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Strategic Design Guidance on Tall Buildings in the Arab Region

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Abstract

Globally, there has been enhanced media and public interest in tall buildings following the terrorist attacks on the World Trade Centre in New York. In the Arab region, tall buildings have also become an important topic of debate. The Middle East is set to grow significantly over the next two decades. Soaring population and jobs growth will increase demands for the better use of residential and commercial office space. This is a vital issue for the growth in the economy of the region. The number of construction sites for tall buildings in the Arab world is staggering when compared to European developments. A statistical review of tall buildings has shown for example that the United Arab Emirates (UAE) by the year 2010 will outnumber UK and Germany together in the number of 30+ floors buildings by reaching (446 UAE) compared to [243 UK(130) + Germany(113)]. Today high buildings are considered flagship developments not only in the Arab World but also worldwide that play an important part in regeneration. Tall buildings are likely to continue to be relevant to the master planning of areas with good public transport access and capacity. A successful tall building must adhere to a set of clear urban design guidelines that affect the following areas: edges, use, public space, urban integration and environmental factors. This paper addresses this issue. The challenge for architects, urban designers, and planners in the Arab world is to provide the right type and quality of new space and new place that won’t undermine the question of identity. The paper explores the nature of tall buildings in the Arab region and provides examples of the positive and negative transformation of the urban environments in a number of locales. The paper concludes by drawing some guidelines for future development of tall buildings in the Arab World.

Keywords: Strategic design guidance, Tall buildings, Cultural identity.
1 Introduction

Since the dawn of history man has been trying to build the tallest building, tallest tower or tallest structure. Much controversy surrounds tall structures and debates about their significance and efficiency have been raging since this building type was invented more than a century ago. Until recently, churches and mosques or other religious buildings dominated the skylines of many cities across the world (Vickers, 1999). The modern movement created rapid and immediate change and many modern architects sought new form of height control that would rationalize the city into segregated users (Vickers, 1999). There are several explanations for the construction of tall buildings. They include their apparent financial rationale, the shift to a service-based economy and the need to create corporate symbols and urban icons (Gottman, 1966, Relph, 1987, Domosh, 1988 and Willis, 1995 cited in Charney, 2005). The shift in architecture notion has therefore evolved from the focus on what a building has and does to represent the consumer's status and the way he/she feels (Klingmann, 2007).

Tall buildings can make positive contributions to city life and provide a positive impact on the image and identity of a city (Anon, 2007). In many circumstances they are considered symbols of power, culture and economic success. In a suitable location, a tall building can serve as a beacon of regeneration and stimulate investment. Such buildings, however, can also impact negatively on urban landscapes and local communities as they may harm the qualities that people value about a place, creating a sense of placelessness (Anon, 2007). The complex relationship between the notion of a place, broad use of Information and Communication Technology (ICT), sense of identity and consumer related market place in the built environment has also been highlighted by Klingmann, (2007).

Tall buildings, more than any other architectural piece, have the capacity to capture the public imagination (Howeler, 2003) and no matter what the real or supposed function, meaning or symbolism of tall buildings, love or hate them, one cannot ignore them (Abel, 2003). Much debate exists over a standard definition of a ‘tall building’. Some define it according to height or number of floors, however, a more suitable definition is provided by Beedle (1986) in which a tall building is described as a building which creates a different set of conditions in the design, construction and operation from those that exist in the particular setting (Short, 2004).

Globally, there has been enhanced media and public interest in tall buildings following the terrorist attacks on the World Trade Centre in New York. Issues such as security and occupant protection have since become more importance. Since 911 a debate over the future of urban form and function has emerged. A principal question in this debate has been whether in this context tall buildings have a future. Some commentators have deemed the end of the age for skyscrapers and consider them to be an experimental building typology which has failed (Kunstler & Safigaros, 2001). Others, however, believe tall buildings
to be a pivotal element ingrained in the modern culture ‘I believe the skyscraper is part of the nature of human beings’ (Cesar Pelli, cited in Libby, 2002).

Many major cities in the Arab world such as Dubai compete on a global stage to have the tallest buildings with which to announce the confidence and global nature of economics. Indeed tall buildings are a mix of real estate speculation, technological advancements, and architectural experimentation (Howeler, 2003). Tall buildings are considered instrumental in claiming a global position. Also, where large commercial names increasingly employ architecture, often represented in or on tall buildings as a central part of their larger marketing strategy; tall buildings claim the same from those commercial names. This is evident in cities such as Shanghai and Dubai, where tall buildings architecture has transformed and enhanced the skylines, and at the same time helped to secure their position globally (Klingmann, 2007).

