

Examining attributes of urban open spaces in Doha

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With intensive emerging and transforming urban spaces and centres, the city of Doha is experiencing continual rapid growth. However, minor attention has been paid to important growth aspects. This paper examines functional, social and perceptual attributes of three urban open spaces in the city by developing and implementing a walking tour assessment procedure composed of checklists and a scoring system. Results reveal important outcomes including the absence of landscape features and a dearth of green spaces or appropriate outdoor furniture, the absence of adequate shaded areas and shading devices and parasols and a lack of children's facilities or a specially designated area for children among other missing elements. These represent shortcomings that impede the maximum efficient and effective utilisation of such spaces. The paper suggests that opportunities to concretise and fulfil people's needs in open spaces should be underscored by urban planners, architects and policy-makers in a multicultural rapidly growing city.

1. Introduction

A substantial development of new urban or transformed areas is currently taking place in the city of Doha. Earlier research on the city indicates that it is witnessing dramatic urban transformations. More than 80% of Qatar's multicultural population already resides in the capital, with no more than 20% of locals and a majority of expatriate professionals and low-income labour groups from over 70 countries (Salama and Gharib, 2012). The overall urban environment is thus becoming increasingly important in the everyday experience of over 1.7 million inhabitants who live there. The qualities of urban spaces greatly impact on a wide range of facets such as living conditions, entertainment and the attractiveness of and desirability for urban open spaces (Salama and Wiedmann, 2013a, 2013b).

Doha's regional and global importance has amplified significantly over the past two decades. Maintaining the current growth of its urban population and fostering quality of life is seen as critical to the future development of the country, as indicated in the national development strategy 2011–2016 (QSDP, 2011). Consequently, enhancing the quality of urban open spaces and the urban environment as whole is one of the

most important considerations that would determine such a future. Urban open spaces in Doha are scattered from its northern peripheries to its centre and in the south-western peripheries. They are often located within enclave developments or within larger urban interventions, while others represent portions of spaces within dense urban districts or waterfront urban open spaces that vary in form, function and scale and the services they offer. Except for a few studies, however, no attention has been given to urban spaces at the policy or master planning levels, nor has there been exploration of whether newly developed urban spaces are supporting the needs of the city's multicultural society (Salama and Wiedmann, 2013a, 2013b).

This paper examines three important urban spaces that are believed to cover a significant range of activities and services, and cater for people of different socioeconomic and cultural backgrounds. The objective is to explore their key functional, social and perceptual attributes by developing and implementing a walking tour assessment procedure consisting of checklists and a scoring system. The study discloses interesting results relevant to these attributes while offering insights into the spatial qualities of the spaces examined.

2. Characterisation of urban open spaces

Arguably, the importance of urban open spaces lies in the fact that they can satisfy certain basic human needs as well as offering particular interactive opportunities to a city's inhabitants (Carmona, 2010; Woolley, 2003). These needs respond to many attributes of human functioning such as comfort, relaxation, enjoyment and social stimulation. In physical terms, open spaces can be defined by their legal ownership and boundaries. Undeniably, the types of open spaces and their accessibility can promote feelings of inclusion or exclusion, as experienced by people of different cultural backgrounds and socioeconomic statuses.

Recent literature on urban design discusses the need for urban open spaces and elaborates on their benefits (Shaftoe, 2008). They offer health benefits when users exploit them for physical activity or just being outside in fresh open air. The beneficial opportunities for improving health and fitness and inculcating a sense of general wellbeing is becoming a vital consideration in the function and sustainability of open spaces, and is especially significant in the light of increasing levels of heart disease and obesity resulting from inactive city lifestyles. Open spaces are also places that offer opportunities for informal and social encounters and learning, places where people can meet other people with different customs and norms (Elsheshtawy, 2011). They can also help foster tolerance and understanding, which result from close interaction with others as opposed to the negative stereotyping that often occurs in monocultural settings (Salama and Gharib, 2012).

On a social level urban open spaces are described as places that allow for a wide spectrum of necessary and/or optional social activities (Gehl, 1987). Necessary activities include going to and from workplaces, schools, hospitals and shopping areas, while optional activities are exemplified by recreational places where people can enjoy walking, jogging, meditating, sitting, or just enjoying quality leisure time. Such activities are dependent on the opportunities available for engagement with, and the characteristics and qualities of, the space. Four types of needs have been identified to account for inhabitants' needs in public open spaces; these include opportunities for comfort, relaxation, passive engagement, active engagement and discovery (Carr *et al.*, 2012).

Comfort in open spaces represents the basic needs for food, drink and shelter. It can be reasonably stated that without satisfying the need for comfort, it would be hard to imagine that other needs could be satisfied (Linday, 1978). Yet, in attempting to enjoy and profit from their time in open spaces, people sometimes tolerate major discomforts such as an army of annoying insects or a lack of shading devices. Relaxation represents a more developed state of physical and mental ease

(Jackson, 1981). Typically, the description of a space as relaxing refers to the users' experience more than to its physical characteristics. It should be noted, however, that these are interdependent because physical characteristics significantly impact the degree of relaxation in a space. Passive engagement is the third need for open spaces; this too may lead to a sense of relaxation. However, passive engagement represents an indirect experience as it involves only the need for interaction with the setting, without active involvement – for example, watching a spectacular sunset or observing a flock of birds (Salama *et al.*, 2013). Active engagement is a more direct experience because it involves contact and interaction with others, whether with strangers or people known to them. Satisfying a need for discovery is the fifth reason people visit public open spaces; this use represents their desire for stimulation while at the same time seeking pleasurable experiences (Whyte, 1980).

