Reconciling Globalization and Localization in developing the Architectural Heritage of the United Arab Emirates (UAE)

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ABSTRACT

This study investigated the impact of Globalization and Localization on architectural design evident in the unprecedented building boom in the United Arab Emirates (UAE), and the relationship between such impact and its influence on the Architecture of these new developments. To date, although research on the stunning architecture in UAE has focused on several aspects, much of the attention has been paid to the descriptions of the mega projects in the contexts of its historical development, documentation of the new developments, and discourse on the role and function of these new developments in relation to social aspects. In contrast, this study aimed to determine: the impact of the coexistence of these forces of change on the built environment in UAE in order to understand the impact of Globalization and Localization, and the rise of Traditionalism and Modernism during this transformation process. This research adopted a multi-disciplinary logic of inquiry combining the interpretivist and structuralist paradigms in association with a framework incorporating both semiotics and hermeneutics, in order to interpret the Star Architects' intentions and associated actions during the creation of these structures. Research data were collected from archival records, books and various electronic sources. Data analysis revealed that there is a dialectic relationship between Globalization and the design of these stunning developments in UAE. This paper therefore, can offer new insights, which is likely to add to knowledge in this field by widening and strengthening the understanding of Globalization, Localization and architectural historical theory in UAE.

Keywords: Globalization, Localization, Architectural Heritage, United Arab Emirates

INTRODUCTION

The construction of cities in the United Arab Emirates coincided with the need to create a modern urban reality precipitated by an emerging civil state structure. The original urban fabric, prior to the newly struck wealth from oil revenues, was modest in quality and insignificant in content and composition. Emerging in cities of this eastern part of Arabia is a strange phenomenon, noticeable in the polished concrete structures beside lush green transformed boulevards distinctive in its universally familiar trend that is reminiscent of the typical urban skyscraper landscapes of the major cities of the world [1].

It is, however, surprising that despite three decades of building, architectural style has been persistently reduced to a process of borrowing. This is most evident in surface treatments, where we find a predominant use of arches, to signify an Islamic or cultural touch. The eclectic forms used in the expression of facades, as manifested by international and pan Arab practices, remain meaningless or contrived [2].

The choice made by new countries in constructing new cities can no longer be assessed within the narrow confines of each locality or in isolation from a complete opus of an Islamic or Arab architectural and vernacular urban heritage, and irrespective of the desire to define the nature of a national attitude as modern or advanced in outlook. The 'transfer of technological progress' should not necessitate the elimination of cultural values and the consideration of specific functional and aesthetic content in the design and planning of towns and cities [3].

The identity of a specific place becomes interesting when it brings about certain experience, evoking associations or memories. In this context, this paper tried to address globalization as a distinguishing trend of the present moment and its consequences on the architecture of the United Arab Emirates, by demonstrating case studies representing both the positive and negative potentials of globalization while encouraging the importance of adapting the advanced technology into sensitive projects that reflect local cultures and are linked to global forces.

BRIEF HISTORICAL BACKGROUND OF ARCHITECTURE IN UAE
Climatic Condition
Historically, UAE has uneven population [4]. The reason for this unevenness is the climate. Before electricity became available in the 1960s, the people who lived in this area had learned from hundred generations how to live in these conditions that is barely tolerable to others. Things have changed, and nowadays summer visitors to the UAE may experience just a few moments of discomfort as they walk from an air-conditioned car to the cool comfort of a marble-clad hotel, but they will not have to endure the heat and humidity prevailing in the area during the months from May to September with temperatures often well above 45ºC and with over 90% humidity on the coast [4].

Yet it was not the discomfort of extreme heat and humidity which made living conditions in this area so very inhospitable; it was the aridity of the entire region which profoundly influenced the lives of people. Permanent settlements need reliable sources of water for drinking, for livestock and for agriculture. Water was the focus of the economy of the traditional society, it was crucial in determining the choice of location for its settlements, and it was the most influential factor for its daily and yearly routines. The absence of water prevented the usability of the vast open spaces beyond the small settlements.

The sources of water were rain water and well water or spring water. There are no rivers in the entire region. The discovery of this limited source of water on the stretch of coast and coastal islands, which is dominated by salty mud flats called *sabkhah* which are devoid of fresh water, led to the foundation of the town of Abu Dhabi in 1760. An additional reason for sitting the new economic and political center of the Banï Yås, the tribal confederation, on this island was that a natural channel leading through the shallow coastline made it possible for boats to sail right up to the northern shore of the island as well as to the more protected inlet of nearby Batïn [5].

In the next two sections, the history of traditional settlements and traditional economies were explained more clearly, which were heavily dependent on availability of water and the strategic locations along trade routes or at the crossroads of trading routes.

Traditional Settlements

UAE is home to many different tribes. At the turn of the last century in what was then called the Trucial States, 44 principal tribes were identified [6]. Over time, the number of tribes has changed because they formed alliances or split and became independent under their own *shaykh*. The *shaykhs* in the past acted as judges within their communities and rallied the male members in times of strife.

The socio-political structure of these tribal subdivisions was visible in most settlements where clusters of houses were separated from each other by empty spaces of sand, *wadi* gravel or beach, depending on the geographical location of the settlement. Such areas were usually inhabited by members of the same sub-tribe. The extended families in the settlement would in turn try to keep a little distance from the other families around them, even though they might be related to each other. None of the towns and very few of the villages of the Trucial States were inhabited by a single tribe or sub-tribes, but they were a patchwork of separate quarters, often having their own neighborhood mosques [7].

Even though settlement patterns were fairly similar throughout the area, the appearance of towns and villages varied because the houses were built using different materials, depending on what was available locally. Away from the mountains, stones were usually impossible to come by. Mud was also unavailable in the sandy desert of the hinterland and in short supply on the Gulf coast. The most prevalent building material was the date palm which grows throughout the UAE wherever there is water.

Every house in the crescent-shaped line of small Lïwå oases in the Southern desert of Abu Dhabi, most of the houses in Abu Dhabi town, in Dubai, Sharjah, the other coastal settlements and those in the large oasis of al 'Ayn and al Buraymï due east of Abu Dhabi, were built ingeniously using the various parts of the date palm.

The palm fronds provided the raw material for densely woven thinner mats, several layers of which formed the roof. They were also hung on the inside of the walls for extra protection in the winter and were often spread on the floor – otherwise the floor was just sand which was renewed from time to time. The form of these houses varied according to the geographical area but they were never more than one story high. Some had flat roofs, hidden behind the bushy ends of the palm branches, which were left protruding upwards beyond the roof top [8].

In the Ra's al Khaymah area, the large coastal oasis of Dibå, in Fujairah, Khawr Fakkån, Kalbå' and other villages on the east coast and in the mountain villages, houses and forts were frequently built of stone, examples of which can still be seen today. There is a wide range in the size and finish of the various types of stone houses, depending on the means of the owner. Some were built with stone up to the roof, which was then completed in the usual manner with palm branches. Others – as can be seen at the fort of Hail in the hinterland of Fujairah –were clad with mud and/or *jußß*, a locally made plaster, which permitted the application of internal and external decoration on the walls, ceilings and crenellations along the roofs [9].

