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Landscape practice in the Middle East between local and global aspirations

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ABSTRACT

In the Middle East today, there are strong tensions between global and local aspirations in landscape architectural projects. Modernism, introduced to major cities in the Middle East, led to design approaches that are detached from local context, some adopting a tabula rasa attitude to site or inspired by Western models with little adaptation. Ambitious designers who seek to celebrate local values through context-based designs face dilemmas between client-driven global aspirations and local contextual particularities. This perspective essay critically reviews landscape design approaches in the region against discourses of Modernism, regionalism and critical regionalism. Projects in Abu Dhabi, Dubai, Riyadh and Muscat were examined to provide a spectrum of current trends in landscape practices. Insights gained show that valuing intangible cultural meanings attached to landscapes, acknowledging particular ecological processes and working within the profound connections between culture and ecology, are critical to inform future design strategies.

KEYWORDS

Landscape architectural practices; Modernism; regionalism; identity; ecology; culture; Middle East

Introduction: 'ideals of progress' and its impacts in the Middle East

The Middle East—a region noted internationally for extreme aridity, heat, the birth of Islam, the Persian Garden and oil—is a region experiencing great flux, with major social and financial changes having occurred since the 1960s. The rapidity of change has brought with it dichotomies between tradition and modernity, new and old, Western and non-Western, and global and local, and raises very important questions as to how the design professions have responded to the startling expansion of opportunities in the region. Many studies (Abel, 2000; Aly, 2011; Asfour, 2009; Germeraad, 1993; Saleh, 1998; Stewart, 2001) address these changes, with a focus on the influence of Modernism and loss of identity in architecture and urbanism in the Middle East. The dominant literature in urbanism focuses on the static ideal type of Islamic/Arab city and generalises the same ideology to illustrate Modernism in the whole region (i.e. Stewart, 2001; AlSayyad, 1991; & Zohadi, 2012). In contrast, there is an emerging body of literature that aims to move beyond what has been described as the 'narrative of loss' (Elsheshtawy, 2004), and contextualise Modernism for the region. Increasingly, the Middle East is seen as possessing a hybrid cultural structure (Elsheshtawy, 2008), with transitional phases in sociopolitical structures based on the specificities of each country (Fuccaro, 2013). Within these discourses, however, studies about in-between spaces and open landscapes and their evolution are often absent or less-explored.

The concept of landscape design as a profession can be seen as fairly recent in the Middle East. Landscape architecture was introduced to the region by modern architecture, as elsewhere in the developing world, and therefore was highly influenced by Western ideas of space (Makhzoumi, 2002). While there was a centuries-old tradition of garden design in the region, such as the enclosed gardens in Egypt and Persia, as a named profession, landscape architecture in the Middle East is a mid-twentieth century phenomena.

Compared to architecture, landscape architecture is considered to be 15 years behind in the terms of absorbing the influences of Modernism and new ideas (Treib, 1993). Treib (1993) suggested that the late influence of Modernism into landscape architecture was partially due to the persistence of naturalistic or picturesque traditions to new ideas and forms. However, Treib (1993) wrote using the lens of Western developed countries. In the Middle East, formality and informality of landscapes were not issues of modernity and tradition, considering that the design of ancient gardens was highly influenced by formal ideas of space centuries before modernist ideas of space emerged. The main reason for a relatively late influence of Modernism on landscape design in the region can be seen in relation to two situations. First, the persistence of traditional lifestyles and the use of public space in the Middle East have always been tightly associated with religious activities and trade. Examples are the public squares inside or in front of mosques, and souks, which continue to serve as multi-functional spaces and encourage social interactions. The concept of creating recreational landscapes in the forms of parks and promenades that merge with urban areas was only introduced to the Arab countries in the last two to three decades. Second, is the relatively recent recognition of landscape architecture as a separate profession from architecture, and landscape gardening or horticulture.