While urban design literature has continuously offered various perceptive classifications of urban open spaces, there seems to be a divergence of thoughts, interests and inclinations. Therefore, within the scope of this paper, a categorisation of attributes of urban open spaces is deducted into three categories that can be outlined as follows.

- **Functional attributes:** Diversity of use; environmental responsiveness; appropriateness of form in relation to use; contextual accessibility; diversity of gathering nodes; visibility and inclusion of iconic elements; clarity of edges and boundaries; quality of architectural and landscape elements; adaptability and opportunities for appropriation.
- **Social attributes:** Promoting effective user experience; social inclusivity; engaging diverse social groups with space; accommodating diverse social activities; promoting interaction among different social groups in terms of age, cultural/ethnic background, or gender; serving different social groups in terms of food option and landscape elements; social accessibility in terms of location and transportation options.
- **Perceptual attributes:** Human experience; comfort and relaxation; personal space and privacy; safety and security in terms of boundaries, availability of security personnel and cameras; memorable architectural character; signage system; navigation and movement; spatial experience; reflecting local identity; attractiveness.

The preceding classification is not exclusive as other attributes can be included. Nonetheless, the examination of these attributes helps determine whether or not urban open spaces in Doha fulfil their functional and social role, and may provide valuable insights as to why some open spaces are filled with people while others are eluded or underused.

3. A methodology for examining urban open space attributes

In order to examine the attributes of urban open spaces in Doha an assessment mechanism was developed adopting a number of steps that include preparatory procedures and designing an investigation tool.

3.1 Preparatory procedures

3.1.1 Identification of urban open spaces

The first step was to identify spaces throughout the entire city boundaries, which could be subjected to investigation. Within the city, 12 spaces can be identified as the most important open spaces: these include Katara Cultural Village, the Pearl Qatar Development, Corniche area A near the Sheraton Hotel, Corniche area B near the Al Mourjan Restaurant, Corniche area C near the Museum of Islamic Art, Al Bidda Park, Souq Waqif area A, Souq Waqif area B, Msheireb, Al Sadd area, the Ramada Junction area and Aspire/Villaggio zone (Figures 1 and 2). While the degree of public usage in these spaces varies dramatically, combined they provide a variety of activities and leisure opportunities that cater to the

main socioeconomic groups of Qataris and non-Qataris who reside in the city.

3.1.2 Establishing space profiles

The second procedure was to develop analytical representation of the spaces identified that would result in establishing descriptive profiles for each of the 12 spaces. The descriptive profile of each space involves a preliminary examination of the spatial typology – involving description of the spatial environment including architecture and urban qualities; contextual accessibility – including availability of parking and ease of identification; type of users – including their socioeconomic and sociocultural background; and the nature and type of activities undertaken by the users. Figure 3 shows a matrix that summarises the profiles of urban open spaces.

3.1.3 Selecting spaces for examination

Three spaces were selected for assessment based on the range of activities, services and types of users that characterise each space. Most important, the degree of ‘publicness’ was an important factor in identifying the spaces, where each enjoys certain attributes relevant to the qualities of being inclusive or