Mud-brick buildings with palm-frond roofs were common in the oasis of al 'Ayn and Buraymï' about 160 kilometers east of Abu Dhabi town, in Dhaid, in the smaller inland oases and in some of the villages on the East Coast. However, on the western side of the Gulf coast, away from the

mountains, the most commonly used material for building substantial houses with two stories was coral. Pieces of coral, usually round and weighing up to two kilograms, could be found in the shallows of the sea. They were piled up on the beach and exposed to the rain to wash out some of the salt. Due to the nature of its high porosity, walls constructed of these pieces of coral provide excellent thermal insulation. Examples of such coral stone buildings can still be seen in some of the old parts of the coastal settlements between Sharjah and Jazïrt al Óamrå near Ra's al Khaymah and in Kalbå [10].

Changes since the 1960

Living conditions in the country were changed for good with the introduction of concrete. No longer was the construction industry confined to the limited resources of locally available building materials: stone, mud, coral, and palm, and the only affordable import, *chandal* wood from India. In due course, an abundant number of do-it-yourself machines were introduced into every Emirate, and with cement, gravel and water so-called 'breeze-blocks' were produced on site. These were stuck together with more cement and helped to create the first generation of non-traditional houses.

Throughout the 1960s one of the constraints on constructing buildings more than two stories high was a chronic shortage of wood, but this was gradually overcome by better organization of imports and eventually the use of metal-reinforced concrete. Initially the construction of new buildings was primarily aimed at providing offices for the large number of companies, including oil company services, shipping agents, importers, consultants and banks, who moved in. More office spaces were needed for the expanding of local administration, schools and the fledgling military establishments in each Emirate. There was no accommodation available for rent anywhere in the country – the local style of living in barasti, a typical palm-frond house, compounds was not considered suitable for most expatriates.

New housing had to be provided for the large number of expatriates, who arrived – often with their families – to work in the oil industry, the banks, the military, the new hospitals, the administration and the schools. From the middle of the 1960s, new concrete buildings also became a reality for the local population, first in the bigger coastal towns and later in the hinterland.

In sum up, the late 1960s witnessed the beginning of the total transformation of the towns and villages of the Trucial Coast yet most of the new construction was then still sited outside the existing built-up areas. When families first moved out of their traditional homes into houses with modern facilities, they usually let their old ones to groups of expatriate bachelor labourers from the subcontinent.

A review of the architecture of the cities in UAE becomes compelling in view of the context and scenario that has emerged. As an important undertaking, this was accompanied by an open license for architects and their clients in the development of these cities. The measure of expressing the wealth in the architecture seemed to become the main criterion used by the architects' designs to impress and please the client. The excessive use of marble and granite in public buildings, and particularly in hotels, echoed lavish building materials typical of the excesses of Capitalist architecture in the 1980s [11].

Mute walls, blind arches, small openings and a minimalist approach may have developed within a particular style, irrespective of the source of influence. Modern, classical, European or Islamic references remained absent in the development of mainstream architectural vocabulary. In the absence of formulating an architectural ethos, the conditions were not

available for creative work based on a specific environmental criterion and cultural reference, where architects can develop distinctive approaches and an emphasis on a high level of conceptual inventiveness.

Amidst the built environment, few examples of serious architecture can be singled out and distinguished from new construction boom. The latter has inevitably been accompanied by dire consequences. Modern architecture may have allowed architects to become less deferential to the environmental context, especially when the built environment is new and based on one that lacks distinctive natural features.

The historical and cultural wealth of the Middle East has been abandoned or ignored by the architects and designers of these once glorious civilizations when faced with the challenge of modernization and development, succumbing to the convenience of imitation and apparent success evidenced by the models of the West. The reason can be found in the absence of any experience of the industrialization process that occurred only in the West [12].

The implication of this was clear in that the Western package and mode of urban development was a ready-to-export commodity that entailed less responsibility for cultural research, since a model already existed. This attitude was the product of the West that has dominated architecture, where 'wealth has become synonymous with industrialization', and has found its expression in consumer culture and junk architecture [13].

MODERNISM IN UAE

Since the production of oil in the mid-1960s and the subsequent establishment of the country in 1971, UAE has been undertaking vast development programs which have physically changed the shape of the country. This has not only transformed the old oases, market towns and harbours into major cities but has also resulted in the creation of completely new towns and cities.

Planning Layout and Strategies

Unlike new towns which were built as satellites to existing metropolises or new capital cities in an already existing urban hierarchy of settlements, such as in Islamabad, Brasilia, Chandigarh etc., Abu Dhabi was conceived and built as the catalyst for an emerging country and as the major centre in a hierarchy of settlements yet to be. As such, the city of Abu Dhabi was synthesized as a completely new city in a new country [8].

The image, which the first city builders wanted to create in Abu Dhabi, was that of a totally 'modern' city fit for the technological revolution of the 1960s and beyond, especially the rapid increase in the ownership of motor vehicles. The city was thus conceived physically as a combination of two main parts, namely the major arterial roads crossing each other in a grid-iron pattern and forming between them large super-blocks, and the multi-storey buildings which filled these super-blocks. The model for this was possibly the island of Manhattan and the objective was to create, in a very short period of time, a convincing resemblance in physical terms of a highly urbanized settlement.

The term 'urbanization' is often used in planning terminology and its Arab equivalent is *taa∂∂ur*, a derivative of *ʿa∂arah,* which means civilization. In other words, urbanization is synonymous with civilization and civilization in this respect is the creation of a 'modern' image. This image was endorsed through the creation of high-rise buildings as a sure sign of city development and as a physical sign of progress. It is necessary to understand the psychology underlying the interpretation of progress [9].

Modern architecture and town planning, in international terms, brought the possibility of vertical expansion coupled with commercial speculation. Large-scale development became impressive, especially in societies where small-scale low-rise low-density living is common. In order to emphasize that a city is progressive, it was felt essential that mega project development should be its backbone. One should also consider the effect of the actual demand generated by the expatriate population, which was attracted to working and living in Abu Dhabi as a result of economic growth. The primary economic sector that attracted employment was oil extraction, transportation and marketing. This generated further employment in the construction and service sectors, which in turn generated additional multiplier effects.

All of this attracted a workforce from various parts of the world. Most of those who came were either single people or had small young families. The trend was therefore to live in small flats. Most of the expatriates who might originally have come on short- to-medium-term contracts and who probably only planned to stay on temporary or transient bases felt that living in flats was much more convenient than living in houses, not that houses were readily available anyway.

This was also influenced by the fact that a lot of the expatriate population came from cities where living in a flat was common practice. Another factor which encouraged mega structure development was the desire of landowners to maximize return on land given to them by the State. Since financing was facilitated on easy terms, originally from the commercial banks and later from the Department of Social Services and Commercial Buildings (DSSCB), owners were keen to maximize the utilization of land with vertical expansion [14].

In Dubai the centralized structure of government and economic imperatives of the structure plan afford limited potential for local democratic participation in urban planning. This city is an excellent example of how convergent urbanization can be viable in terms of economics, history, culture and politics. Having developed into a regionally important city, it aimed to be a significant city as well so that it could take its place in the international urban economic system. A major reason for its progress and success had been the clever exploitation of the synergy between the universal and regional forces within the context of history and geography [15].