The late modernist influence on landscape design contrasts architectural design, which throughout the region has been affected by the emergence of industrialisation in Europe since the early 1900s. In the first half of the twentieth century, architecture in the region was immersed in what Asfour (2009) calls a 'crude image of Modernism', with Modernism in the Middle East defined by Isenstadt and Rizvi (2008) as the 'extension of industrialised building processes and urban infrastructure', and 'the spread of standards of comfort and ideals of progress'. During the 1950s and 1960s, the transformation of built environments into new images established superficial ideas as ideals of progress in major Middle Eastern cities. Regardless of the context, the progressivist and objectivist practices influenced by Modernism have led to environmental and spiritual decline and subsequent loss of alterity and difference (Corner, 2014). Thus, while the influence of Modernism in landscape architecture in Western contexts has been studied by scholars such as Treib (1993) and Eckbo (1950), the story of modern landscape architecture in the Middle East remains to be told.

While embracing positive changes and using new effective techniques for progress are not in question, the role of Modernism and the common current design approaches with aspirations in apparent conflict with prior cultural and ecological approaches in the Middle East are in need of interrogation. For this aim, a critical review of the discourses related to built environment in the context of Modernism, regionalism and critical regionalism was undertaken, elaborating the role of landscape and ecological thinking in localising approaches in the Middle East. For a better understanding of the trends and influences, recent landscape architectural projects in different Gulf cities were investigated to gain an overview of the spectrum of current design. Interviews with designers working on large-scale projects in the area helped to gain an in-depth insight into the current approaches and challenges in design, with a focus on important tensions between local contexts and global aspirations.

Modernism in the Middle East

The history of Modernism in the Middle East, particularly in the Gulf region, can be identified with the phenomenon of oil urbanisation and emerging centralised political systems. Asfour (2009) and Isenstadt and Rizvi (2008) examined the phenomenon of Modernism in parallel with post-colonisation and the emergence of nation-states; they argued that colonised Arab cities were affected by a 'simplified version of Modernism' that gave them a fresh visual start after their independence from nineteenth

century colonial powers. For example, the modern movement in several Middle Eastern countries such as Egypt, Turkey, Iraq and Iran started as early as in the 1920s with the decline of colonialism and the rise of independent nation-states in a region once ruled by the Ottomans (1290–1924) in present-day Turkey and North Africa, and the Qajars (1779–1924) in Iran (Isenstadt & Rizvi, 2008). Nevertheless, it was not until the 1960s that the whole region witnessed massive changes in development and major shifts in their built environments. These changes in the built environment grew in parallel to the discovery of vast oil reserves and the subsequent extensive creation of wealth in the Gulf countries. Therefore, the immediate influences of Modernism on the built environment in these areas are considered to be related to the oil economy and oil urbanisation (Fuccaro, 2013). Nevertheless, contextualising cities in their regional and socio-economic settings is fundamental in order to have a valid understanding of the evolution of the region through Modernisation (Fuccaro, 2001, 2013).

Rapid waves of changes, or what is known as globalisation, occurred over a decade or two throughout the region, which led to restructuring and transformation of the notion of place. New communication networks, labour migration, mobility and flexibility in movement, internationalisation of the economic structure and consumer products and fluidity of ideas, led to borderless or homogenised cultures, places and identities. These transformations have underpinned questions regarding global, regional and local identity in the context of built environments in the Middle East.

In architecture, the rapid uncritical importation of models and ideas brought about the free use of international style in the region that often did not allow a chance for dialogue with local heritage and contextual specifications (Aly, 2011). These imported styles have been studied by several scholars, through investigating tangible physical aspects such as form and materials, or new techniques used in construction. Understanding evidences of change in the field of landscape architecture is more challenging, and tracing the influences of Modernism is more complex. One reason is that landscapes in the Middle East tightly embrace both tangible and physical, and natural and managed settings, and intangible cultural aspects (Makhzoumi, 2002). Thus, they are strongly rooted in the locality of their settings, and it is challenging to identify and generalise a pattern of changes throughout the region.

Modernisation and re-conceptualisation of landscapes

Landscapes are the outcome of human-environment co-evolution; a 'product' of the act of shaping and a 'process' of making sense of surroundings through shared meanings, cultural values and common sense (Bender, 2006; Makhzoumi, 2009). They are physical manifestations of cultures that foster community cultural values. As Nassauer (1995) points out, 'culture structures landscape and landscapes inculcate culture'. While the tangible character of landscape is an essential feature of it, the intangible and invisible processes, whether natural or socio-cultural, are intertwined with the visual structure and should not be ignored. The tangible outer expression, landscape scenery, and intangible cultural values and valuations are equally considered as 'collective heritage' and are highly integrated with belonging and identity (Makhzoumi, 2011). Thus, landscape design 'cannot work outside of cultural construct' (Grose, 2014, p. 75).

