THREE DECADES OF OMANI ARCHITECTURE: MODERNISATION, TRANSFORMATION AND DIRECTION

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ABSTRACT

Oman has an old civilisation and rich culture, juxtaposed on the ancient trade routes. The sea-faring nation has been a melting pot of great civilisations of the Orient, Africa, Arab and West. Along with Oman's topography, climate, and socio-religious-economic context, these exposure and associations influenced its built forms, giving rise to a type of architecture often distinguishable from its neighbours as being Omani. Oman also has a fast growing economy creating a more literate and prosperous population with changed demands and taste. This brought major infrastructure developments and rapid urbanisation in the last three decades, with inevitable effect on the local architecture. Despite calculated steps at the beginning, an alien form overtook the rich traditional architecture.

This paper traces the architectural transformations of the last three decades in Oman from a rich traditional style. It highlights some of the reasons responsible for the change. In conclusion, the paper presants some recommendations aimed to positively define the direction the built-form of this emerging nation should take.

1- INTRODUCTION

Oman is the eastern-most country in the Arabian Peninsula with the oldest civilisation and the richest culture in the region. Being a sea-faring nation and having interactions with the Indians and the Chinese, the Iranians, the Turks and the Yemenis, the Africans, the Germans, the British and the Portuguese for hundreds of years, the country has received traits from many civilisations and cultures. Exposure to the historical trade routes between the occident and the orient, variegated culture, art and craft have shaped Oman's architecture for ages. However, significant development in the modern era started only after the present sultan accessed the throne in 1970. He aspired to accommodate people in modern habitats with the institution of amenities, paid for by the oil revenue and following a National Plan. The phenomenon, which brought the fastest growing economy in the region, is fondly refered to as the 'new renaissance'.

The quest for fast urban development omitting the essential components of the local built form had irrevocable effects as elsewhere in the region - an alien form overtaking the rich vernacular. However, the authority showed maturity in their thinking by apprehending the changes to come and commissioning studies searching for directions and vocabulary for the new developments. Besides, as practice of architecture in the modern sense just picked momentum, the authority tried to preserve Oman's architectural heritage through conservation examples, landscaping and design guidelines, uniquely in the region. Yet the all pervasive notion of 'modernisation' with everything western and trendy had the upper hand, aided by a practice dominated by the expatriate designers failing to uphold the spirit. Instead the society strived for a form adorned with unrelated motifs, misrepresented elements and alien spatial arrangement.

2- THE TRADITION

Despite being more aligned with the conservative culture and hot-arid climate of the Arab-Islamic world, the Omanis have been milder, friendly and outgoing, making colonies or having trade relations with countries as far as China, Madagascar or Portugal. The legendary character of Sinbad is known to be modelled upon a real-life Omani mariner and his expeditions. There have been distinguishable features in its built-form known for its spirit of minimalism and austerity, which made it prominent in the region.

This character in the traditional architecture of

Oman refines the extent and form of urban grain, embedded in the understated mood of the buildings - low-rise white or sandy edifices in gypsum and mud in the interiors, occasionally stone and palm fronds along the coasts. An appreciation of materials generated solid forms which could often be confused with Mediterranean or North African or adobe architecture (Figure 1). But one will not miss the unadorned facades highlighted by soft curving arches, with intricate patterns often with expressive details and colours on different elements like the openings, when looking closely (Figure2).

Figure 1: Muscat- an assemble of low-key white edifices on the rugged coast-line

Figure 2: An opening on a sea-front house in Sur Lawati- the traditional trading quarter

Islam played a vital role in shaping the society and its built forms, which derived its scale from the close-knit settlements evolved around a focal point. These were usually the community gathering areas in front of the neighbourhood *masjids* (mosques), *bayts* (fortified mansion) of the local *sheikh* or the *wali* (governor), or the spontaneously grown *bazaars* (market) in larger scale (Figure3), or the residential courtyards at individual scale (Figure 4). The same spirit was maintained all the

Figure 3: Formation of a bazaar in a rudimentary stage-a social space

Figure 4: Muti-purpose cour-the centre of all ddomestic chores

way through in the users' interaction with the urban fabric, and in understanding the hierarchy of the spatial organisation and the generation of the related forms.

The Omani builders translated the local materials into a creation integrated to nature. The apparently impregnable stone-built *Killas* (forts) and bayts (Figure 5 & 6) of Oman are the most visible forms of a vernacular architecture, as the rest built in mud-brick, wood, palm-frond and the soft local stone had to be constantly pulled down and rebuilt. These were supplemented by the mixed arid-tropical type buildings, constructed by the Portuguese and British often in the port areas.