Globally, the urban agenda is an integral feature of the capitalist world system, in which the all dominating concern is economic performance. In the case of Dubai, this concern was reflected within ideological and institutional contexts that are a blend of American neo-liberalism and Asian state controlled entrepreneurship. In the same way that different societies variously accept, adapt and practice economic capitalism, the development of cities in the world accommodate the new (globalized ideas and practices) as well as the traditional (local history, culture and environment) in a delicately balanced interaction.

There is a strong universal vision that envisages a competitive international environment driven by economic globalization that leads city managers all over the world to prioritize the essential availability of strong economic pull factors – attractive location, state of the art ICT facilities, financial services and lifestyle amenities – in order to be a magnet for investors and Foreign Direct Investment (FDI) [16].

This vital need to be competitive is the impetus that sees strong promotional and marketing efforts launched by various major cities of the world to the rest of the international community. Their targets include multinational corporations, and specialist professionals in

various fields of expertise. Modern city development was therefore driven by these imperatives and Dubai's impressive projects were among the most spectacular.

Dubai is today a leading destination for leisure tourism. The attractions of sun and sea, hotels, entertainment, retail complexes, trade centres, conference facilities and theme parks find few equals and have given the city a reputation and identity of its own [17].

Despite the overwhelming nature of global impacts, the local context continues to play a significant role in how these external influences are accepted, adapted and implemented. City planning in the USA is the responsibility of various development agencies which more often than not pay little heed to local considerations [18]; in Europe the state exerts control in urban planning and development [19]. The case of Dubai and also in Abu Dhabi is a combination of state control and economic liberalism, with urban development largely dependent on the personal vision of the ruling family in the context of market capitalism aimed at attracting investment and being business friendly. The result of state directed approach to urban planning and development is a city based on economic strategy, complemented with a mechanism to ensure that all required infrastructure, services and amenities are provided [20].

First period of New Construction in UAE (1960-1980)

Usually, high-rise development is appropriate for the provision of office space, but since the demand for office space was limited, the nature of development in general led to the creation of residential flats which could also be used as offices, clinics and the like. This led to a first period of New Construction with multi-storey buildings that were totally mixed in the way they were utilized (Figure 1).

Figure 1: Vertical constructions for maximum utilization of land 29 Bulivard: construction completion date 1976 (Source: Authors)

Later in 1971, Abu Dhabi became the capital of the UAE, thus maintaining the historic importance of the island. The city was designed as a grid-iron system with main longitudinal arterial roads running along the length of the island and others of equal importance cutting across its width. The areas enclosed by these main roads form the super-blocks within which urban development has been taking place. Generally speaking, high-rise developments of up to twenty storeys were strung along the perimeters of the super-blocks while the inner parts were occupied mainly by lower-rise buildings of up to seven stories [21]. (Figure 2).

Figure 2a and 2b: New generation buildings of commercial and residential usage were a product of the intense reconstruction of the 1980s loosely placed as an echo of high-modern or post-modern architecture. a) Burj view, b) 8 Bulivard walk; construction completion date 1972-1978 (Source: Authors)

Figure 3: Close-up of a cluster of high-rise modern buildings in Abu Dhabi, showing the stereo typically Arab or Islamic 'arch' style; the view also shows a modified corner squinch, a feature of the Arkan building on the right; construction completion date 1973 (Source: Authors)

The architecture of the commercial/residential buildings has in most instances taken an experimental form. The lack of historical reference of architectural quality coupled with the desire for the expression of individuality by property owners have led to architectural treatments, which in most cases are various façade and lacking harmony, scale and proportion. Images of local and regional heritage, such as the arch have dominated architectural treatment and elevation solutions [22] (Figure 3, 4).

Figure 4a and 4b: Examples of the uneven styles and varying architectural philosophies in the attempt to reconcile the modern and the traditional old town; construction completion date 1976 (Source: Authors)

Second period of New Construction (1980-2000)
After the initial buzz, the foreign architects were invited from different countries with different architectural styles therefore, they have been working in the city with different understandings of aesthetics and varying approaches to design discipline and architectural philosophy. In addition, the statutory requirements to produce elevations of an 'Arab/ Islamic' cache have led

to the forceful inclusion of features such as arches or decorative elements that have, in many cases, had adverse effects on the quality of the elevations [23].

This is particularly so in this second period of construction when town-planning regulations allowed for higher-rise buildings and more funds became available, allowing the use of more diverse cladding materials such as glass curtain walling, granite and marble, ceramic tiles, Glass-fibre reinforced Concrete (GRC), self-finished pre-cast concrete and aluminium panels. Although these materials were used previously, they were used in a limited way and were mainly imported.

Architects' individuality had to be reflected not only in the architectural style but also in materials, colours, and types of glazing, motifs and features used. These features also reflected their taste in the architectural style, which in most cases represented a simplistic understanding of heritage, modernity, regionalism and internationalism. The recently constructed Central Market, known as Zayed's Shopping City, employs Arab/Islamic references as typified by the dome, arches and wind towers. This, coupled with the haphazard experimental nature of the architectural profession that mushroomed, produced some exaggerated examples of architectural interpretation. Gold-coloured glass and aluminium represented richness, while blue glass matched the sky and green glass reflected the green landscape. Rose, pink and maroon glass and aluminium were also used to stand out. Features of traditional architecture such as the arch, columns, capitals and lattice-work are also used extensively and in a multitude of forms, details, scales and sizes. Other features such as wind towers and desert forts have also been used to reflect regionalism [24].

Figure 5: Fuchsia metal panelling and reflective glass characteristic of recent vibrant tower cladding; Taj hotel; construction completion date 1997 (Source: Authors)

As these buildings were so close to each other, occupying a relatively small site, a clash of styles, features, materials and colours has resulted without sufficient space or vista. In contrast to the first period of construction of residential/commercial buildings, the second period has a distinctly higher architectural quality in terms of design, detailing and finishing.

This group is represented by such buildings as the headquarters for oil companies (ADMAOPCO/ZADCO, GASCO/ADGAS), headquarters of the Telecommunication Corporation (Etisalat), civic centers such as the Cultural Foundation, and hotels such as the Abu Dhabi Grand and the Intercontinental Hotel.

The majority of buildings in this group were built on much larger plots than the ones described in the first group, allowing the designer sufficient flexibility of layout, massing and the creation of form. The other advantage is that large international architectural outfits were normally engaged in the design of these buildings and can therefore demand full professional fees for the

design and supervision to enable them to spend the required time and effort to produce a quality building. In addition, the cost of construction per unit rate was normally much higher and could be more than three times that allowed for in the first group, which obviously resulted in a much better quality of construction and finishes [25].