In the arid lands of the Middle East, the struggle against aridity over centuries has fundamentally shaped cultural and technical methods of interacting with the landscape, resulting in many vernacular practices. The formation of old settlements in the region was highly interlocked with the ecological structure of the land. With the advent of Modernism, many vernacular practices gradually faded away, largely due to urbanisation and rising modernisation of methods and techniques. Rapid urbanisation in the last two decades has modified and changed the integration of culture and the physical landscape and has led to destruction of long-established ecological-cultural systems.

The past knowledge and the manifold relations people have towards the perceivable environment and the symbolic meanings it generates, offer valuable knowledge to inform future landscapes (Antrop, 2005). Unfortunately, the environmental history of Middle Eastern and North African (MENA) countries is neither well documented nor thoroughly studied. The importance of understanding how various traditional communities in the region previously comprehended and sustainably interacted with their

natural setting and how this has changed over time has only been acknowledged in recent years, with a major assessment by Mikhail (2012) on the environmental history of the Middle East.¹ However, the connections between landscape design, landscape history and environmental policy remain weak if considered from a design perspective.

'Ideals of progress' and globalisation shifted the desire away from continuity and connection with the historic, cultural relationships in landscapes to the extent that the interests of many decision makers are focussed on imported materials, technologies, forms and concepts. An appreciation for the modern 'look' of the city has emerged. This appears to stem from the tendency of major Middle Eastern cities to desire a place in the global arena and have a modern appearance in order to position themselves globally as leaders. Such a desire has led to the encouragement of some international designers undertaking large projects in the region to ignore local and cultural specificities. International design approaches often seem preconceived, without references to the particularities of the Middle East—extreme aridity, extreme heat, deeply considered privacy and subsequent enclosed and tightly framed gardens—with the result that new designs can be interpreted as merely international in appearance. How has this occurred and are changes afoot?

In the Middle East, there has been a long history of designed public open spaces which have served as public realms; these include public and private courtyards, the souk or the bazaar, and even the narrow shaded alleyways meandering in the dense residential urban fabric. Landscape design was formerly limited to traditional practices linked to agricultural purposes and land management in rural areas, and in urban and sub-urban realms to creating public and private courtyard gardens (such as enclosed gardens built for the royal family, castle-gardens or military fortifications and school-gardens). After the 1960s, booming economies in the Gulf region of the Middle East led to extensive urban growth in major cities—in what is known as *oil urbanisation*—with little regard for public open spaces (Germeraad, 1993; Haddad, 2007; Mahgoub, 2004). The traditional forms of public open spaces were unsuited to contemporary needs and appeared unable to accommodate new demands of modernised citizens in urban areas. Thus, in the last two decades, cities such as Dubai, Abu Dhabi, Doha, Riyadh and Muscat have realised the need for alternative forms of public open landscapes and this has led to the introduction of Western concepts such as urban parks, boulevards and waterfront promenades, all hitherto unknown in the Middle East. Our contention is that the 'ideals of progress' have encouraged the penetration of Western notions of public open space into the Middle East, with formal and visual imported concepts, and that this has led to a frequent disregard for the long-practiced ecological and cultural connection to landscapes.

Bender (1993), Makhzoumi (2002), and Tilley (2006) argue that the perception of landscapes is strongly related to landscape context in terms of time, space and historical conditions; therefore, they urge for a 'contextualised' conceptualisation of the term. An instance of this is the perceptions of the concept of landscape in the Middle East. Aesthetic appreciation of landscapes in the arid and hostile environments of the region is not solely visual; landscapes are strongly dominated by the cultural impacts of severe aridity. Accordingly, vernacular responses to these difficult environments have always been strongly cultural, in which 'nature has been tamed, enclosed and ordered' (Makhzoumi, 2002), and highly functional. Movement in space and time, engaging all senses and fully experiencing the landscape has been an essential feature in interacting with the landscape. Hence, landscape is an experiential and lived-in space, rather than a visual space, it engages with poetic interpretations and hermeneutics and creates a sense of belonging and attachment between the object (landscape) and subject (the user) that eventually generates landscape identity. Nevertheless, wealth, and major building and construction for rapidly expanding urban populations in the Middle East have led to a particularly sharp focus of the issues of global vs. local. It is likely that the struggle to maintain local identity rooted in regional culture and ecology might be more profound here than many places in the world, even areas which are also undergoing similar rapid change, such as China. Modernisation has led to questions of maintaining local identity, and how to do it—if it is recognised.