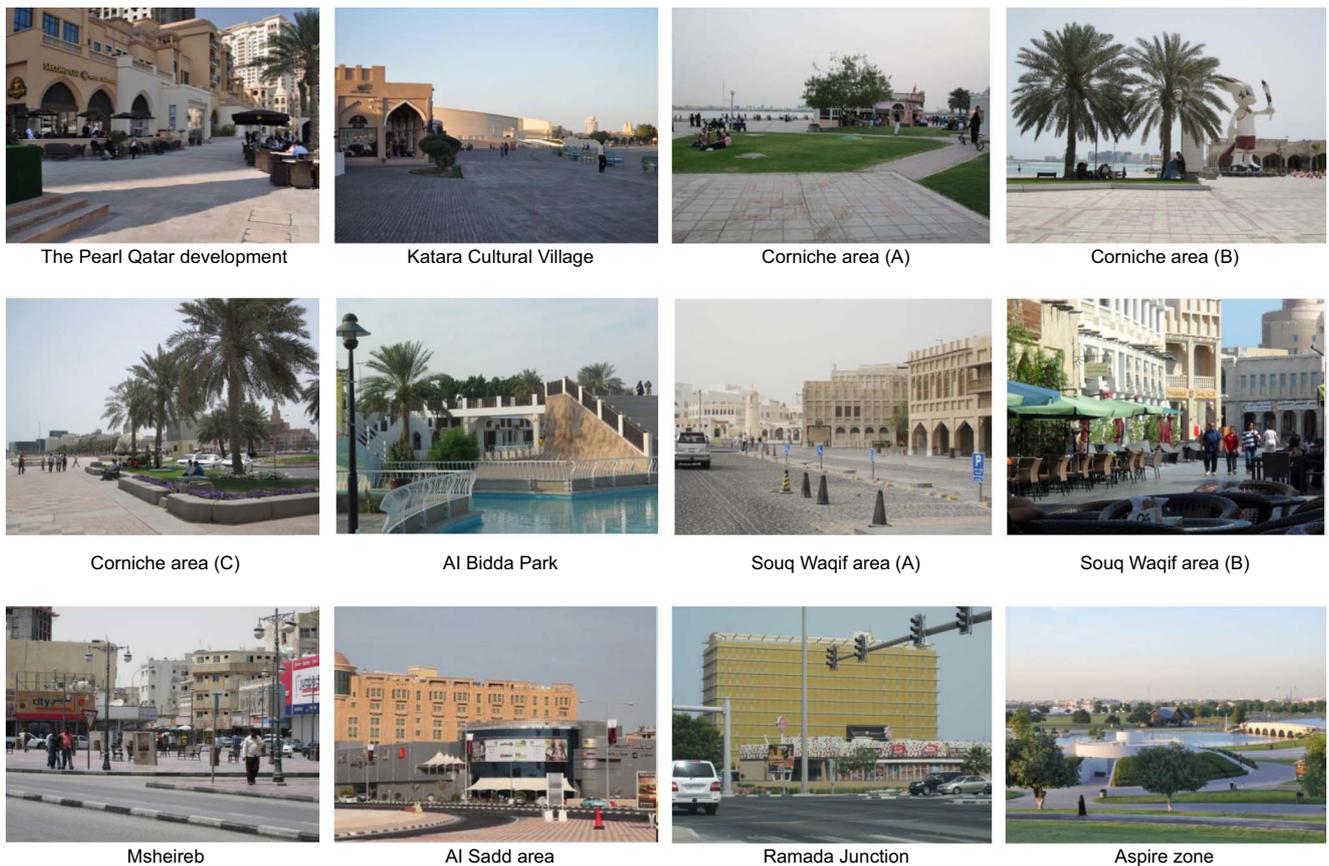


Figure 1. The spatial qualities of 12 urban open spaces in Doha

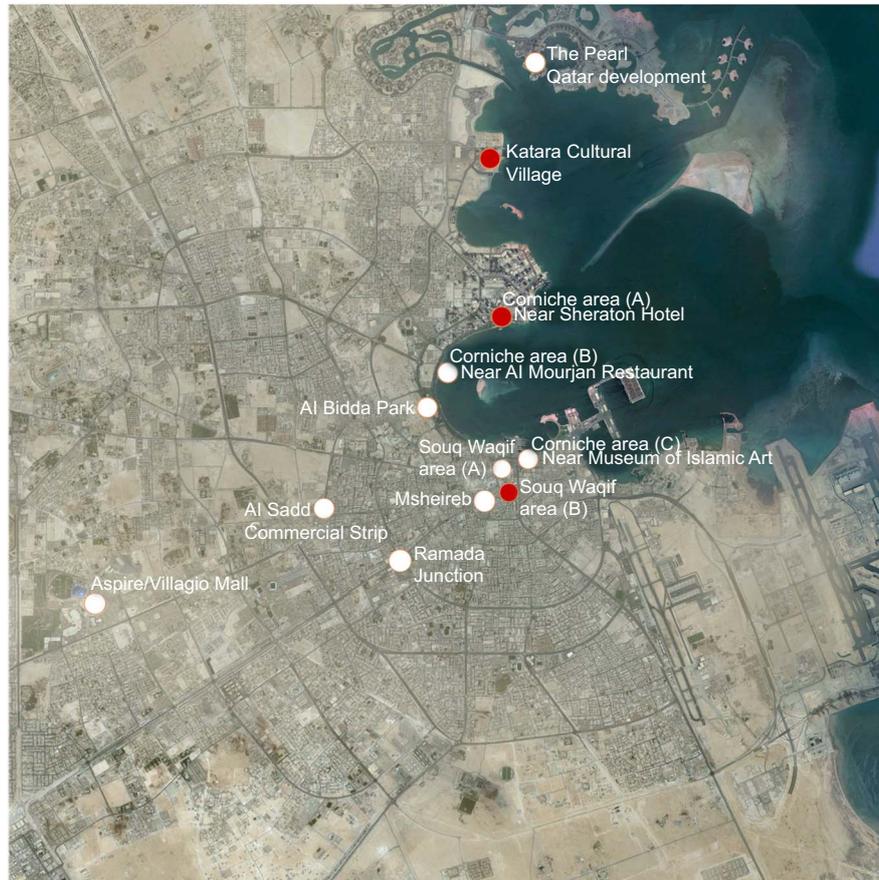


Figure 2. Locations of the three spaces selected for examination

exclusive, social and symbolic (Akkar, 2005; Varna and Tiesdell, 2010). Katara Cultural Village, Corniche area A and Souq Waqif area B were selected out of the 12 spaces (Figure 2). Key areas within each space selected were identified to conduct the assessment.

3.2 Designing a walking tour assessment tool

In order to introduce a step-by-step procedure for investigation, a walking tour assessment tool was designed to facilitate a comprehension of urban spaces in Doha, their different attributes and the users associated with them. The tool is structured in terms of checklists underlying three major categories of attributes: functional, social and perceptual. It is also developed in a manner that allows the researcher performing the walking tour to take a relatively structured walk-through in an urban open space. Each category involves checklists with a scoring system. Checklists are phrased in the form of questions underlying each category. Questions are designed in a manner that reflects the essence of each attribute. Numerical scores are assigned to the questions to represent the degree of appropriateness using a four-point scale where 1

represents highly inappropriate and 4 represents highly appropriate. Scores are averaged and an overall score for each urban space is then calculated (Figure 4). Concluding observations-based comments together with supporting illustrations are developed, while highlighting positive and negative attributes in each space.

In order to ensure objectivity and reliability the tool was tested and checklists were circulated to invited architects and urban design experts for feedback, which was taken into account in developing a final version of the tool. The walking tour was conducted by five architects, each at least three times, whose assessments were included in the final average score for each of the three categories of attributes. The final categorised checklists that were utilised in the walking tour assessment procedure are shown in Figure 5.