In such cases the desire for tall structures takes priority over the fear of terror, earthquakes, typhoons, height and restrictions and economic uncertainties. In a broader sense, recent planning practices in London, a city that recently only had a handful of tall buildings suggest that despite the shock of the World Trade Centre destruction, construction of high-rise buildings is far from over (McNeil, 2002). Tall buildings are likely to continue to be relevant to the master planning of areas with good public transport access and capacity. A successful tall building must, however, adhere to a set of clear urban design guidelines that affect the following areas: edges, use, public space, urban integration and environmental factors. With such a fast pace of development in the Arab World the issue of strategic design guidance for tall buildings has become an important emerging issue.

In the Arab region, tall buildings also have become an important topic of debate for a number of reasons. The fast pace of development in the Arab world has meant that quality and unity of the urban landscape has become amalgamated. The paper provides a perspective on architectural and urban transformation of major Arab capital cities in the era of the global village, focusing on the expanding use of tall buildings in the Arab world. The impacts of such rapid changes on the urban environment are discussed with special interest on how such cities try to both cater to an influx of global capital and to re-state their roles as symbols of national sovereignty. Finally, strategic guidance for future developments of tall buildings in the Arab world will be proposed.

2 Transformations of Architecture in Major Arab Cities

Architecture in the Arab world demonstrates a vibrant and diverse history. Christian churches, Islamic mosques and other religions and cultural monuments have enriched the landscape for many centuries. Architectural style has transformed over the years throughout the Arab world. Before the 1960’s the only settlements were generally small towns and villages. It was the discovery
of oil resources that enabled massive modernisation and transformed towns from mud-walled communities into commercial capitals integrated into the global economy, (Anon, 2006b).

Since then the Middle East has grown significantly in terms of social and economic development. The Arab world’s total population now exceeds 325 million people spanning over two continents and this trend of expansion is set to continue (Anon, 2006a). Such soaring populations and economic development has increased the demands for tall buildings and in turn questioned the development of urban space and architecture, calling for the better use of residential and commercial office space as well as improved cultural preservation in architectural designs.

Architectural cultural preservation is of particular importance in the Arab world. The 1970’s and 1980’s experienced the use of imported architectural styles, construction materials and building materials. Concerns over a ‘cut and paste’ or borrowing mentality of European architectural styles was highlighted as early as 1888 in the Arab world (Asfour, 1998). The introduction of dominant urban features including skyscrapers in the commercial city centres and multi-storey residential buildings, large shopping malls, wide boulevards and extensive network of sprawling new suburbs became more widespread (Anon, 2006b). The borrowing of western architectural styles created an environment unlike that of the past. Despite the modern development, many critics claimed that such a fundamental development or alteration of the Arab architectural style caused a loss in authenticity and ultimately created a cultural crisis (Thabet, 1999).

As a result of this realisation a trend emerged with an aim to revitalize the architectural heritage of the past and use its feature to stress identity and architectural styles of the area. Many of the building constructed during the 1970’s were replaced by new buildings using architectural features assumed to be more related to the region for example Emir house project in Kuwait city and the Hadj terminal project in Jeddah (Adbderezak & Tahar, 2004). The use of reinforced concrete and other modern materials such as glass were, however, not sacrificed (Mahgoub, 1999).

To create a balance between global and local architecture many municipalities have since adopted policies projecting Arab-Islamic architectural design, particularly arched window and decorative stucco. Recently more urban settings have exhibited decorative designs with local themes related to the national heritage. Preservation of the urban heritage has also seen in the renovation of old forts, market places and mosques (Anon, 2006b). Despite the improvement with architectural preservation, urban development in many key cities of the Arab world has been unstructured and irregular and this has impacted greatly on the urban developments.
3 Impact of Developments in the Arab World on the Urban Landscape

The movement to preserve architectural heritage in the Arab world has become a major challenge particularly with the introduction and construction of tall buildings. The number of tall buildings in the Arab world is staggering when compared to European developments. The Arab world today contains approximately 528 buildings over 30 stories. This is an increase of approximately 507 since 2000, a staggering increase 2500%. The case of the United Arab Emirates (UAE) and more specifically Dubai demonstrates such examples. A statistical review of tall buildings has shown for example that UAE by the year 2010 will outnumber UK and Germany together in the number of 30+ floors buildings by reaching (446 UAE) compared to [243 UK(130) + Germany(113)]. With regards to Dubai statistics show that prior to 2000 Dubai had a total of 14 buildings over 30 stories. Today, however, the total is in excess of 200 buildings. Figure 1 provides a breakdown of tall buildings in the Arab World by country and highlights the developments in UAE.

