Report, 13 (4), 544-559.
[3] Canter, D., (1976),"The Psychology of Place", Architectural Press, London.
[4] Carmona, M., Tiesdell,S., Heath,T., and Oc,T., (2010), "public places public spaces: The dimensions of urban design", Archtectural press, UK.
[5] Carr, S., Francis, M., Rivilin, L.G., Stone, A.M., (1992),"Public Space", Cambridge university Press, Cambridge.
[6] Cooper, M.C, Francis, C, (1998),"People Places: Design guidelines for urban open space", John Wiley & Aons Inc. Toronto.
[7] Cresswell, J., (2009),"Research design, qualitative, quantitative, and mixed methods
[8] approaches", (3rd ed), Sage.
[9] Gehl, J. (1987),"life between buildings: using public space, Van nostrand reinhold company, New York.
[10] Golicnik, B., (2010),"Emerging relationships between design and use of urban park spaces", Journal of Landscape and Urban Planning, 94 (1), 38-53.
[11] Hillier, B., Penn, A., Hanson, J., T. Grojewski, J Xu, (1993),"Natural movement: or, configuration and attraction in urban pedestrian movement", Environment and planning B: Planning and Deisgn, 20, 29-66.
[12] Jacobs, J. (1961),"The Death and Life of Great American Cities: The Failure of Modern Town Planning", Peregrine Books, London.
[13] Lynch K., and Rodwin, L., (1958),"A Theory of Urban Form", Journal of the American Institute of Planners, 24 (4), 201-214.
[14] Lynch, K. (1981),"A theory of good city form", MIT Press, Cambridge.

[15] Lynch, K. (1960),"The Image of the City", MIT Press, Cambridge, Mass.
[16] Madanipour,A. ,(2010),"Whose Public Space? International case studies in urban design and development", London; New York: Routledge.
[17] Mongomery, J., (1998),"Making a city: Urbanity, Vitality and Urban Design", Journal of Urban Design, 3, 93-116.
[18] Thompson, C., (2002),"Urban open space in the 21st century", Journal of Landscape and Urban Planning, 60 (2), 59-72.
[19] Tibbalds, F., (2003),"Making people- friendly towns", Spon Press.
[20] Urban Task Force (1999),"Towards and urban renaissance", Urban Task Force, London.
[21] Van Melik, R., 2008. *Changing public space: The recent redevelopment of Dutch city squares.* Utrecht: Faculty of Geosciences, Utrecht University.
[22] Varna, G., and Tiesdell, S., (2010),"Assessing the Publicness of Public Space:The Star Model of Publicness", Journal of Urban Design, 15: 4, 575 — 598.
[23] Whyte, William.H, (1980),"The Social Life of Small Urban Spaces", The Conservation Foundation, Washington, D.C.