Generally speaking, this second group of buildings tend to be of much larger scale than the first, their design was more streamlined and they made an impressive architectural statement. They were also distinguished in the sense that each stood as a separate work surrounded by generous space and can be appreciated individually.
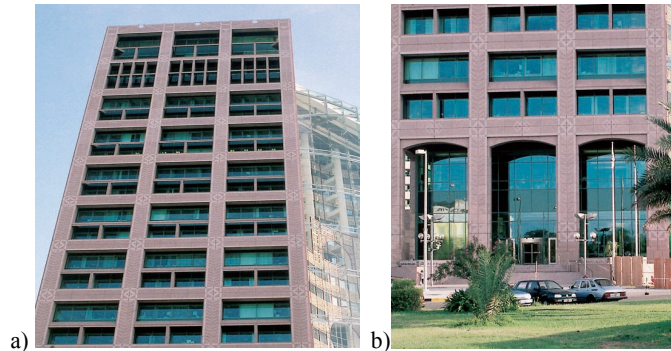

a)   b)

Figure 5a and 5b: Close-ups of the ground and upper storeys of the Abu Dhabi Marine Operating Company headquarters (Jung/Brannen, Boston, USA, 1996). The building design involved Nader Ardalan who refers to the interior garden enclosure as a 'garden paradise'; construction completion date 1996 (Source: Authors)

Third period of construction (2000-present)

While the second period of construction provided a string of a relatively higher level of construction with their modernity and individuality, what UAE still missed is the local identity. The increasing wealth had provided them the option to take a more remarkable step in new construction during a further third period. Regionalism was the key force during this period, and it was demanded from the invited star architects in a way that can make UAE a place with an exceptional monumentality that can still reflect its regional identity. That identity was searched through social, geographical, climatic, and morphological features as a source of inspiration, while cultural background and social practices were the keys to providing a feeling of place and an identity to an environment. At the beginning, Regionalism had a significant role in the face of westernization that was brought on, first, by colonialism and then followed by secular ideologies that governments imposed.

In order to address this onslaught of new and foreign influences and to recover and maintain a sense of localization, it was thought that the theory of returning to the past and regional forms would heal the cultural rupture caused by the colonialists, modernization and globalization in most of the colonized countries.

METHODOLOGY OF THE STUDY AND DISCUSSION

This study adopted case study method, and in the case studies, it dealt with various selected buildings, which offered visual, explicit as well as hidden implicit meanings that need to be identified for better understanding of the significance of these case studies. both Semiotics and Hermeneutics were applied to explain these constructions. Semiotics and hermeneutics were discussed in detail to clarify how they have been hypothetically connected to the research. This is critical, as by comprehending Semiotic and Hermeneutic hypotheses for analyzing architectural elements of the structures and impact of globalization and localization on them, theories can be developed.

For the purpose of this study, 18 structures were examined and analyzed but due to limitations of space, only the Burj Khalifa has been featured in detail. The design of this structure reflects, incorporates and integrates the built configuration with the physical features, and national history of place, that includes its climate topography and ecology. Hence, the Burj Khalifa created to be a symbolic definition of the national persona as well as western concepts, drawing inspiration from the UAE's national flower, the Hymenocallis Spiraling. The Burj Khalifa is a bold attempt at projecting national identity by expressing a national flora in iconic form, while at the same time incorporating the onion-shape dome of Islamic architecture[26]. Therefore, it represented an excellent case study to be explained through Semiotics and Hermeneutics.

Semiotics
The current study tried to comprehend the structure or proportional connection that may add to the generation of the significance, and semiotics appears to be most appropriate to this content, to decide how implications are inserted in a protest. Semiotics, or semiology, is the investigation of signs, images and how significance is developed and caught on [27]. Semiotics covers three central districts of venture. These are examination of sign itself; codes systems into which signs are dealt with, and the lifestyle inside which these codes or signs work. Sign is portrayed as the show of the structure, an exhibition; movement or something physically discernible through human identifies that passes on idea, information or charge. In any case, things simply transform into a sign when significance is placed into them [28].

Saussure (1966) posits that a sign does not exist in reality and it is formed by the associative link between the signifier and the signified. In his linguistic idea, the signifier is the voice that indicates thoughts. A sign is not a link between a thing and a name, but between a concept (signified) and a pattern (signifier). He also stated that signs can exist only in opposition to other signs. In other words, signs are created by their value relationships with other signs. The contrasts that form between signs of the same nature in a network of relationships are how signs derive their meaning [29].

It was evident that Burj Khalifa aimed not only to be recognized as just one of the new development buildings and world's tallest skyscraper, but also to be a representation of the city's increasing global role. It is an icon of the Middle East which symbolizes the region's prosperity, dynamicity, and successful capability to assert itself within the international realm in economic and cultural terms. That was evident in plentiful while searching for 'signs', and mental concepts behind the signs were also very powerful.

For the analyzing of this project, Saussure's model refers to the signs valued appropriate. The build-up of signs from signifier - word or pattern of sound 'new development buildings' is recognized as the signifier and the mental concept of 'new development building' is recognized as signified. Saussure demonstrates that the mental idea (signified) is additionally a result of a specific culture. In this way, rational idea (new development) might be verbalized diversely by every individual who is impacted by the way of life they originate from.

The rational ideas that were attempted to be verbalized were based on three concepts of socio-semiotics as new construction buildings were considered not to be isolated physical objects, but belonging to the social setting around. These three concepts were discussed briefly below.

Barthes' Socio-semiotics
Socio-semiotics expresses the setting of a material through day by day life and the connoting rehearse inside a social setting, where all implications emerge from a more enunciated
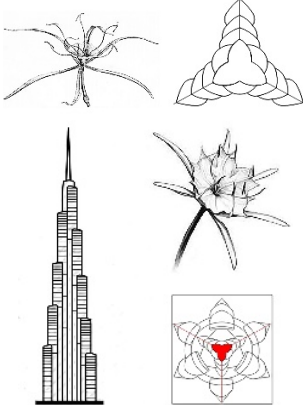
arranged measurement. Frameworks on the connection among the signifier and signified are multi-leveled structures which contain denotative signs, as well as obvious signs when specific social codes are credited to them [30].

The primary demand of connotation is that of sign and at this level there is a sign containing a signifier and an implied. Embodiment is a minute demand of meaning which uses the denotative sign (signifier and connoted) as its signifier, and annexes to it an additional importance. In this framework, a pith is a sign which derived from the signifier of a denotative sign [30].

The main (denotative) level of implication thus is viewed as fundamentally representational and moderately independent. The second (suggestive) level of connotation reflects 'expressive' qualities which are connected to a sign. In the third (ideological) level of meaning, the sign reflects major socially factor ideas supporting a specific perspective, for example, manliness, gentility, flexibility, independence, objectivism etc. [31].

To see how Barthes' hypothesis of requests of connotation identifies with the present review, the table beneath can be alluded for Burj Khalifa (Table 1).

Table 1: Explaining Burj Khalifa through Barthes' Socio-semiotics

Denotation	Connotation	Myth
1st order of signification	2nd order of signification	3rd order of signification
Dominant design concept, contemporary technology and material, monumental grandeur appearance, symmetrical massing, Y-shaped building, geometric grid, abstract decorations (graphical abstract reproduction by authors to point out the key elements, not accurate and not to any scale)	- Association with existing Islamic culture - Organic (From flower) influences that is historically important for this region - Codified by Cultural dimension and regionalism	-Reestablishing ethnic myth of Arab status as greatness and power - Symbol of stunning mega projects which expresses the country's vision to both local and global audiences.

On denotative level, the above is a diagram of an image of Burj Khalifa of Dubai building structure, and by bringing together all its physical architectural elements as an example, on an abstract version of the common desert flower, Hymenocallis, and references to traditional local architecture, associated with a geometric grid that echoes the abstract decorations of Islamic art, it can be identified as a building which is under impact of Localization in Regionalism style.

At a connotative level, Burj Khalifa is associated with the existing culture and society. The Burj Khalifa represented how new meanings are given to old forms and elements, in the socio-cultural fabric of the UAE, it was a sensitive balance of innovative architectural concepts and adaptation of traditional functions.