4. Heuristic narrative of the selected urban open spaces

Katara Cultural Village is named after the ancient name 'Catara' used by second century Roman mapmakers to

Space	Spatial typology						Accessibility			People				Activities							
	Traditional styled architecture	No cohesive architecture	Pedestrian paths	Green spaces	Enclave development	Landmarks	Dense urban node	Limited parking availability	Ease of identification	High – medium income	Low – medium income	Families	Singles/adults	Majority of qataris	Majority of expats	Residential	Commercial (shops)	Leisure and entertainment	Family/children play area	Sport activities	Walking and relaxing
Katara Cultural Village	●	●	●	●			●	●	●		●	●	●	●			●	●		●	
The Pearl Qatar development			●	●			●	●	●		●	●	●	●	●	●	●	●			●
Corniche area A (Sheraton Hotel)			●	●			●		●	●	●			●				●	●	●	●
Corniche area B (Al Mourjan Restaurant)			●			●	●		●	●								●		●	●
Corniche area C (MIA)			●			●			●	●		●						●		●	●
Al Bidda Park	●			●		●					●	●			●			●	●	●	●
Souq Waqif area A (shops)	●		●				●	●	●					●	●		●				
Souq Waqif area B (cafes & restaurants)	●		●				●	●	●					●	●		●				●
Msheireb	●						●	●			●	●					●	●			
Al Sadd area		●					●					●		●			●	●			
Ramada Junction area		●					●	●				●		●			●	●			
Aspire/Villagio zone			●	●				●			●		●	●					●	●	●

Figure 3. A summary matrix of the profiles of urban open spaces in Doha. MIA, Museum of Islamic Art

designate the peninsula of Qatar (Salama and Wiedmann, 2013a). Katara, as it is popularly known, is a 99 ha development along the waterfront located slightly north of Doha, between the West Bay financial district and the Pearl Qatar development. Its design and architectural character is intended to simulate a traditional, real or imagined, Qatari village with covered alleyways and narrow pedestrian streets. Buildings are styled to represent a hybrid of traditional Arabic or Islamic features. The locale hosts art societies and professional organisations, lecture halls, theatres, art galleries and hand-craft souqs, in addition to cafes and ethnic restaurants. The area selected for investigation within the village includes a large pseudo-Roman amphitheatre, a seafront esplanade that attracts strollers and people-watchers from different cultural backgrounds, and an entrance-fee ‘public’ beach that accommodates water sports and other beachside activities.

The elegant Corniche Boulevard is, in striking contrast, lined with a 7-km waterfront park and pathways, and is one of the most important and accessible urban open spaces in Doha. It consists of an attractive linear promenade along the picturesque Doha Bay enhanced by a variety of landscaped green areas, entertainment areas, open spaces and children’s play areas. The Corniche Waterfront Park is a popular recreational spot that provides city inhabitants with opportunities for strolling, jogging, cycling or just sitting and contemplating the scenic views across the bay. The park attracts a wide variety of different cultural and socioeconomic groups and is completely accessible to all members of the public. Key areas within the waterfront park can accommodate socialising, sporting and cultural events and activities. The area selected for investigation within the Corniche is characterised by its proximity to the Sheraton Hotel, the first iconic building and oldest

Perceptual attributes		Score	
Highly appropriate	4 3 2 1	Highly inappropriate	
1 To what degree does the space foster users' attachment to it while offering opportunities for an intensive human experience?	Insert illustration that justifies the score	
2 To what degree does the physical design of the space foster the feeling of comfort and relaxation?		
3 To what degree does the space consider the dimensions of personal space and privacy?		
4 To what degree does the space offer the feeling of safety and security to its users?		
Boundaries		
Security personnel		
Security cameras		
5 To what degree is the architectural character of this space being memorable?		
6 To what extent do the signs in this space consider different ethnics?		
7 To what degree is it easy to navigate in this space?		
8 To what degree could the spatial experience in this space be described as being interesting?	Insert text that justifies the score	
9 To what degree does the architectural character of this space reflect the identity of Doha?		
10 To what degree could this place be described as a major attraction in the city?		
Average score (total scores/12)		Insert illustration that justifies the score
		

Figure 4. Sample sheet used in the walking tour assessment

five-star hotel in the city, and its lush green spaces, paths and cafeteria.

Souq Waqif, an important urban open space in the city, is considered to be the most popular destination for residents and tourists alike. The rehabilitated souq includes a wide variety of shops that sell traditional garments, souvenirs, spices and foodstuffs within an environment that is designed to resemble the perceived and imagined traditional architecture of Qatar. The souq is a combination of restored, reconstructed, renovated and new buildings. It also hosts several small boutique hotels, an art gallery, handicraft and antique shops, traditional markets and numerous ethnic restaurants and cafes that attract Qataris, other Arabs and expatriates from all income groups. Occasional or weekend events are held in the open areas of the souq or in its purpose-built performing arts venue, the Al Rayyan Theatre. The area selected for investigation within the souq includes the main pedestrian spine, which houses the police station and a series of ethnic restaurants and cafes.

5. Uncovering urban open space attributes through the walking tour

The examination of the three categories of attributes reveals similar average scores in some attributes while varying in others (Table 1). However, the analysis conveys that each space enjoys specific attributes and performs differently.