There are central problems landscape architectural practice faces in the Middle East. Misconceptions by international designers often lead to an emphasis, if not sole focus, on visual and physical aspects of

the landscape. A significant consequence of the emphasis on visual and physical is that the landscape architectural profession in Middle Eastern countries has been generally perceived as a practice for beautification of urban settings. This severely limits the professional scope to that of providing greenery using 'ornamental plants and large areas of turf grass that serve as a backdrop to the buildings, much in the fashion of the modern architecture in Europe and North America' (Makhzoumi, 2002, p. 225). Importantly, the perception of the profession within the region as beautification undermines the potential of landscape architecture to highlight and protect intangible social, cultural and ecological values, and to reconcile the lived-in aspects through design.

Regional approaches towards built environments

The simplified version of Modernism with its controversial outcomes in architecture and urban design triggered a shift towards design approaches that aimed for the revival of local and regional identity; for example Regional Modernism, which was inspired by vernacular architecture and drew on regional approaches to design. Despite effective attempts to avoid the modernist homogenisation and placelessness of built environments, regionalist initiatives have only had moderate success. Instead of maintaining and celebrating difference and diversity, the regionalist movement often attempted to cover the repeated modern modules with traditional garments, through surface decorations and symbolic, static reproductions of the vernacular. While these attempts were often labelled as ways to retrieve local identity, indigenous character, national heritage and rooted history, they failed to represent the traditional values associated with their physical features and forms, and were rather a superficial 'touch-up' on the 'borrowed Modern manifestations' (Asfour, 2009), and included 'exclusivist translations of culture' (Haddad, 2007, p. 37).

In landscape architecture in the Middle East attempts at expressing cultural references to validate projects have often resulted in replicating forms from Islamic art and architecture, or symbolising traditional elements with a modern touch. One common current trend is using formal references to Arabic calligraphy as a design element. An example of the use of Arabic calligraphy to underpin culture is the proposal for the New Moon Park in Dubai (2011) that styles itself as an 'ultramodern incarnation of traditional oriental values'² (Figure 1). The designers consider that the use of Arabic calligraphy on the building will inspire visitors with Arab culture and local traditions. A moon-like sculpture carved with Arabic calligraphy is designed as a signature to confirm it is located in the Middle East and nowhere else. However, this shows a simplistic and limited understanding of Middle Eastern cultural values, which are indeed more than Islamic art and calligraphy. Of perhaps greater concern is that the design of the park follows the style of a European park, with surface water and green patches used lavishly in the desert environment of Dubai, which experiences high rates of evaporation and water loss. Thus, the claim of encouraging local traditions is contradicted in the realised outcome. It must be noted that the designers are not solely responsible, as this is often what the clients—who are major decision makers within the process—aspire to.

Approaches aiming at greening the desert and resembling the Paradise Garden or what Bolleter (2009) calls 'para-scaping'³, are dominantly favoured by clients and are mainly seen in countries such as Saudi Arabia, the Emirates and Qatar, where the landscape profession's agenda is often concerned with rendering the urban spaces to attract the global gaze. The notion of para-scapes originates from the concept of Paradise Gardens in Islam, which is not only to aspire in the afterlife, but manifests a symbolic metaphor to be created on Earth (Brookes, 1987). However, the design of these gardens was primarily dictated by aridity rather than religious beliefs. The Persians deliberately created these gardens only where they could find underground water, or where there was a possibility to conduct water from the aquifers via innovative subterranean chained canals known as the *qanats* from the source in the mountain (Khansari, Moghtader, & Yavari, 1998). The *qanats* are examples of cultural responses to the particular ecological structure of the landscape, as sustainable alternatives for dealing with water issues in aridity, and give strong lessons for sustainable water use to modern designers.