The masonry construction, small recessed windows and courtyard planning made perfect sense climatically, providing natural low energy protection from the extreme heat and glare of summer (Figure 7). Thus the Omani settlements had an organic cluster form, typical of hot and arid zone. These consisted of low-height structures built of local materials, and were surrounded by walls. Socio-economic life evolved around tribes engaged in fishing, trading, agriculture and grazing, according to the climate, topography and available resources, and the historic links and roles (Figure8).

Figure 5: An eight hundred years old conserved fort

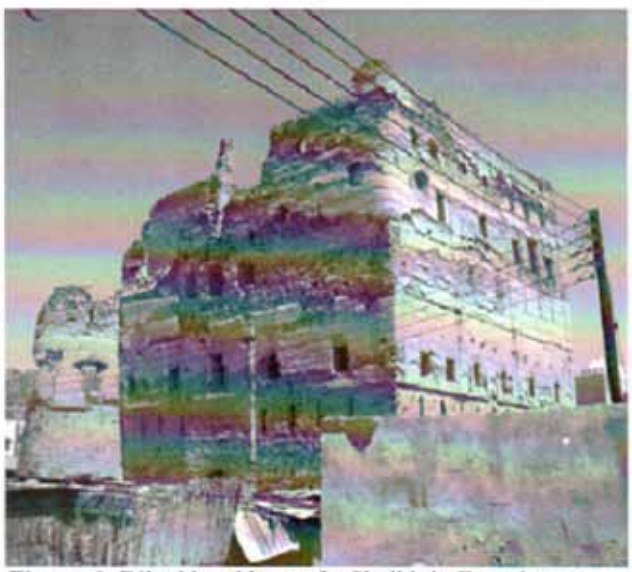

Figure 6: Dilapidated bayt of a Sheikh in Fazzah, now under documentation stage to be conserved in future

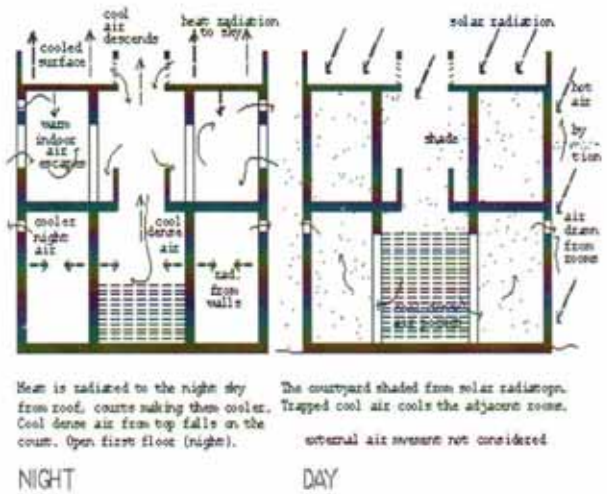

Figure 7: Section to a typical residential court

Figure 8: Agriculture activity-a male group function

There were effective and innovative indigenous elements used in Omani architecture which made the spaces not only functional and climatically soothing, but aesthetically inspiring as well. Different areas of the country, the second biggest in the Gulf region with 85% covered with the *Raab al-Khali* (the empty quarters) desert stretching all the way up to Syria thousands of miles away, were known for using particular elements. For example, *bagdirs* (wind catcher) and *arish* (pavilions with palm frond walls) used in the *Batinah* region (Figure 9)- a narrow coastal strip stretching more than 200 miles overlooked by the copper mountains, took advantage of the high sea wind. In the *Dakhliya* (interior), perched between the green mountains with *wadis* (dry river beds) in one side and the desert on the other, multi-storey close knit thick wall mud houses were more of a norm. The greener *Dhofar* region bordering Yemen had a unique monsoon season; buildings in stone with colourful facades and often in *Hadramouthi* style were more visible there.

Figure 9: Use of badgir (wind catcher) and arish (flatten and woven palm fronds) in a vernacular structure in Sohar

3- THE 1970S- THE MODERNISATION

Until recently, Muscat, an isolated enclave on the rugged coastline of Oman, was virtually separated from the rest of the country, both topographically and administratively. But as soon as the present Sultan ascended to the throne in 1970, he aimed to unite the country strife with warfare within the tribes and rebels supported by the neighbouring countries, and struggling to make good use of its resources, mainly oil at the beginning and eco-tourism lately. He initiated extensive infrastructure renewal and urban development programs. This was supported by the oil revenue based economic boom starting from the mid-1970s. This saw Oman having one of the fastest growing economies in the region, despite progressing cautiously and more importantly consciously about the tradition and effects on the environment.