5.1 Katara Cultural Village

Functional attributes of the space selected within Katara Cultural Village received a score of 3.03. The space involves mixed types of users including children. Users represent different socioeconomic strata and cultural backgrounds, including a substantial presence of locals (Figure 6(a)). The space accommodates a wide spectrum of uses including walking, sitting, relaxing, enjoying the beach view, experiencing and viewing beach sports, eating and learning about culture and arts through art exhibitions. The two dominant elements in the space are the esplanade and the amphitheatre, and both can be recognised from a distance and create a clear definition of boundaries. Shading and shaded areas seem to be

Functional aspects		Katara	Corniche A	Souq B
Highly appropriate	Highly inappropriate			
1	To what degree does the space involve different uses?	3.0	3.0	3.75
2	To what degree could the design of this space be described as environmentally responsive?	3.0	2.75	4.0
3	To what extent is the form of the space appropriate for the existing uses?	3.5	3.0	4.0
4	To what extent is this space accessible from the street/s?	1.25	3.75	3.5
5	To what degree does this space include multiple gathering nodes?	4.0	4.0	4.0
6	To what degree does this space include iconic elements that make it visible from a distance?	4.0	2.5	2.5
7	To what degree does this space have clear boundaries/edges?	3.75	3.0	3.75
8	How would you rate the quality of architectural and landscape elements in this space?	3.75	2.75	4.0
9	To what degree does the design of the space allow for an environment that users can modify and adapt according to emerging needs and wants?	1.0	3.5	0.75
Average score (total scores/9)		3.03	3.14	3.36
Social aspects		Katara	Corniche A	Souq B
Highly appropriate	Highly inappropriate			
1	To what degree does the space promote human direct experience while supporting the activities of and interaction among people?	3.75	4.0	4.0
2	To what degree could this space be described as being socially inclusive?	3.5	4.0	4.0
3	To what degree does the space encourage the use of several social groups?			
	Age	4.0	4.0	3.5
	Cultural/ethnic background	4.0	4.0	4.0
	Gender	4.0	4.0	4.0
4	To what degree does this space accommodate diverse social activities?	3.5	2.75	3.75
5	To what extent does this space promote interaction between different social groups?			
	Age	2.0	2.0	2.75
	Cultural/ethnic background	2.0	1.5	1.5
	Gender	2.0	2.0	1.0
6	To what extent do the uses in this space serve different social groups?			
	Food	3.0	3.0	4.0
	Landscape elements	2.25	3.5	1.75
7	To what extent is this space accessible to diverse social groups?			
	Location	1.5	4.0	4.0
	Transportation options	2.0	4.0	2.75
Average score (total scores/13)		2.88	3.29	3.15
Perceptual aspects		Katara	Corniche A	Souq B
Highly appropriate	Highly inappropriate			
1	To what degree does the space foster users' attachment to it while offering opportunities for an intensive human experience?	3.75	3.0	4.0
2	To what degree does the physical design of the space foster the feeling of comfort and relaxation?	2.25	3.25	4.0
3	To what degree does the space consider the dimensions of personal space and privacy?	2.5	1.25	2.75
4	To what degree does the space offer the feeling of safety and security to its users?			
	Boundaries	4.0	3.5	4.0
	Security personnel	4.0	1.5	4.0
	Security cameras	4.0	0.0	4.0
5	To what degree is the architectural character of this space being memorable?	4.0	3.5	4.0
6	To what extent do the signs in this space consider different ethnics?	3.75	3.25	2.0
7	To what degree is it easy to navigate in this space?	2.75	3.5	3.75
8	To what degree could the spatial experience in this space be described as being interesting?	3.5	2.5	4.0
9	To what degree does the architectural character of this space reflect the identity of Doha?	2.5	3.0	4.0
10	To what degree could this place be described as a major attraction in the city?	4.0	4.0	4.0
Average score (total scores/12)		3.38	2.69	3.71

Figure 5. Categorized checklists utilised in the walking tour assessment

Spaces	Functional attributes (total scores/9)	Social attributes (total score/13)	Perceptual attributes (total score/12)	Average (total score/3)
Katara Cultural Village	3.03	2.88	3.38	3.1
Corniche area A – near Sheraton Hotel	3.14	3.29	2.69	3.04
Souq Waqif area B – near police station	3.36	3.15	3.72	3.41

Table 1. Total average scores of the functional, social and perceptual attributes examined in the three spaces

absent in the waterfront portion of the esplanade, which creates a sense of discomfort. Yet, there is some shade provided through building masses and orientation. Artificial lighting appears insufficient at night. Access to the space from the parking area appears to be inconvenient due to the rough pavements used from the parking area to the space. Pavement materials while durable have the potential of creating heat islands. The space does not seem to offer any opportunity for adaptation or appropriation.

The examination of social attributes revealed a score of 2.88. The physical form of the space promotes various experiences where people pass by, gather, sit, relax and explore different exhibitions. While performing these activities there is some degree of socialisation and interaction. The space is inviting for men and women, adults and children, singles and families and people from different cultural backgrounds. It is pedestrian friendly, encouraging families to bring their children with little concern for safety. The diverse food choices of the ethnic restaurants surrounding the space serve users from different

social groups. It does not cater, however, to low-income groups. Softscape is considered in small portion in the space, space furniture and seating appears to be minimal. The space is not easily reached by pedestrians or public transportation. Yet, it is accessible to private transportation with sufficient parking available in peak visiting times.