Figure 1. The New Moon Park in Dubai, UAE, showing the use of calligraphy as oriental decoration in design. Source: Varabyeu Partners, in www.varabyeu-partners.com (Accessed 4 February 2014).

Design elements such as *qanats* used in vernacular landscapes were highly coherent with environmental conditions. Further, traditional designers were selective about plants that were drought tolerant, and provided shade for thermal comfort. The traditional designers' innovation in creating these cool landscapes with minimal water, and thus keeping the balance with natural environmental conditions, is in complete contrast with the current trends in greening the arid regions of the Middle East using industrial desalinated water.⁴ While traditional rural practices are reflective of 'ecologically responsive management practices' (Makhzoumi, 2014, p. 234), and thus inherently sustainable before the term was invented, limited efforts have been made in adopting older heritage approaches towards using water and plants in contemporary parks and projects in the Middle East.

Another example of vernacular practices is how cities were established with attention to natural resources and environmental realities (Bahrami, Salehi, Jafari, & Irani Behbahani, 2012). Examples from ancient cities in Iran show that the connection of the natural and built environments, such as rivers and the historical gardens, to the city was provided through ecological networks or green corridors, as seen for example in the Garden-City of Isfahan⁵, built during the Safavid dynasty (1501–1722) (see Figure 2). It is fundamental to understand that 'past processes provide a dynamic context within which present landscapes need to be assessed, and future strategies formulated' (Makhzoumi & Pungetti, 2008, p. 339). Yet, the influence of industrial urbanisation, population growth, changes in land use and ignorance towards the ecological structure of the landscape in urban development regulations have resulted in destruction of urban ecological systems in old cities in Iran, and in many other countries in the Middle East. Current planning and design policies in some Middle Eastern cities have taken up an

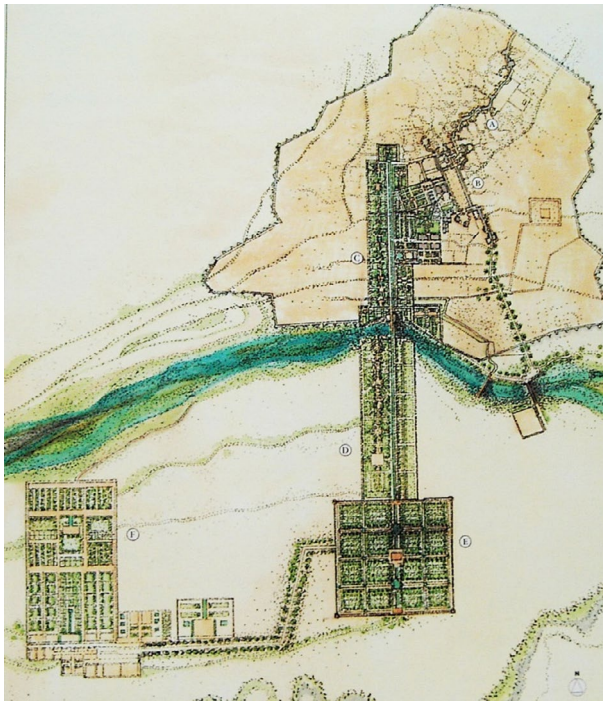


Figure 2. The Garden-City of Isfahan in the Safavid era, which is an example of coexistence between the city and existing ecological structures. Source: Khansari et al. (1998, p. 90).

indiscriminate application of European and North American strategies, which generally ignore existing regional, ecological and the cultural strategies to deal with these realities.

Nevertheless, a shift to greater sensitivity to designs that are situated and ‘grounded in the site’ (Burns & Kahn, 2005; Marot, 1999; Meyer, 1997) is and will continue to be tested in the rapidly expanding cities in the Middle East. In a study on identity in Arab regions, scholars such as Asfour (2009), Alsayyad (2008) and Haddad (2007) introduced the actors in design practices that advocate a shift to change through reformist and polemicist stances. Commonly known as ‘critical regionalism’, or what Haddad (2007) calls ‘sensitive modernism’, the reformist approaches strived to provide designs that are rooted in the modern tradition, but tied to the local geographical, regional and cultural context while avoiding superficial regionalist clichés such as exclusivist translations of culture described earlier. As described by Kenneth Frampton, critical regionalism is principally centred on the desired synthesis of universal and local, the attention to the context and the specificities of the place (Frampton, 2005). Emerging reformist approaches encourage aspects of vernacular practices that encompass bioclimatic approaches to design which are mainly concerned with climatic conditions and local topographic characteristics. These approaches use landscape as a medium for modifying the climatic condition through utilising natural resources and passive energy as sustainable responses to the environment.

