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THE REGENERATION OF AL NASSER STREET IN DOHA (QATAR): ENHANCING THE SPATIAL FORM AND USER' SOCIAL INTERRACTIONS.

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ABSTRACT

Al Nasser Street is one of the most commercially populated streets in Al Mirqab District, in Doha, Qatar. Over the past few years, many commercial developments have overtaken urban spaces, leaving no place for green areas or proper urban furniture—and thus resulting in inhabitance social interactions' decay, which, in turn, has discouraged the quality of social interactions in the street, thereby affecting the human health and social fabric. This research study investigates the street urban components as well as green areas, considering their influence on inhabitance social and environmental behavior. The study engages with issues of sustainable urban design standards linked to social sustainability of the street. The literature about sustainable development and principles of urban design was reviewed. In addition, site analysis and site observation were conducted in order to explore the street urban characteristics. The findings provide a set of practical and empirical strategies to enhance the current spatial form of Al Nasser Street.

Keywords: Al Nasser Street, Social Sustainability, Social Interactions, Urban Fabric, Doha, Qatar.

INTRODUCTION

The discovery of "Oil" has led to explosive urban growth. In the 21st century, Qatar entered an era of modern urbanization driven by the increasing oil prices (Fromherz, 2012; Jaidah & Bourennane, 2010; Jodidio & Halbe, 2015; Qatar, 2008; Salama & Wiedmann, 2013). This growth has also had negative effects, by neglecting the environment as well as inhabitants' quality of life within Doha built environment.(Furlan & Almohannadi, 2016; Furlan, Muneerudeen, & Khani, 2016; Furlan & Sipe, 2017; Furlan & Wadi, 2017; Furlan, Zaina, & Zaina, 2016). Al Nasser Street is one of the major streets of Al Mirqab district. Various land uses can be identified through the street components (residential, commercial, and mixed-

use). The street encompass 12 housing units and 75 commercial establishments (Authority, 2010). Almost 2,000 people live in the settlement (statistics, 2015), 61% of whom are male and 39% are female. As the rapid urban development has overtaken urban spaces, the street has been suffering from a shortage of green areas that is itself directly linked to the social interactions of the users (Furlan, 2015, 2016; Furlan & Faggion, 2017; Furlan, Muneerudeen, et al., 2016; Furlan, N.Eiraibe, & AL-Malki, 2015; Furlan, Nafi, & Alattar, 2015; Furlan & Petruccioli, 2016).

This research study investigate (1) the extent to which environmental and spatial factors are linked to the social interactions of users, (2) as well as how health and social activities, furniture, streetscapes, pocket gardens, and pedestrian networks contribute to enhance quality of life (Adhya, Plowright, & Stevens, 2014; AlSayyad, 1991; Day, 2003; Farr, 20081; Furlan, Rajan, & AlNuaimi, 2016; Hakim, 2014; Wiedmann, Salama, & Mirincheva, 2014). Finally, a systemic set of strategies is developed for the regeneration of al Nasser street in Doha (Qatar), aiming at enhancing the spatial form and user' social interactions.

LITERATURE REVIEW

SOCIAL SUSTAINABILITY

Humans' gregariousness gives rise to cities. At first in tribal and communal contexts, humans' mutual support allowed the accumulation of surplus and the attendant formation of hierarchical societies, which, in turn, supported the formation of settlement, such as villages, towns, and eventually cities (Brown & Dixon, 2014). The definition of social sustainability is a point of contention among scholars; some of whom argue that it indicates the built environment is created by the intersection of economic growth, social development, and environmental protection (Meadowcroft, 1999). Sustainable development aims at balancing and sustaining three-dimensional issues in all their interconnectedness so as to achieve a sort of process prioritization (Manzi, Lucas, Jones, & Allen, 2010). Although the Russian doll model suggests that these areas are central to any understanding of social sustainability—and, moreover, that the concept can be understood by distinguishing between eco-centric and anthropocentric approaches to the issues (Kearns & Turok, 2003). However, Jarvis, explains that social sustainability chiefly concerns itself with the interconnectedness of individuals' actions and the created environment in which those actions occur - the link between individual life and institutional structure. Such a perspective - he notes - has been taken all too infrequently by mainstream voices in the debate over issues of sustainability (Manzi et al., 2010).

Social sustainability is achieved when human needs are provided through an institutional

framework that takes into account productivity and social equity while keeping the human factor at the forefront (Littig & Grießler, 2005). Brundtland describes the main principles of sustainable development as Public trust and Intergenerational equity (Barton, 2000).

Qatar National Vision (QNV2030) for 2030 emphasizes the urgency of forging regional and international alliances that promote global development through partnership. However, the Qatari government's ambitious agenda will require deep-seated organizational changes and substantial capacity-building among the institutions responsible for environmental issues.

URBAN DESIGN

Urban design is defined as a multidisciplinary subject that relies on all elements of built form engineering, including architecture, landscape design, urban planning, and general municipal engineering (Van Assche, Beunen, Duineveld, & de Jong, 2013). Urban design takes a holistic view of these spaces, seeking to bring together as part of a unified vision the various disciplines that contribute to a city (Association, 2006). Positive changes can be taken into consideration for the human welfare, but urban designers must take responsibility for reshaping the human life style to achieve the maximum benefits of the users (Brown & Dixon, 2014) (Givoni, 1998). Moreover, urban site boundaries exceed horizontal spatial dimensions to include vertical dimensions (Oke, 2006) (Donald Watson, 2003). What's more, with respect to neighborhood platforms should be defined through the concept of a 5-10 minutes (Ramadan, 2010) (Lynch, 1960). Both hardscape pavements and softscape areas merge to define the edges of a floorscape that covers the surface of the ground (Moughtin, Oc, & Tiesdell, 1999). However, vegetation can include natural elements that can be placed vertically or horizontally among built forms to maximize the benefits offered by a particular view, to enhance thermal comfort, to boost users' health, or to promote urban forestry. Distances between pairs of public greens average 600 meters, halfway between the 300 meters of English nature standards and the 15 minutes' walk, or 900 meters, recommended by the European Environment Agency (Barbosa et al., 2007).