Perceptual attributes received a score of 3.38. The eclectic architectural style coupled with a local vernacular feel makes the space visually appealing. The space is vibrant in special occasions and accommodates large gathering and public events (Figure 6(b)). Movement within the space can be described as easy while it may create some form of curiosity for some users. While signage is not so visible, it is bilingual (Arabic and English), which allows visitors to comprehend their whereabouts. The electric cars used to transmute people within the site instigate a feeling of discomfort to pedestrians, as they do not have clear tracks or pathways. Security personnel and cameras are available through the site. The space can be considered a major attraction to all socioeconomic and cultural groups within the city.



(a)



(b)

Figure 6. Katara Cultural Village: (a) substantial presence of locals; (b) the space during a public event



(a)



(b)

Figure 7. Corniche area A: (a) Sheraton hotel and Msheireb Enrichment Centre as dominant elements in the space; (b) sitting on green areas with low level of privacy

5.2 Corniche area A

Examining functional attributes of the space selected with the Corniche area A revealed a score of 3.14. The space encompasses diverse activities such as walking, exercising, cycling, eating, playing, sitting, relaxing. It is also used on special occasions such as national ceremonies and sports events. It includes different gathering nodes, such as the cafeteria, the bike renting area, the exercising tools area, the playground, the boat cruise renting area and the green areas where people sit and relax. With clear boundaries of waterfront and the boulevard the space has two important buildings: the Sheraton Hotel and Msheireb Enrichment Centre (Figure 7(a)). There is a severe lack of shade and shaded areas except in and around the children's playground. Artificial lighting, while sufficient, is poor in condition as it distracts vision due to the height of the light posts and their location within the landscaped and parking areas. The space is accessible from the street with two major parking lots, in addition to street parking. While the existing softscape is diverse with trees, grass, shrubs and flowers, pavement and green space curbs appear to be in poor quality. As the space is open with an abundance of green and paved areas, it appears to provide an adaptive environment.

Social attributes received a score of 3.29. The visibility and views within and through the space promote an effective spatial experience. The daily and occasional activities are socially inclusive to all users of different age groups, cultural backgrounds and gender. However, the space allows for minor interaction among these social groups on a daily basis. It is a destination for singles and families but for different activities. There is only one cafeteria serving different but not all social

groups due to the basic food it serves (drinks, traditional tea and light snacks). Landscape elements and the available green areas appear to suit all user types, yet minor seating seems to be available. The Corniche Boulevard is one of the most important and used streets in the city; thus the space is accessible from different directions to all social groups by different modes of transportation, private vehicles, public buses and taxis.

The examination of perceptual attributes disclosed a score of 2.69. The Sheraton Hotel as an important landmark in the city creates a special ambiance, especially for those who experienced the development of the city. While the space does not have enough support services, the view to the sea, the availability of green spaces, the sea breeze and children play opportunities are attributes that offer an enhanced experience and a relaxing mesosphere. The space is very open, allowing good visibility and navigation but with a low level of privacy (Figure 7(b)). Buffer areas of green and parking areas provide a feeling of safety. However, there are no security personnel or security cameras. The signage system appears to be efficient, expressed in English, Arabic and in illustrations, thereby considering people from cultural backgrounds. While the Corniche Boulevard is a major attraction in Doha Metropolitan, this space is the most attractive part of the Corniche due to its size, sea view, availability of parking and variety of gathering nodes. Yet, it caters more to middle- to low-income groups.

5.3 Souq Waqif area B

The examination of functional attributes revealed a score of 3.36. The space is a social hub and a point of attraction for



(a)



(b)

Figure 8. Souq Waqif area B: (a) visitors exploring the traditional vernacular style; (b) softscape elements and mobile parasols

different user groups of various cultural and socioeconomic backgrounds. It accommodates different retail and entertainment uses such as restaurants, cafes and shops. It also houses some services such as the police station and passport department. People gather in different spots along the pedestrian spine and the gatherings in this area are more or less instant because the pedestrian spine appears to be motivating visitors to experience the place and enjoy the scene and services while walking. The architecture of the souq symbolises the traditional vernacular style (Figure 8(a)). The arcaded passageways are dominant and are used by visitors to avoid walking under the sun. Yet, architectural details are repeated in a manner that provides a sense of monotony. While not available for visitors, there are opportunities for shop and restaurant owners to appropriate the space and extend their goods or tables in the main spine.

Examining social attributes revealed a score of 3.15. While the space appears inclusive, not all groups are allowed to navigate the space through security personnel. Even though the activities that cater to children are very limited it seems that they enjoy experiencing the space with their families. There is a variety of choices available through ethnic restaurants and cafes. Landscape elements are minimal but there are softscape elements or movable shading devices that each restaurant utilises to attract visitors. The way in which they are positioned offers a relative definition of territories with minimal privacy (Figure 8(b)). While it does not seem to be sufficient, two main parking spaces are provided allowing easy access to different pedestrian spines and zones. The space is thus highly accessible from different entry points. No designated cycling pathways are available in or around the space and both a taxi hub and a bus stop are available in the main parking area.

Perceptual attributes received a score of 3.72. The architecture of the space manifests the old historical and cultural image of a city seeking to bring back the spirit of its past. This instigates a sense of history, offers a cultural experience to both residents and tourists, and supports the feeling of comfort and relaxation in such a small-scale environment. The space has clear boundaries while offering a feeling of security through the presence of the police station, security personnel, in addition to the cameras installed in all building and restaurant entries. Directional signage is minimal yet this might be seen as fostering exploration and promoting a sense of curiosity. Representational signs are, however, available for all restaurants and cafes. The majority of signs are in Arabic, which does not cater to tourists and residents from non-Arabic backgrounds.