An emerging shift in landscape practices

Efforts to revisit vernacular practices were the first signs of ecological re-thinking in architecture and landscape architecture in the region after the formal recipes of Modernism, and were implicitly addressed in critical regionalism. However, the influence of Modernism in the region was very strong that limited attempts for a more rooted approach in design were not widely appreciated. In landscape architecture, at the discipline’s very inception, the pressure from Modernism was overwhelming, and links to historical and traditional vernacular practices were not seen as vital, and have been gradually

lost. This has left us with the situation in the Middle East where the design of contemporary landscapes is dominated by outcomes either based on obsolete and irrelevant prototypes, or informed by superficial cultural references such as spatial manifestations of traditional geometries, calligraphy or artworks.

However, there are increasingly important outcomes which suggest that there are emerging practices in the Middle East, which have a far greater engagement with ecological imperatives as a medium to context-based design solutions. Accepting that sociocultural values in the region are hybrid and ever changing, these emerging design practices focus on innovative techniques for local solutions that are responsive to the environmental limitations—rather than focusing on universal approaches—while respecting cultural nuances. This could be seen as the beginning of a revival of regional landscape identity.

Vernacular and its manifestation in projects

How is vernacular knowledge being incorporated in projects? One important strategy appears to be that of engaging with the locality through the imperative to design with, not against, the ecological processes and dynamics particular to the place. Scholars have stressed the importance of traditional narratives in design and planning with a focus on physical and conceptual aspects in order to understand and restore identity as a counterpoint to the 'placelessness of Modernism' (Castree, Kitchin, & Rogers, 2013). Tilley (2006), Bender (2006), Makhzoumi (2009) and Mozaffari (2014), writing both in the Middle East and outside of it, argue that landscape, place and heritage are central to the research of 'identity'. Vernacular landscapes of the Middle East provide designers with local exemplars which fall into two categories—constructed and natural. Constructed exemplars are Paradise Gardens, the *Aflaj* or *qanats*, the courtyard and sunken gardens—all responses to intense aridity and often strong winds. The desert's natural landscape itself provides examples of direction: the oasis in all its manifestations sitting amongst variable dune forms, the wadi, or the dryland river and its braided systems of dry and occasional deluges, wind-steepened ridges, mosaic-like tracts of desert pavement and the physiological adaptation of plants to extreme desiccation and drought. Understanding evolved adaptations to conditions of aridity and comprehending the landscape forms derived from these adaptations help in achieving a visual and ecological fit with the naturally evolved context (Lyle, 1997).

A recent example where designers have responded to local exemplars is the *Al Fayah Park* (*Al Fayah* meaning shade in Arabic) in Abu Dhabi, UAE (Figures 3 and 4), which is to be constructed by 2017. This project aims to replace an existing European-style park. The design is inspired by the topography of Emirates; the structure of the fractured desert crust (*Sabkha*) as well as the forms of a meandering wadi



Figure 3. Al Fayah underground park, Abu Dhabi, UAE, showing the concept of using mosaic forms of the desert and elevated structures for providing shade in the design. Source: Heatherwick, in www.heatherwick.com (Accessed 5 September 2014).



Figure 4. Al Fayah underground park, Abu Dhabi, UAE: the roof of the park is inspired from the patterns in the fractured desert crust. Source: Heatherwick, in www.heatherwick.com (Accessed 5 September 2014).

or oasis in the desert environment. The ideas are developed in response to environmental challenges as a way of celebrating the beauty of the desert and its distinct landscape. Instead of denying the presence of the desert that the city is built on, the designers use the very features of the desert to make the park. Elevated cracked shape plates, rising 20 m above ground level, serve as shades to protect the underground areas of the park from direct sun and create a microclimate for growing plants and reducing evaporation. The concept is based on spatial references to desert archetypes; however, the use of the forms is not merely limited to aesthetic purposes, but the forms are generative and functional in direct relation to contextual climatic limitations. The design engages with the local natural assets⁶ in a conceptual and pragmatic way. Yet, the practicality of the project and how it connects to the surrounding urban fabric is not well-explored or elaborated.