The context of the Burj Khalifa being located in the city of Dubai, UAE, drove the inspiration for the building form to incorporate cultural, historical, and organic influences particular to the region. The architecture features a triple-lobed footprint, an abstraction of the Hymenocallis flower. The tower is composed of three elements arranged around a central core. The modular, Y-shaped structure, with setbacks along each of its three wings provides an inherently stable configuration for the structure and provides good floor plates for residential. Twenty-six helical levels decrease the cross section of the tower incrementally as it spirals skyward.

In short, the design of this structure reflects, incorporates and integrates the built configuration with the physical features, and national history of place, that includes its climate topography and ecology which is reflected in the abstract version of the desert flower. The design of Burj Khalifa was derived from patterning systems embodied in Islamic architecture.
At the level of mythic, we comprehend that Burj Khalifa as sign, enacting myth of the Arab status, religion, personality, greatness and power.

Barthes' work, along these lines, is more noteworthy incentive for the ebb and flow look into, as the point of this review is to peruse and translate the important nature and ideas that epitomized in this new development building as sign by which it is bound to a particular social context and cultural setting.

Gottdiener's Socio-semiotics
However, there were other researchers as well who suggested methods to explain physical signs into socially meaningful messages by breaking down the built environment, and the work by Mark Gottdiener can be alluded as another principle reference for this review. This is on the grounds that he expressly concentrated on socio-semiotics and its application to break down the marvels of material culture. Gottdiener utilized the association of signs for his examination to see how philosophy verbalizes with material structures or, at the end of the day, how material structures are encoded through ideological implications which are built into frame. By understanding this, one can have the capacity to decipher and 'read' the significance of the material culture. Despite the fact that his examination concentrated on Las Vegas as an ecological setting, his review gives methodological bits of knowledge to the investigation of different settings, for example, development in the United Arab Emirates, which are also products of social and cultural contexts.

Gottdiener (1995) presented the socio-semiotic model of the signs to depict the method belief system expressed with material structures. As indicated by him, socio-semiotics represents a two-route procedure to introduce typical association in day by day life. First is the enunciation of the philosophy, and second is the material frame. The expression 'belief system' here is characterized as the esteem arrangement of a social gathering. An esteem framework is related to the substance of a sign, though materiality is associated with the declaration of sign [32].

$$Sign = \frac{Content}{Expression} = \frac{\frac{Substance}{Shape}}{\frac{Substance}{Shape}} \frac{\frac{Non-codified\ Ideology}{Codified\ Ideology}}{\frac{Morphological\ Element}{Material\ Objects}}$$

The 'content' then can be partitioned further into 'substance' and 'shape'. The content of shape and substance are controlled by the ideological culture of the general public. This belief system, which has a place with a specific social practice, might be arranged or non-classified philosophy. The 'expression' is likewise partitioned, facilitated by substance and shape. Both of these allude to the question. On account of the question, it might refer to the particular morphological components or material presence of the substance [33].

Keeping in mind the end-goal to comprehend the way belief system identifies with the invented environment, Gottdiener (1995) additionally delivered another kind of socio-semiotic model utilizing an indistinguishable arrangement from the above, and more relevant to architectural objects.

$$Sign = \frac{Content}{Expression} = \frac{\frac{Substance}{Shape}}{\frac{Substance}{Shape}} \frac{\frac{Social\ Ideology}{Architectural\ Ideology}}{\frac{Morphological\ Elements}{Architectural\ Objects}}$$

To clarify how this socio-semiotic model works for the assembled environment, Gottdiener (1995) completed an examination of the shopping center as his contextual investigation. Likewise, decomposition of architectural signs planned by Gottdiener seems suitable to describe the Burj Khalifa to elucidate the new development in the United Arab Emirates as an object of social culture. By looking at the content and expression of this structure, it is conceivable to portray the way social and social codes explained inside the manufactured frame. This additionally incorporates a clarification of how the arranged belief system of Burj Khalifa verbalizes a specific philosophy having a place with a public and culture.

As the study includes the perusing of the new development buildings as a sign, there is a need to distinguish the design components inside this building. This is on the grounds that Gottdiener's work concentrates on depicting the shopping center as a social item. Accordingly, he distinguished just two components inside the shopping center. These are the spatial format, and the exteriors and ornamental components of the shopping center. In any case, since the present research is about the new development as an image of dominant architectural philosophy and conviction framework, the choice of components inside these structures ought to be more particular and fitting.

In the investigation of the Burj Khalifa, it can be depicted as a constructed shape, which is best understood as the meeting site of two particular basic standards. These two standards are the Burj Khalifa's 'substance' and its 'look'. Since each sign is additionally a piece of arrangement of connotation, which is organized by the paradigmatic and syntagmatic tomahawks, these two separate levels of significance are likewise essential in perusing the sign framework, which can be found at this structure. It additionally expresses that the paradigmatic tomahawks of the new development can likewise be alluded to as the 'substance' of the Burj Khalifa, which includes plan theme, while the syntagmatic hub is alluded to as the 'expression' of the Burj Khalifa. This second hub comprises the way the different components inside the Burj Khalifa create significance through metonymy and contiguity [32].

$$Burj\ Khalifa = \frac{Content}{Expression} = \frac{Paradigmatic\ (Design\ motifs\ of\ Burj\ Khalifa)}{Syntagmatic\ (Elements\ within\ Burj\ Khalifa)}$$

For this situation, the 'expression' or syntagmatic tomahawks of the Burj Khalifa include the verbalization of plan components inside the manufactured shape, for example, the constructed frame inside the façade, its spatial format and improving elements [33]. However, the components mentioned by Lara [34] seemed to be a better tool to describe the elements and design motifs.

Combining Gottdiener's Socio-semiotic with the components of Lara
The present research is about the new development as a symbol of Globalization philosophy and belief method, and the selection of elements within these buildings should be more specific and appropriate. The work by Lara and his research team conducted a thorough art factual

survey of all houses within two multi block neighborhoods to ascertain the proportion of modernist inspired housing. Finally, Lara examined a sample of houses in order to:

1. Classify them along a continuum of traditional to modernist, based on their use of specific façade design features.
2. Conduct both a visual and computer-based analysis of the spatial qualities of the floor plan.

They recognized four fundamental components. These are scale, spatial association and treatment, and auxiliary frame (Structural arrangement) and material expression (facades). Thus, by joining standards from both Gottdeiner's exploration and Lara's review, a reasonable system for the present review is created. These new pointers to peruse the new development as signs, are set out in the model below [34].

$$Burj\ Khalifa\ (Sign) = \frac{Content}{Expression} = \frac{Paradigmatic\ (Design\ motifs\ of\ Burj\ Khalifa)}{Syntagmatic\ (Elements\ within\ Burj\ Khalifa:\ Scale, Spatial\ Organization, Structural\ Arrangement, Facades)}$$

In light of the above model the examination of the new development sign framework, with Burj Khalifa as a particular case study, is conceivable by perceiving the implication that happens with reference to two separate levels of significance, - the paradigmatic and syntagmatic tomahawks. In the process of researching the new development in United Arab Emirates, the plan theme and components inside these buildings was examined, to unload their typical importance.