Such large scale developments has undoubtedly impacted on the urban environment and in turn influenced the identity of space. The current challenge for architects, urban designers, and planners in the Arab world is to provide the right type and quality of new space and new place that won’t undermine the question of identity. This is particularly problematic in the Arab World with the
ambiguity of planning guidance to developers and the lack of requirement to deliver any form of urban design statements.

As previously mentioned, the discovery of oil led to a new found era of economic prosperity and a period of rapid change with the built environment in the Arab world. This era, enjoyed by the areas of the Arab world, created a need to construct new buildings to meet the new demands of rapid economic development and urbanisation. The high rate of expansion has transformed many cities into metropolitan areas and undoubtedly brought with it a number of architectural and design challenges (Mahgoub, 1999). The traditional Arab world urban layout has been swept aside by the perceived need to produce modern developments. Their replacements, however, reflect and represent in many ways the new states and their growing confidence (Lockerbie, 2007).

Lockerbie (2007) highlights the fact that many modern urban developments in the gulf demonstrate a similar characteristic in the sense that virtually all have had little or no urban design relationship with each other. He also suggests that despite the possible use of a master plan there is usually little or no coherent urban theme in their relationships. It would seem that the abstract and flat representation of public places in the Arab World at the end of the 20th century has gradually alienated large parts of the public from positive engagement with their urban environment. The contextually responding traditional surrounding as a source of delight was not valued and was sacrificed for more ‘efficient’ and industrially driven aesthetics in the Arab world. Glass as a façade material has influenced the reconstruction of the public place in the Arab World. Centuries of tactile facades that endowed stability to city dwellers and conveyed desirable meaning to visitors have changed.

The relationship between cultural identity and place identity has always been seen in historical and visually identified cultural gestures. “We would like to know not only where we are but also when we are and how now relates to time past and come (Yuen, 2003). Yuen also indicated that space and time together are two of the major dimension within which we live. Lang (1994) also explained the urban experience in a sense of history and permanence. Tall buildings in new cities in the Arab World have brought with them complications to this view. There is a sense of loss of a local person’s sense of pride which is indicated by association. Twigger et al (1996) linked the harmonious symbolic and physical qualities of the place with the people’s values providing positive self-esteem enhanced by the visitors’ positive feedback. Building on some empirical work, Korpela (1989) also conceived that place identity is part of the individual’s on-going processes of emotion and self-regulation that may involve one’s sense of self. A feeling of isolation, due to the personally uncontrollable change in the physical environment would lead to loss of reaction and discontinuity of involvement with the surrounding context (e.g. Fried, 1963).

Similarly, there is a consensus that the contemporary phenomenon of placelessness or the rootlessness results in negative consequences. In a place with no identified memory, such as a new instant city or a landscape, a neutral
environment can also create this feeling of placelessness. According to Pedersen, (2004) 'The dynamic of a successful urban environment depends on the interaction individual buildings have with each other and the place they inhabit. When urban buildings do not interact, the city becomes much like a social gathering of humans with no one wishing to make conservation'.

This situation in many Arab cities confirmed the conclusion reached by Relph (1976) that the making of standardised landscape or placelessness ensues a prospect in which loss of places simply do not matter. In the Arab region issues that pertain to identity, character and architectural trends of the built environment have been in debate for a number of decades. The cultural uniqueness and diversity in the Arab world only adds to this complexity (Salama, 2006).

Cultural identity is reinforced by economic prosperity and relative political stability in the Arab world. The impact of such rapid urbanisation and changes to the built environment has undoubtedly influenced cultural identity in the Arab World. The main challenge for architecture is to ensure the developments of tall buildings hold only a positive influence over identity and ensures unity with space and place. An architectural renaissance may be needed to minimise the loss of further cultural identity in the Arab world and in order to support this challenge coherent strategic guidance is needed.

4 Building Tall in the Arab World

For centuries buildings in the Arab world were traditional with a maximum height of 12 stories. Whilst Beirut was the 1st city to start building higher than 20 stories, Kuwait & Egypt followed suit and started the movement of tall buildings. The Arabian Gulf countries then came to put their names on the map of tall buildings with Dubai, Abu Dhabi, Riyadh and Bahrain building tall in the 1990s and more recently Kuwait (Al-Rayes, 2005).