6. Discussion and conclusion

Most of the three types of attributes received relatively high average scores, which indicates a high degree of appropriateness. Key findings representing shortcomings, however, can be highlighted. The total score of social and perceptual attributes is lower in Katara Cultural Village (2.88) and in the Corniche area A (2.69), respectively, which indicates a degree of inappropriateness as shown earlier in Table 1.

Despite the fact that the three spaces received high scores, some functional attributes received lower scores. In the Corniche area A environmental responsiveness scored 2.75 because the space lacks sufficient outdoor seating and significantly lacks parasols or other forms of shade, which could potentially make it more appealing for use by more groups, especially during the hot and sunny daytime hours. While it encompasses an important iconic building, visibility scored 2.5, which indicates a degree of inappropriateness due to distraction resulting from

artificial lighting at night. In Katara Cultural Village contextual accessibility seems to be inappropriate and scored 1.25 where a rough pavement leading to and within the space does not offer a feeling of walking in comfort. Adaptability and flexibility are highly inappropriate in Katara Cultural Village and in the Souq Waqif area B because they scored 1.0 and 0.75, respectively. This was where a lack of adequate outdoor furniture such as benches and chairs hinders opportunities for appropriation as in the case of Katara Cultural Village, or almost no opportunities at all for visitors to the Souq Waqif area to adapt their space, especially while dining outdoors, although space appropriation is articulated by shop and restaurant owners and staff (Table 2).

Promoting effective experience, social inclusivity and engaging diverse social groups with space as social attributes appear to be highly appropriate in the three spaces because they scored 3.0 or more. A number of social attributes, however, received low scores as shown in Table 3. Notably, on the one hand, promoting interaction among different social groups across the three spaces appears to be highly inappropriate because it received scores between 1.0 and 2.75 in terms of age, cultural background and gender (Table 3). This is despite the fact that there are several gathering nodes that could potentially instigate interaction. This could be attributed to the lack of outdoor furniture as a landscape element as in the case of Katara Cultural Village, which received a score of 2.25, or due to the severe lack of shaded areas in the Corniche area A, which received a score of 2.75 in environmental responsiveness as part of the functional attributes, or the entire absence of trees or greenery in the Souq Waqif area B, which received a score of 1.75.

The fact that Souq Waqif area B received very low scores in the attribute of promoting interaction among different social groups in terms of age (2.75), cultural and ethnic background

(1.5) and gender (1.0) could be explained by the lack of children-related activities. Also, repeated walking tours reveal that from time to time Asian labourers and groups of Asian men cruise through the open streets watching the more well-heeled patrons dine at expensive cafes and restaurants. However, security police stand in front of and near the station and have been observed to hustle certain labourers away.

On the other hand, social accessibility in terms of location and transportation options received low scores. The location of Katara Village scored 1.5 due to its position on the northern periphery of the city. Also, transportation options scored 2.0 because public transportation is not provided to the area. The village itself is designated for an exclusive clientele and patronage as it is gated; visitors are generally screened before being admitted. Despite its ideal location in the heart of the old city, Souq Waqif area B scored 2.75 in transportation options due to the crowdedness of the area and the inadequacy of parking space, which is exacerbated by the less than standard-size parking lozenges and narrow lanes of the car park areas.

The majority of the perceptual attributes scored relatively high in the three spaces, in particular human experience, navigation and movement, reflecting local identity and attractiveness. The sense of comfort and relaxation scored low in Katara Cultural Village and this can be attributed to the rough pavement used and the lack of green spaces and outdoor furniture. Due to the vast space, which is not supported by elements such as outdoor covered seating, privacy and personal space scored 2.5 in Katara Cultural Village. Although the scenic views and the waterfront are dominant in both Katara Cultural Village and the Corniche area A, they do not seem to offer interesting spatial experience and this can be explained by the fact that both spaces lack vertical elements that define smaller spaces

Functional attributes

Highly appropriate 4 3 2 1 Highly inappropriate	Katara Cultural Village	Corniche area A	Souq Waqif area B
1 Nature and diversity of use	3.0	3.0	3.75
2 Environmental responsiveness	3.0	2.75	4.0
3 Appropriateness of form in relation to use	3.5	3.0	4.0
4 Contextual accessibility	1.25	3.75	3.5
5 Diversity of gathering nodes	4.0	4.0	4.0
6 Visibility and inclusion of iconic elements	4.0	2.5	2.5
7 Clarity of edges and boundaries	3.75	3.0	3.75
8 Quality of architectural and landscape elements	3.75	2.75	4.0
9 Adaptability and opportunities for appropriation	1.0	3.5	0.75
Average score (total scores/9)	3.03	3.14	3.36

Table 2. Average scores of the functional attributes examined in the three spaces

Social attributes

Highly appropriate 4 3 2 1 Highly inappropriate	Katara Cultural Village	Corniche area A	Souq Waqif area B
1 Promoting effective user experience	3.75	4.0	4.0
2 Social inclusivity	3.5	4.0	4.0
3 Engaging diverse social groups			
■ Age	4.0	4.0	3.5
■ Cultural/ethnic background	4.0	4.0	4.0
■ Gender	4.0	4.0	4.0
4 Accommodating diverse social activities	3.5	2.75	3.75
5 Promoting interaction among different social groups			
■ Age	2.0	2.0	2.75
■ Cultural/ethnic background	2.0	1.5	1.5
■ Gender	2.0	2.0	1.0
6 Serving different social groups			
■ Food	3.0	3.0	4.0
■ Landscape elements	2.25	3.5	1.75
7 Social accessibility			
■ Location	1.5	4.0	4.0
■ Transportation options	2.0	4.0	2.75
Average score (total scores/13)	2.88	3.29	3.15

Table 3. Average scores of the social attributes examined in the three spaces

within each. Other attributes such as security in the Corniche area A and the signage system in Souq Waqif area B scored 1.5 and 0.0 and 2.0, respectively (Table 4). This can be explained

by the absence of security personnel and cameras in the Corniche and by the use of signs that have only Arabic language in a multicultural and multilingual setting.