Analysis
The architectural design of Burj Khalifa was then analyzed based on these four indicators. In the table below, the data collection and analysis methods were explained in detail (Table 2). There were applied in order to analyze Burj Khalifa through its Signs, which were later interpreted through Hermeneutics.

Table 2: Combining Gottdiener's Socio-semiotics and Lara's components to develop research methodology

Architectural elements (Indicators): 1	
Scaling (scale of form itself, scale of building form, elements the urban scale)	

Method of Data Collection and Analysis

To obtain the urban scale, the size of the Burj Khalifa in a particular setting or the context of the city was compared with the size of other existing things in its surrounding. This was done by conducting investigation on the building on-site.

An analysis of the Burj Khalifa's section and elevation to determine the scale of the building were also conducted by reviewing the drawings of the Burj Khalifa taken from blueprints and working drawings obtained from the architects.

Details

To attain exact form of scale, the overall vertical height of the new development structures (roof, wall, base) was investigated.

Architectural elements (Indicators): 2

Spatial association and treatment

Method of Data Collection and Analysis

An analysis of the Burj Khalifa spatial organization was conducted by reviewing the building.
Floor plans were taken from blueprints and working drawings were obtained from the architects and architectural archives.

Details

- To break down the space arrangements of this new development structures, within spaces in their affiliation are inspected.
- In this sense, the strategy for space punctuation of examination made by Hillier and Hanson (1984) was the basic as a key reference to explore how the arrangement of spatial spaces may present a level of advancement and control in perspective of the putting of the parts inside the entire spatial affiliation.
- Their study mapped the interior spaces into the cellular structure. Both of them termed these structures as a genotypes, which are defined as clusters of spatial segments that are arranged in a series of sequent configuration.
- There are two essential strides for a building plan to be changed over into a colleague format to plot the life of the inhabitants that contained inside it.
- In this framework, the building game-plan was firstly disengaged into different constituent of spaces known as cells.
- As per Hanson and Hillier (1988) the cell was conceptualized as a point, which is tended to in circles, while lines were utilized to address the change that relationship with all cells. In this sense, a singular access to the cell is conceptualized as a 'uni-permeable point', however a cell with more than two ways is known as a 'bi-permeable point'. The point outside the cell is separated as a cross circle.
- In the second step, the spaces (of each inward cell or subdivision of cells) are then changed over into gamma maps or 'syntactic structures' to see the spatial requesting that exists between all cells. In perspective of this mapping, an illustration can be fabricated which demonstrates the flood of the internal cells whether it is symmetry, asymmetry, distributedness or non-distributedness.
- The importance of this space mapping system is that it can show the vitality of the spaces similar to their request and game plan. Additionally, it illuminates how these spaces are related to the building confounding all things considered.
- The above procedures, in any case, simply separate space in perspective of the course of action of advancement process, as opposed to investigating within space perceptually.
- Based on Hillier and Hanson's procedure, the orchestrating organization of the new progression are made as an interpretation of and mapped into cell structures or segmental diagrams starting from the area to demonstrate the building.

This is done by drawing the spaces inside the new progression consolidating with syntactic structures close by all the possible pathways, boundries or points that may transverse or intersect the spaces. This method makes sense of if the spaces display the free stream of advancement with many extending systems (known as orbited or ringy) or restricted to single growing system (known as straight and fanned) structures.

Architectural elements (Indicators): 3

Auxiliary frame

Method of Data Collection and Analysis

An analysis of the Burj Khalifa Auxiliary frame was conducted by reviewing their sectional and detailing drawings taken from blueprints and working drawings obtained from the Architects and architectural documents.

Details

- To break down the sectional and basic game plan of this new development building, there were two essential viewpoints to examine, which were the conclusion of a space and the structures inside the spaces. For conclusion of space, components, for example, spatial thickness and fringe needed to be researched. In structures inside the

spaces, components, for example, physical components inside the space and how the components separate the inward spaces likewise needed to be inspected.

- In researching conclusion of space, one needs to go through an arrangement of progressive view of diverse areas then wire them into one single psychological picture. At the end of the day, the subject needs to move around them with a specific end goal to see or sense the space. The size and mass of the internal compositional limits, which perceptually encase the space watched. For this situation, the stature, width, length and profundity proportion of the encased volume watched.

Architectural elements (Indicators): 4
Material Expression

Data Collection and Analysis Method

- An analysis of Burj Khalifa's material expression was conducted by reviewing their sectional and elevation drawings taken from blueprints and working drawings obtained from the architects and architectural books.
- Observation on-site was also conducted to study the exterior and interior facades by examining the elements, composition, materials and finishes used for these facades.

Details

- To review the new headway outside façade, the strategy for façade investigation created by Shatha (2004) is an imperative as a key reference. Using her technique to peruse and investigate the façade will demonstrate or dis-demonstrate regardless of whether the Burj Khalifa façade may depict the effect of globalization and confinement philosophy. Despite the fact that Shatha's (2004) concentration centered on reading the façade of homes in Amman, her works in like manner concerns investigating the suggestions and making of basic structures.
- According to Shatha (2004), remembering the ultimate objective to analyze the noteworthiness of the auxiliary façade, one should look at it in layers since the façade is addressed in layering of consultation and joined unusualness. In association with this, Shatha (2004) laid out four basic steps to coordinating examination on the façade of a building:
- Layer 1: The basic game plan of the outside laid out in this first layer is to clarify the basic structure, which made the shape.
- Layer 2: This level enhances the articulations on the key masses of the outside, so that the major volumetric alterations inside or on the basic masses and achieving a development to or subtraction from the basic shape shown.
- Layer 3: This stage focuses on appearance in more detail; it picks and deals with the geometric portrayal of piercing(s), showing the important relationship of piercings with each other and with incorporating dividers.
- Layer 4: At this stage, the supportive and decorating purposes of enthusiasm of stone finish, areas, cornices and materials added to give the last picture. Prior to the completion of this stage, the outside totally drawn, with its minute purposes of enthusiasm appearing as in reality.
- Refering to Shatha's (2004) layering strategy, the façades of the new change researched in a more think route from all sections – the housetop, body and base fragment in detail.
- From this, the compositional treatment of four sides of the building that contained the vertical and level segments examined to see how they made and coordinated. This is basic as the course of action of the vertical and even part may shape an announcement of the supporter's impact of globalization and constrainment ideologies.
- To take a gander at the new change inside façade, the four sides of the new progression encased space, the treatment and improving culminations are assessed to see how unusually the surfaces' beautification, finishes and organizing are shaped and coordinated on the rooftop plane, floors and divider planes. This is basic as pointless improving embellishments may in like manner shape expression to the social event of individuals

Hermeneutics

After Semiotics set up the outer level of investigation, Hermeneutics sets up to find out the inner meanings. For this situation, hermeneutics could be the fitting way to deal with making this understanding conceivable as it empowers an analyst to decipher or ask about the significance of social wonders that incorporate composed writings, human conduct and typical antiquities (for example, sculpture, statuette or construction) and import these marvels, through comprehension of the perspective and 'inner-life' of an insider, or the primary individual point of view. In the present review, hermeneutics was the key to deal with comprehending the idea of human aim and the related activities, and their outcomes required in the making of the new development in the United Arab Emirates.