A profound appreciation for ecological structures and processes in drylands is often missing in the current approaches to landscape design within these regions. Commonly, there is limited public awareness towards concepts such as landscape ecology, ecosystem management or the extent of the disruption of natural processes in the region. Several designers involved in small- and large-scale projects in the Middle East note that efforts for applying an ecological landscape approach often encounter resistance from clients who prefer the greeneries of European lush landscapes and have little appreciation for an environmentally adapted design approach.⁷ An example of this issue is resistance towards using indigenous plants in landscape projects. Often clients are unaware of the ecological

consequences of invasive exotic plants and refuse to use indigenous plants that they consider less aesthetically appealing to the public.⁸ Notwithstanding, the horticultural industry is also only emerging in many Middle Eastern countries (i.e. in Oman and Saudi Arabia), and the designers have to deal with scant data on indigenous or locally endemic plants, and poor or non-existent availability of plants in the quantities needed for park design. These issues are both very challenging and create hurdles to ecological design in the region.⁹

Nonetheless, in some Gulf countries such as Qatar, Oman, and Saudi Arabia, there is a growing awareness towards conserving the natural assets, and work is being done to address these difficulties. For example, the unique desert characteristics of wadis are now increasingly recognised, and the revitalisation of wadis as wildlife habitat and as embodying traditional vernacular management of natural resources, is now a major focus of a series of 24 regeneration projects in the city of Muscat in Oman, titled 'Majestic Muscat'. The projects are developed by the Municipality of Muscat to encourage natural and cultural values of important ecological structures that were once highly integrated with the land and people¹⁰, yet became neglected during modernisation. Interestingly, an in-depth investigation into some projects reveals that they are often driven by social and economic incentives; rather than engaging with the realities of the wadi systems such as ecological dynamics and the flux of natural events. An example is the design proposal for *Wadi Al Kabir* in Muscat (2010), where the priorities of the project are providing pedestrian access to the wadi and across the margins, and increasing land prices in the newly developed commercial and residential districts along the wadi. Ecological dynamics such as water fluctuation, sudden flash floods in the wadi and evacuation measures were not addressed profoundly. In addition, the proposal to use large surfaces of turf in the wadi bed (see Figure 5) demonstrates ignorance towards the context's limitations associated with severe water scarcity and droughts.

More significant in its major strides towards designing in the context of sensitive arid environments has been the 10-year award-winning project *Wadi Hanifah* in Riyadh, Saudi Arabia, opened to public in 2010, which is a globally significant example of an ecologically driven landscape project. The master plan for the wadi system was developed in 2001 with a strong vision to turn away from a European-style park, and create naturalised desert parklands along the wadi. The design is not only responsive to the ecological processes and dynamics of the wadi system; it embodies cultural considerations by respecting the intangible social values in the design of recreational structures, such as the semi-enclosed picnic areas. This design allows conservative Saudi families to enjoy the wadi while providing them with a level of privacy through the use of limestone slabs in horseshoe-shaped spaces (Figure 6). It indicates the sensitivities of the design team in engaging with the realities of the context of the site, culturally



Figure 5. Wadi Al Kabir Project, Muscat, Oman, showing the extensive use of turf surfaces inside the wadi. Source: Image courtesy of Project Architecture.



Figure 6. Wadi Hanifah, Riyadh, Saudi Arabia: the semi-enclosed picnic areas provide a level of privacy for the families. Source: Image courtesy of Arriyadh Development Authority, 2010.

and ecologically. The highlight of Wadi Hanifah is the water treatment bioremediation system that uses simple technologies with principles of biological food chain in nature, in order to treat the urban run-off to grey water for agricultural and industrial use (see Figure 7). The insistence of the landscape designers to use indigenous plants from the same gene pool that long existed and survived in the wadi



Figure 7. Bioremediation water treatment system in Wadi Hanifah, Riyadh, Saudi Arabia (the structure of biocells and the aerial photo of the bioremediation system). Source: Image courtesy of Arriyadh Development Authority and Google Earth, 2013.

ecosystem, convinced the clients to establish an on-site nursery to propagate plants from the cuttings and seeds collected from existing plants in less damaged areas of the wadi.¹¹

Such a project points the way forward in the Middle East and acts as modern exemplar of a 'situated' design, with its re-orientation of pre-existing, vernacular design approaches to water and aridity. It uses experimentation, local knowledge and global aspirations for ecologically grounded work, with cultural context paramount.