METHODOLOGY

This study explores the relationships between user behavior and the physical-nonphysical aspects of the spatial form through site analysis and observation of the physical conditions of Al Nasser Street, including aspects such as density (pedestrian and vehicular), land use, physical conditions of the built environment and availability of both hard- and softscape (green set, public realm, connection set, and parking).

FINDINGS

The street encompasses 77 establishments accommodated by approximately 155.5 acres of land on a stretch 1.75 km long. Al Nasser Street includes major establishments such as Doha Souq Mall, Al Mirqab Mall, the Doha Clinic Hospital, 25 service agencies and more than 20 restaurants. The street divides Al Mirqab district into the Al Naser and Al Mirqab Al Jadeed sub districts, connecting C Ring Road with the Doha Expressway.

SITE PHYSICAL ANALYSIS (LAND USE, DENSITY, AVAILABILITY OF SOFTSCAPE AND HARDSCAPE)

Land use: Al Nasser Street land use can be categorized into (1) mixed-use buildings (commercial shops and residential apartments) located on both sides of the street and (2) high-density residential buildings in the second row of the establishments.

Density: The Street is one of the densest streets in Al Mirqab and its street density can be broken down into three types: (1) The built environment (buildings) with a footprint exceeding 85% of the total street land area; (2) Pedestrian density with related services such as malls, restaurants, pantries, and daily services; (3) Vehicular density increasing in the density of built forms and pedestrian use.

Availability of soft and hardscape: Al Nasser Street is characterized by a consistent absence of any type of green settings (floor vegetation, vertical vegetation, trees, ground cover), displaying only 1% of the street-front vegetated.

SITE OBSERVATION (COMPOSITIONS AND SOCIAL INTERACTION)

The Commercial activity peaks once in the morning, when agencies are open for work and again at lunchtime because of the restaurants and food pantries, which attract employees from surrounding neighborhoods. Then it gradually increases until evening, when it reaches its maximum as visitors approach for shopping purposes.

CONCLUSIONS AND DISCUSSION

Al Nasser Street social characteristics has drove it into complicated situation were the interactions between inhabitants and built form occurs at the lowest level. Limited consideration is addressed to the street and users' quality of living. Therefore, the social sustainability of the street need to be explored, enhanced and left-up through the main pillars of social sustainability which are environment, economic, and social development. The integrated strategies shall flow with the mainstream of Qatar National Vision

(QNV2030) for 2030, relying the responsibility on the governmental institution to achieve that purpose.

The institutional bodies through governmental agendas need to address the required regenerative process in the long term aligning with urgent changes, which need to be carried out in all levels (physical and institutional). A proper agenda will include and target the nature of the street within the overall state future plans combined with the proper urban design and environmental standards.

Since the urban design scoop is to develop functional and sustainable settlements that goes beyond the current issues, a responsible design strategies for Al Nasser-street need to be efficiently addressed considering the characteristics of the street (commercial and residential activity) and focusing on prioritizing the human scale, where attention is given to pedestrian need and behaviours. Also, the design standards need to be considered. The environmental aspects that is required to enhance the activity of the residence must include pathways design, city furniture and green areas as source of the aspects that increase the quality of life for the street's users.

In order to develop and enhance the street and residence quality of living, specific factors have been revealed from the data analyzed through the site analysis and observation (social and physical). The findings contribute to determine three types of systematic recommendations. The first includes the social pattern of the commercial activities: the authors attempt to propose a treatment method to reduce the influence of such activity on the users; the second recommendation refer to accessibility and vehicular congestion in the street; the third suggestion addresses the enhancement of environmental aspects such as vegetation and inhabitance health in the street.

CONTRIBUTION TO KNOWLEDGE AND IMPLICATIONS FOR PRACTICE AND ADVANCEMENT OF RESEARCH

Concerns of social sustainability and urban design have failed to attract suitable levels of attention from local scholars and developers. Accordingly, this research study investigates the relationship between social sustainability and urban design standards in the State of Qatar, attempting to translating theoretical knowledge into applicable principles of urban planning. This study could be further expanded to other local and/or regional case studies, seen the fast-urban development and regeneration of the built environment of several major cities within the GCC countries.

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Mahmoud H. Al Saeed has 5 years' experience working as an architect and as a green building specialist, with 3 years served in the gulf region and 2 in Jordan. He has a LEED GA certificate, a CGP certificate, and an UPDA certificate for practice as an architect and has been a member of GORD (the Gulf Organization of Research and Development—QA1669 001858) since 2014. Dr. Raffaello Furlan holds Bachelors and Masters Degrees from IUAV University in Venice (Italy), and a PhD in Architecture from Griffith University in Brisbane (Australia). He has held visiting and permanent positions in Australia (University of Queensland and Griffith University in Brisbane), UAE (Canadian University of Dubai) and Qatar (Qatar University). He has been teaching Art History, History of Architecture, Project Management, Urban Design, Architecture Design and Interior Design. His areas of interest include Vernacular Architecture, Architecture and Urban Sociology, Project management, Art History. Member of the Board of Architects in Italy and Australia, he has 20 years professional experience, split between design management, project management and supervision roles, with some highly respected companies, 6 years of which were in Italy, 10 years in Australia, and 4 years in Middle East. He is an assistant professor in the Department of Architecture and Urban Planning (DAUP) at Qatar University.

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