With more than 150 nationalities and almost as many expressions of culture, Dubai is one of the most diverse cities in the Middle East. Dubai began as a small port with a small community concentrating on fishing, pear-ling and trading. Commercial success coupled with the liberal attitudes of its rulers made the emirate attractive to traders from India and Iran, who began to settle in the growing town. This gave the city an early start before the explosion of wealth brought on by oil production in the late 1960s. The population of Dubai has exploded since the 1960’s; from 60,000 in 1969 to over 1 million today (Katodrytis, 2005).

Over the last twenty years Dubai has developed at a remarkable pace. Tall buildings have undoubtedly offered a suitable solution for a city with such rapid growth and placed it as a world leader in tall building construction. Much controversy, however, exists over its architectural significance and urban sprawl. Since Dubai has no real urban history, it has had to invent a variety of new urban conditions. Using it transitory oil wealth, the emirate has created some areas
promoted as clusters defined by economic liberalization, technological innovation and political transparency (Katodrytis, 2005).

Katodrytis, (2005) describes the city as being everywhere and nowhere at the same time because it has no urban centre or core and believes it to be missing the visionary realization of its architecture. Dubai has also been criticized by Finch (2007). He explains that diagrams are built rather than developed and context is financial rather than physical.

‘What is disappointing about so much architecture in the Gulf and Middle East is that it could be so much better: there is no shortage of money, no shortage in demand’ (Finch, 2007).

Dubai, however, thrives on newness and bigness in an act of on-going self-stylization and fantasy and hence architecture is crucial for it defines these elements. Katodrytis, (2005) describes it as a theme park orientated cityscape with no differentiation between old and new. Dubai is a prototype of the new post-global city, which creates appetites rather than solves problems. This approach to building is focused exclusively on marketing and selling (Katodrytis, 2005). Despite the criticisms, Dubai is considered a world leader in tall buildings with the construction of the Burj Dubai. This building is now the tallest building in the world despite the fact that it will not be completed until 2008.

Kuwait, despite being of a smaller scale than Dubai has also entered a process of rejuvenation. Like Dubai, Kuwait has become the focus of international construction activities as many world famous architects completed for large scale projects (Khattab, 2001). Throughout the capital, dilapidated buildings are being replaced by impressive new high rises (Anon, 2005). An improved economy and more stable political environment have led to the emergence of a dominating metropolitan centre in the last two decades. The change in opinion of tall buildings is clearly evident for example in the 1980s the Kuwait municipal council allowed up to 20 stories and in 2001 increased the limit to 40 stories. By 2005 the council allowed up to 100 stories. The tallest building of 77 stories is under construction and is to be completed in 2009. Interestingly, blue prints for a kilometre tall skyscraper have been drawn up for Kuwait. At 1001 metres, the tower would also dwarf the Burj Dubai which is expected to stand at 700-800 metres when completed. The change in urban definitions in Kuwait has, however, also alienated the cities inhabitants and subsequently created a loss in identity.

Dubai and Kuwait demonstrate how the change of pace in urban rejuvenation and an increase in high rise developments can have both positive and negative impacts. An increase in tall buildings shows Arab cities to be economic and political stable environments. Such global status attracts further investment and therefore fuels urbanisation. The developments in the Arab world concerning architecture and tall buildings also highlight how such developments can create a loss in local identity and local architectural traditions. It can be considered that
the unstable political history and lack of strategic guidance has created such unstructured urban environments within the Arab world.

5 Strategic Guidance for Tall Buildings in the Arab World

Considering all tall buildings that are currently under construction globally are built in an attempt to redefine urban, regional and in some cases national identity, it will be noticed how integral architecture is to trade marked borrowed style buildings and vice-versa. However, despite that persistent influence of such style on architecture and its urban context, and its powerful strategy to vehicle in a new identity, the danger is in its opposite impact of placelessness. The preference within the Arab region in the creation of architectural pieces over more comprehensive urban interventions, by separating their social fabric complexity, which is also exemplified by signature buildings, shopping centres, corporate franchise and planned residential, all resulted in the new crafted culture of imitating one another in their offering and aesthetics.

As tall buildings are an integral part of the contemporary cityscape and considered distinctive landmarks facilitating spectacular skylines, their future role in the Arab world needs to be evaluated and a coherent strategic framework devised. Dubai and Kuwait provides an interesting example of the role tall buildings can play in urban development and the positive and negative implications of high rise developments. Just recently the UAE has been making progress with the development of the urban planning council and the launch of a comprehensive urban plan by the Abu Dhabi government as well as a master plan for development. The plan appears to recognize the need to consider further the impacts of tall buildings. The plan is not due for completion for several years; however, the recommendations from this paper aim to assist its development.