Concluding remarks

This review reveals a spectrum of different approaches to the design of public landscapes in the Middle East, from mere symbolism and superficial orientalism and regionalism to approaches that are engaging with the underlying processes and ecological and cultural dynamics within these landscapes. This review shows that while clients and designers have long been seduced by the supposed internationalism of 'ideals of progress' in the region, there are signs of a shift to re-orienting approaches to greater regionally sensitive design. This shift has led more recently to outcomes reflective of both the natural and cultural environment. This does not mean promoting a landscape of reconciliation in a 'landscape of loss', but of designs drawn from the ecological and cultural understanding of Middle Eastern contexts, underpinned by experimental, challenging and imaginative approaches which can give lessons to the global community of what 'ideals of progress' might mean.

Acknowledgement of work being done in the Middle East is made difficult by limited access to reliable data and design documents related to projects, in addition to strongly flavoured advertising-style information and subjective interpretations in interrogating approaches to design. Further, interviews with the designers and clients can be difficult to gain, and publicity about new designs continues to be dominated by North America, Eastern Asia and Europe. While acknowledging these challenges, there are clearly compelling reasons to undertake more extensive research in conceptualising and understanding landscape architecture in the rapidly expanding urbanism of the Middle East. In particular, the scarcity of studies on the interrelations of Modernism, regionalism and landscape architecture limits a deeper critical analysis of the practice in the region.

This article arose from a widespread disquiet, and indeed frustration, amongst designers of Middle Eastern background and others, many of whom are deeply concerned with the imposition of designs which ultimately change or conceal locally distinctive characteristics, and create a break between communities, their past and their land. Landscape architects working in the region who advocate sustainable, rooted and holistic design approaches can potentially re-negotiate and re-design the brief against the global aspirations of some clients which speak to other places, not the local. The tensions between global and local aspirations and practice are not new, and are not confined to the Middle East, but the tensions in the region suggest a more purposeful approach to designing in local contexts which remains a challenge to the design professions as they increasingly work internationally.

Notes

1. See Mikhail (2012) for a review of the environmental history of the Middle East, in his book *Water on Sand Environmental Histories of the Middle East and North Africa*.
2. Cited in <http://www.varabyeu-partners.com/en/project/55>; accessed 12 September 2014.
3. Para-scape is a landscape derived from Quranic interpretations of paradise (see Bolleter (2009)).
4. For example Riyadh relies on costly water supplies pumped from desalination plants over 350 kilometres from the eastern coast of Saudi Arabia.
5. During Shah Abbas Safavid's era (1501-1722) the design of the Garden-City of Isfahan incorporated a green corridor (*Chaharbaagh*), which connected the river to the inner city and the King's palace-garden. Many other gardens were later built along this main axis. The idea of an urban system designed with perpendicular axes and grid street networks was initially inspired by the structure of the Persian Gardens.
6. Natural assets refer to natural, biological and ecological resources such as land and water, and their ecosystems.
7. The authors interviewed a number of local and international designers who were involved in large projects in the region, including but not limited to, George Stockton and Drew Wensley from Moriyama and Teshima Planners

involved in projects in Saudi Arabia, Diccon Round from Snøhetta working in Oman, Roger Gunn from Nakheel working in the UAE, and Vladimir Djurovic from Vladimir Djurovic Landscape Architecture working in Lebanon, Kuwait and Morocco.

8. Personal interview with Diccon Round, the representative designer from Snøhetta, involved in Wadi Adai project in Muscat, Oman (1 December 2013).
9. The issue of limited indigenous plant availability was highlighted by several designers from large Western firms.
10. Mentioned by the former Muscat Municipality's Chairman, Sultan Al Harthy in a personal interview, Muscat, Oman, (3 October 2013).
11. Interview with George Stockton and Drew Wensley, Moriyama and Teshima Planners, Toronto, Canada, (29 August 2013).

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