Perceptual attributes

Highly appropriate 4 3 2 1 Highly inappropriate	Katara Cultural Village	Corniche area A	Souq Waqif area B
1 Direct human experience	3.75	3.0	4.0
2 Comfort and relaxation	2.25	3.25	4.0
3 Personal space and privacy	2.5	1.25	2.75
4 Safety and security			
■ Boundaries	4.0	3.5	4.0
■ Security personnel	4.0	1.5	4.0
■ Security cameras	4.0	0.0	4.0
5 Memorable architectural character	4.0	3.5	4.0
6 Signage system	3.25	3.25	2.0
7 Navigation and movement	2.75	3.5	3.75
8 Interesting spatial experience	3.5	2.5	4.0
9 Reflecting local identity	2.5	3.0	4.0
10 Attractiveness	4.0	4.0	4.0
Average score (total scores/12)	3.38	2.69	3.72

Table 4. Average scores of the perceptual attributes examined in the three spaces

Examining urban open spaces by implementing the walking tour assessment tool enabled the development of insights into the understanding of their key functional, social and perceptual attributes. Conducting self-guided tours with checklists and a scoring system can assist in the identification and subsequent understanding of the spatial experience, movement and sitting patterns that are often governed by design qualities and amenities that characterise the space. The study delineates that there is an absence of landscape features and a dearth of green spaces or appropriate outdoor furniture, such as benches and seating, in Katara Cultural Village. Similarly, there is an absence of adequate shaded areas and shading devices and parasols in the Corniche area A. In addition, a lack of children's facilities or specially designated areas for children was noted in Souq Waqif. These detected lacks and absences could be viewed as flaws that may inhibit the effective utilisation and use of the three spaces.

While the walking tour assessment strategy is considered to be impressionistic, it offered an opportunity for understanding urban open space qualities in the city of Doha by focusing on specific attributes. Investigations of the same spaces, however, are currently being undertaken by the authors to implement direct observation and behavioural mapping as systematic methods for describing and analysing the dynamics of user interaction with the spatial environment. The results of implementing such methods would instigate complementary justifications to the outcomes of the walking tour assessment, while expanding on the discussion of sociospatial practices in the three spaces.

The availability of attractive, accessible open spaces is an important feature of a liveable urban environment. Such importance is sometimes ignored or oversimplified when making decisions about land use or when discussing the qualities of the built form, particularly in the absence of urban design guidelines or public realm strategies. This mandates the need for careful consideration of the design of future urban spaces. As such, addressing the lack of features that enhance people's activities and use of space, or those that would cater to a specific type of user would make the space more conducive for use by different groups and at different days and times.

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REFERENCES

Akkar M (2005) Questioning the 'publicness' of public spaces in postindustrial cities. *Traditional Dwellings and Settlements Review* XVI(11): 75–91.

- Carmona M (2010) Contemporary public space, part two: classification. *Journal of Urban Design* 15(2): 157–173.
- Carr S, Francis M, Rivlin LG and Stone AM (2012) Needs in public space. In *Urban Design Reader* (Carmona M and Tiesdell S (eds)). The Architectural Press, Oxford, UK, pp. 230–240.
- Elshestawy Y (2011) Informal encounters: mapping Abu Dhabi's urban public spaces. *Built Environment* 37(1): 92–113.
- Gehl J (1987) *Life Between Buildings: Using public spaces*. Van Nostrand Reinhold, New York, NY, USA.
- Jackson JB (1981) The public park needs appraisal. In *Urban Open Spaces* (Taylor L (ed.)). Rizzoli, New York, NY, USA, pp. 34–35.
- Lindsay N (1978) It all comes down to a comfortable place to sit and watch. *Landscape Architecture* 68(6): 492–497.
- QSDP (Qatar General Secretariat of Development Planning) (2011) *National Development Strategy 2011–2016*. Gulf Publishing and Printing Company, Doha, Qatar.
- Salama AM and Gharib RY (2012) A perceptual approach for investigating urban space diversity in the city of Doha. *Open House International* 37(2): 24–32.
- Salama AM and Wiedmann F (2013a) *Demystifying Doha: On Architecture and Urbanism in an Emerging City*. Ashgate Publishing, Surrey, UK.
- Salama AM and Wiedmann F (2013b) The production of urban qualities in the emerging city of Doha: urban space diversity as a case for investigating the 'lived space'. *Archnet-IJAR – International Journal of Architectural Research* 7(2): 160–172.
- Salama AM, Khalfani F and Al-Maimani A (2013) Experiential assessment of urban open spaces in Doha. *Open House International* 38(4): 47–57.
- Shaftoe H (2008) *Convivial Urban Spaces: Creating Effective Public Places*. Earthscan, London, UK.
- 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.
- Whyte WH (1980) *The Social Life of Small Urban Spaces*. Conservation Foundation, Washington, DC, USA.
- Woolley H (2003) *Urban Open Spaces*. Spon Press, London, UK.

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