Schleiermacher's two routes of Hermeneutics: Semantic and Mental

Hermeneutics is a particular approach used in this study to interpret texts. The term 'text' here "applies to anything which can be seen as signifying something or refers to anything that can

be read. Texts (be they written discourse, oral narratives, aesthetic object, architectural buildings and others) are understood as conventionalized expressions of the experiences of their authors" [35]. Alternately, through this review, hermeneutical hypothesis affected by Schleiermacher (1998) was grasped. His theories of explanation and translation were based on two essential principles: the hermeneutic drift taken by two sides of form, one semantic, and the other mental [36]. As demonstrated by Schleiermacher, hermeneutics cannot be moved toward using a pre-chosen game plan of criteria in perspective of its interpretive nature. Accordingly, an approach known as the 'hermeneutic circle' is displayed. The hermeneutic circle incorporates a genuine irregularity; for one ought to get a handle with everything taken into account before one can appreciate the parts. In this hermeneutic level, the elucidation and development of reality extraordinarily relies on the specialist's familiarity with the content, and its position in a particular setting. In this sense, "the epistemological position for hermeneutics becomes a 'transactional and subjectivist' one, in which the investigator and investigated object are linked interactively [37].

The Semantic Route

Since the concentration of the present research on the examination of the new development as a contextual investigation, Schleiermacher's ideas are valuable in two fundamental routes as strategy of examination. To begin with, alluding to his idea of etymological elucidation and hermeneutic circle would direct the perusal and translating of the architectural content and authentic archives. Second, his idea on mental translation is valuable amid the procedure of deciphering draftsman's expectation with a specific end goal to get a reasonable comprehension of the star architects' belief system and the globalization atmosphere that they were arranged in.

The method of Schleiermacher's hermeneutics was suitable for deciphering composed content that identified with the new improvement and star designer's plan in United Arab Emirates. This was vital to accomplish the goal of this review, which was to see how Globalization and Localization and star engineers' belief system impact new advancement in the UAE, and then decide the pointers for investigating the reports and chronicled records. The Semantic part can thus be concluded as a combination from Barthes and Gottdiener's components of Socio-semiotics.

Semantics = Barthes's 'myth' level + Gottdiener's Social and Architectural Ideology

From this system, it can be seen that these structures as a 'sign' that can be examined in an organized way with the goal for it to symbolize different implications to its beneficiary in view of:
  − The design motif of this new development building (known as paradigmatic axes).
  − Components inside these structures, which include: the size of the structures, spatial association of the structures, veneers of the manufactured shape, and basic plan of the frame (known as syntagmatic tomahawks). The examination procedure on every structure configuration components was performed with reference to the above system.

As we probably are aware, these contextual analyses demonstrated that there was indeed an association amongst Globalization and Localization and Burj Khalifa. The results of the contextual investigation additionally merge the supposition of the review that the plan of Burj Khalifa was affected by the globalization and confinement. This structure considered as a course of action of 'signs', which can be experienced as a sort of correspondence while seeing the helpfulness of its arrangement properties. Since this building have the limit of going on significance through physical and visual casing, they may have a tendency to pass on the

objectives of their supporters to the building customer, and furthermore offering messages that have mass intrigue.

Burj Khalifa utilized as obvious images to speak to the globalization and restriction conviction framework and interests of the modelers for country's progression and to lift their stature in the area and overall setting. This can be found in the arrangement appearance of the structure from 'frame' and 'space' building's, which consolidate its scale, facade, spatial association, and structural arrangement. The design of Burj Khalifa has importance and communicates high open an incentive as the delegate of new period of architecture in UAE. This is on the grounds that this structure is the visual interpretations of expectations gave by affected star architects in United Arab Emirates. Architects not just regard globalization as a superseding power to show their qualifications to the masses to win their support; they additionally look for innovation legitimization through material advance and improvement as the building. Their consideration can be found in the improvement of tall structure like Burj Khalifa, which are dependably addressed in astounding structures essentially depicted by overwhelming size, basic territory, and the allocation of blueprint appearance suggesting western and Islamic recorded models.

The Mental route

For this exploration, the numerous case outlines were selected to empower the review to demonstrate the relationship that existed in this new development building amid the effect of Globalization with Star architects' philosophies. The different case outlines comprise this structure in UAE developed during this period 'in their own logical settings and connecting the contemporary plan to the different social times of United Arab Emirates. It is expected that this approach will answer the exploration address, and the goal of the examination would be accomplished.

In the following short manifesto describing the five central attributes of a modern globalized architecture of alterity, the basis is not the building components, simple conceptual ideas or an intriguing aesthetic, but the necessity of a continually transformative analytical focus integrating with the complex and nuanced situation of globalization:

1. More involvement in the building process and a specific return to building that incorporates all aspects of design, including the social networks, ecological systems, and technological delivery systems found in the context of a project.
2. A redefinition of monumentality moving beyond scale and style, while incorporating complexity as well. In the globalizing world, the smallest of projects with the right conditions can have greatest impact.
3. Overcoming the futility of keeping up with the latest technological fashion, instead focusing on the relevance of various technological avenues benefiting people's lives. Developing an ethical attitude and methods of technological implementation less disruptive to environmental and cultural infrastructures, as well.
4. Integrating technology into the design process, from initial sketches outlining preliminary concepts, to its maintenance decades after the project is completed.
5. Finally, striving to cultivate a construction and design ethic valuing integration of social, technological, and cultural landscapes locally and into the larger social/political landscape of globalization.

Regarding Burj Khalifa, The design of the structure derived from patterning systems embodied in Islamic architecture. According to the structural engineer, Bill Baker of SOM, the building's design incorporates cultural and historical elements particular to the region such as the spiral minaret. So as it is seen in figure below, the old Form, which is the minaret, keep repeating in

design of the structure so one can finalize these building based on Old forms, which it had in Islamic Culture.
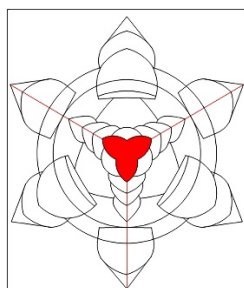

Figure 6: Analysis of the Burj Khalifa
(Graphical abstract reproduction by authors to point out the key elements; not accurate and not to any scale)

Embracing the new, preserving the old – Regionalism as the backbone of the concept of Glocalization

A particular place would have a physical, social, economic and political status quo besides a cultural and architectural heritage, and natural history. Architecture's function in relating its attributes as a technological product to a particular place and time acts as a critical bridge that joins technology with culture. The regionalist design approach seeks to articulate this linkage. Regionalist design intentions seek to incorporate the 'spirit' of the place in which it is located. Its objective is to create architecture in context, which presents a response to its surroundings. The idea is to be sensitive to its place rather than be merely a representation of a trend toward international imitation more specifically, regionalism in architectural endeavors to achieve affinity with a particular place and time through the built configuration, aesthetics, technical assembly and materials [38].

More specifically, the emergent regionalist architecture finds its architectural significance by linking a particular place and time to the built configuration's aesthetic organization with technical assembly and materials. It is a virtual connector that links technology with culture.

Regionalism is inspired by social, geographical, and morphological features, while cultural background and social practices provide a feeling of place to certain locations and an identity to an environment. At the beginning, Regionalism had a significant role in the face of westernization that was brought on, first, by colonialism and then followed by secular ideologies that governments imposed.