With a continued expansion of the Arab world set to continue the need for strategic guidance for tall buildings in the Arab region has never been clearer. Recommendations need to be better focused and structured. An effective tall building policy for the Arab world needs to take into account the impact on people and places as well as how they affect the skyline. The development strategic plans from other landmark global cities have been shown to provide much needed guidance to place making and therefore assisted in the resurgence of improved cultural identity. The Arab world can learn a lot from developments in cities such as London. Lessons include the need for further development of planning tools and processes, a greater focus on environmental performance and further collection of ‘views’ across local and strategic polices. The quality and visual impact of developments in the Arab world need also careful consideration. Elevations need to be well proportioned, interesting and varied with the use of appropriate materials. The schemes in relation to historic development need to be also considered. Local views, panoramas and prospects need to be collected and considered. Assessment criteria for planning applications also need to be structured. New buildings must be properly planned as part of a place-making
process which is informed by a long term comprehensive vision that is integrated with the existing traditions of the cities.

There is a potential for architects to creatively employ the manifest of corporate mimicked style buildings, in promoting cultural value that respects the diverse character of places and in the same time align new emerging city activities with the broader inclusive and objectives of urban regeneration. Unlike dazzling signature projects, architecture can sustain a new corporate identity that emerged as a main characteristic of new emerging Arab cities; a characteristic that could result in a lasting and meaningful emergence, drawing upon the implicit or explicit potential of particular cultures and places.

To achieve successful practice in urban development and regenerations of tall buildings in emerging Arab cities, practices of such kind should respond, challenge and adapt to changes in the economy, the industry and the need for particular cultures and places. There is a positive role for architecture to develop a mutual process of identification that transcends the narrow focus of stylistic categories with a broader understanding of social and economic conditions.

To summarise the following criteria need to be considered further for the future development of tall buildings in the Arab World. Tall buildings must contribute to surrounding areas through the following ways:

- Tall buildings need to maintain cultural heritage and support civic or visual importance such as town centres and major public transport interchanges. Appropriate architectural style is essential for the promotion of the Arab culture and local traditions.

- Tall buildings need to contribute to an interesting skyline. The placement of a tall building in relation to other buildings needs to be considered to ensure that the skyline is attractive as well providing as positively identifiable landmarks. High rises need to complement the traditional low rise Arab architecture.

- Tall buildings need to give focus, momentum and obliquity to areas undergoing regeneration. New tall buildings can attract investment and further support the redevelopment of areas so it is essential that their design and placement generates confidence both economically and aesthetically.

- Tall buildings are considered symbols of power and success and are needed to help create new architectural icons for the new century.

6 Summary and Conclusions

With the rapid pace of development in the Arab region the need and desire for tall buildings has increased dramatically. Tall buildings and their place in Arab society has since become an important topic for debate. Despite their positive symbolism of power, economic success and politically stability, tall buildings have altered the traditional architecture of the Arab world and hence contributed to and in some cases created a loss of cultural identity in some cities. This paper
explored the role of tall buildings in the Arab region and demonstrated the positive and negative consequences of rapid urban expansion with a lack of strategic guidance.

As tall buildings are an integral part of the contemporary cityscape and considered distinctive landmarks their future in the Arab world needs to be considered further. Tall buildings have in no doubt a major role to play in the Arab world and as a result, their contribution to surrounding areas as well as cultural and social development of Arab cities needs to be considered further. By their very nature tall buildings can encourage confidence in terms of aesthetics and economics. Incorporating traditional Arab architecture with modern materials and construction techniques should be a challenge that is not shied away from but embraced in the Arab region.

Tall buildings have the potential to support cultural heritage, contribute to an interesting skyline, assist with regeneration, as well providing the Arab world with many architectural icons for the new century. In order to achieve this, development guidance needs to be structured and coherent and planning and assessment criteria needs to be robust and sophisticated. The visual impact, quality and impact of all future buildings on cultural identity needs to be at the forefront of planning in the Arab world. The challenge for architects, urban designers, and planners in the Arab world is undoubtedly to provide the right type and quality of new space and new place that won’t undermine the question of identity. The main challenge for architecture is to ensure the developments of tall buildings holds only a positive influence over identity and ensures unity with space and place.

References