In order to address the issue of under development, it was thought that the theory of returning to the past and regional forms would heal the cultural rupture caused by the colonialists, modernization and globalization in most of the colonized countries. Regionalism is also a reflection of the bottom up approach that resisted the exogenous models of development. Entrenched cultural beliefs, local materials and homegrown expertise and technology together offer another option in most aspects of development, and it is a smooth passage toward the progress of developed societies.

In most of the structures built in the Regionalism Style as Burj Khalifa, tradition and modernity are either dramatically contrasted or seamlessly fused in architectural projects by the most influential architects and design studios. These projects draw inspiration from Islamic architecture, embedding Islamic decorative motifs and traditional structural solutions to cope

with the extreme Arabian climate. Architecturally, the urban design of Arab cities is reinterpreted.

In summary, architecture's function in relation to its attributes as a technological product to a particular place and time acts as a critical bridge that joins technology with culture, in other words, regionalism design approach seeks to articulate this linkage.

Regionalism is also a reflection of the bottom up approach that resisted the exogenous models of development. Entrenched cultural beliefs, local materials and homegrown expertise and technology together offer another option in most aspects of development and are a smooth passage toward the progress of developed societies.

In most of the structures built in the Regionalism Style as Burj Khalifa, tradition and modernity were either dramatically contrasted or seamlessly fused in architectural projects by the most influential architects and design studios. These projects drew inspiration from Islamic architecture, embedding Islamic decorative motifs and traditional structural solutions to cope with the extreme Arabian climate. Architecturally, the urban design of Arab cities was reinterpreted.

In sum up, architecture's function in relating its attributes as a technological product to a particular place and time is as a critical bridge that joins technology with culture, in other words, regionalism design approach seeks to articulate this linkage, and that way it concludes the hermeneutic explanation of Burj Khalifa.

Summarizing the findings
Localization with response to climate, material and culture
Localization is a developmental process that is guided by the customs, culture, social and economic conditions of a particular geographical area. The outcomes from the process reflect the cultural characteristics of the place and answer to regional needs. One of the important reasons for the United Arab Emirates to opt for localization is the ideology of president Shaikh Zayed bin Al Nahayan, based on his speech "We cherish our environment because it is an integral part of our country's history and heritage". Shaikh Zayed encouraged pride tradition and was concerned for the nation and its future [3].

Politically, as the ruler of Abu Dhabi from 1966 to 2004 and president of the UAE from 1971 to 2004, his accomplishments were vast and wide-ranging He guided the UAE unification and was at the helm of the country's development both socially and culturally. The main impact of localization is based on this goal, which was to become a distinctive global magnet where the traditional values were the foundation on which the present was built and which would be the very foundation of the future. Reviving the local architecture, besides the nostalgic tendency might be part of the cultural policy that aims at healing the deformed identity of local societies and prescribing a remedy for heavy presence of colonial legacy in most Muslim countries.

Comparing the development before 1960s and after that, a relatively low profile vernacular architecture suddenly seemed to gallop towards modernity without any clue towards any goal. It seemed that even though the old vernacular might not possess the flashy look, it still reflected local identity through response to local climate and local material and technology. The First two generations after the sixties offered response to modern material and technology through established architects, but they lacked the expression of local identity as they hardly responded to local climate and materials. The leaders felt the need for that, and with the wealth as their major force, aspired for that identity at an even greater scale which searched for

regionalism. That set the goal, which led them to create more meaningful constructions that responded to that identity during the third period. This period of construction was truly evident of high class integration of local knowledge into world class masterpieces, and Burj Khalifa stands tall among them to represent this phenomenon in the best possible way.

Search for 'Global Identity': A Political interpretation of 'Modernization'

As we know, UAE is an Islamic country; besides responding to local climate, material and technology, it also tried to use the power of Islamic culture to be vocal through the new construction as well. Islamic architecture there have two ideologies, the first kind of Islam is that which is practiced as a traditional style like the vernacular style and the second one is considered a symbolic presence, more for a political message rather than one that actually guides the day to day pattern of lives. These buildings are usually ostentatious, grand and singularly monumental, like the buildings of the regionalism style or monumental style [26].

In another level, the use of historical revivalism and in some cases, regionalism, has been accepted as an important architectural approach for the sake of religious continuity of past tradition. Most of the time the buildings, which were under the impact of localization, were influenced by political agendas and personal symbolic gestures as well. The idea was to develop a truly global and distinctive center where the values of the past had built the present and molded the shape of the future for good. On the other hand, their concern for traditional architecture has been considered by adaptation to diversity and as needed by local conditions. These styles also reflect the bottom up approach that challenges the exogenous models of development.

In summary, most of these buildings which searched for Global identity also were under the impact of localization possessing regional identity, establishing a reputation for cultural authenticity, and promoting tourism, and supporting traditional craftsmanship and addressing regional needs. In other words, new development buildings like Burj Khalifa searched for global attention without sacrificing local identity. The sequence of this searching process that started from early 1960s, and culminated in modern day through the new development buildings such as Burj Khalifa can be summarized as in Figure (7) below.
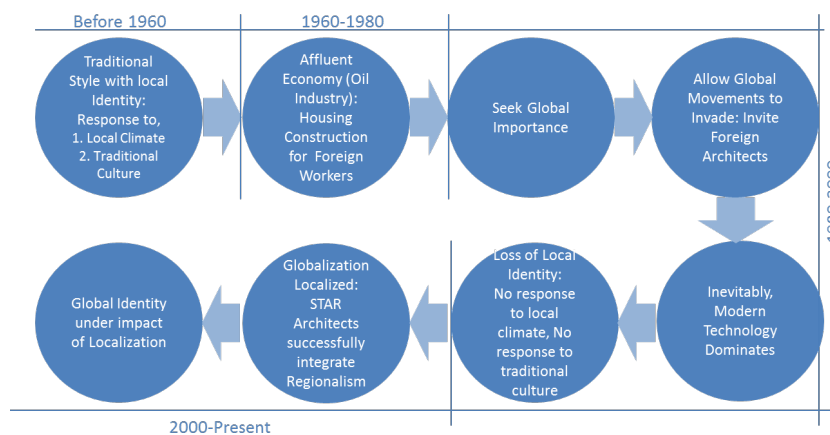

Figure 7: Summarizing the sequence in which new construction of buildings in UAE progressed

CONCLUSION

The above has provided the background to the development of architecture and its various architectural forms and development approaches taken by the UAE in its desired vision to be a part of the global picture in terms of social, economic and political progress.

As is inevitable when a country aspires to play 'catch-up' in any aspect of development, the initial attempts were imitative borrowings from the examples of the world's leading cities which in this case were Europe and North America. As such, the early years of imitative development and urbanization created urban landscapes that were reminiscent of parts or the whole of some of the major cities of the world, with indiscriminate and discriminate high-rise and wide tree-lined boulevards. In short, architectural transplants were borrowed in haste and without much thought put into long-term planning. Since then though, the scenario of urbanization and general architectural development in the UAE had been significantly transformed, fuelled by petro dollars and the will to realistically be up there among the major cities of the world. In this sense, despite the initial challenges faced by a country attempting a fast-track architectural transformation from traditional to modern the UAE appears to have succeeded in reconciling Globalization and Localization in the development of its architectural heritage.

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