The capital city Muscat was in oblivion at the beginning of the 'new renaissance' in a country virtually unknown for centuries which had no mass media, no electricity except within the palace compound, no metalled road and no hospital except for a Christian missionary run health clinic with two nurses. But naturally it was the focus of most infrastructural and physical expansions, which till now is done by demolishing an older structure if it has to be within the mountainous enclave. The sleepy town could not meet the immediate demands of suitable land, favourable ambient, and the kind of infrastructure and physical facilities required for a modern metropolis. Nevertheless, it was felt that the country was in the verge of physical development of such a scale which would no less shatter the traditional pastoral and nomadic society, and its forms.

The people at the helm in the early-1970s, assisted by advisers and much later by the first generation of the western trained bureaucrats and professionals, could envisage the effect that such developments would have on the physical environment as well as the cognitive environment. Therefore studies were commissioned for the development and extension of the capital city to give a direction to the enormous amount of building activities apprehended. This in one way was an attempt unique probably in the world, to be seen in the context of considering 'western' and 'modern' as synonymous, and thus omitting the essential components of the local built form in the quest for fast urban development in most of the developing countries with irrevocable effects. Due to a serious shortage of qualified professionals, Oman had to depend entirely on the expatriate building professionals. It had a few British and Indian consulting companies looking after the engineering projects and occasionally the architectural needs since the end of the Second World War. Two companies at the beginning of the renaissance, John R. Harris Architects Design and Planning Consultants[1] and Mohammed Makiya

[1] Harris, a British architect, had established himself in Muscat in 1965. He won the 1952 RIBA open competition for designing Doha State Hospital. In 1961, he prepared the Abu Dhabi master plan. Until the 1980s, he was involved in several important projects in Kuwait, Bahrain and Dubai as well.

and Associates[2], contributed a lot in directing the trend of the future growth of the urban physical environment and forming an architectural vocabulary. Harris is credited with the designs of the first modern buildings in Oman. On the other hand, Makiya had developed a definite modern Arab and Islamic architecture in the region by the late 1960s. These two reputed architects were engaged to undertake the study.

The reports by Harris (1970) and Makiya (1973) aimed to define the role of the traditional capital city in the background of rapid development, to preserve the heritage, and to set guidelines for new developments and constructions in the expanded metropolis following the plan. However, the means suggested by them to achieve these goals were different. Both of them urged the preservation of the vernacular features while encouraging a more contemporary interpretation (of the traditional elements and spaces). Both made nearly identical sets of recommendations - setting up and empowerment of the planning authorities through regulations based on zoning, building lines, parking provision, structure, insulation, drainage, height (Harris) and materials, design and layout (Makiya). Some of the recommendations were later partly adopted.

Makiya recommended that Muscat be kept intact as a cul-de-sac city against the onslaught of the development by shifting the administration to the future greater metropolitan area, and thus not upsetting the vernacular setting. His ideas were inspired by the concept of desegregated Islamic cities and his desire to integrate the old fabric into new. As a contrast, Harris put forward options like developing Muscat as the administrative and cultural centre with public buildings and mansions. They both proposed the locations of new facilities, services and infrastructure that would be required by the new administration and the prospering populations, by respecting the socio-cultural, economic and physical issues translated three-dimensionally. While topography forced a linear development constrained by the sea, mountains and desert, the suggested housing types of courtyard houses and shop houses honoured the traditional spatial organisation.

Both the proposals had similarities and dissimilarities, of course never in serious confrontation. For example, these envisaged the creation of a network of roads serving the new areas separated from the capital district either in a linear (Harris), influenced by western concepts and the topography, or cluster development (Makiya), influenced by the organic form of the Islamic cities. They were involved in designing several important buildings and landmarks in the 1970s, which were also part of the greater master plans[3]. Harris specially experimented with modern materials and vernacular element, with awareness to climatic restrictions, into a modern expression, in non-civic or commercial buildings. Both of them also designed several administrative-civic and institutional buildings, integrating what they were preaching.

Many of the attempts by Harris and Makiya done with good intentions had positive effects in the decade that followed. Yet these could not reign in the building spree that is observed in the later years. To what extent these were effective may be debatable, but no doubt these gave rise to a kind of modern architecture which had its essence rooted in the tradition. These were more maintained by the institutional buildings, and particularly by the Diwan (*Sultan's Secretariat*)[4]. The project office within the Diwan developed a large architectural cell executing the buildings supporting the palace, masjids, and some restoration and housing projects, often by involving reputed companies. It developed a distinct style by the 1980s in the restrained nature of unadorned façade with slits on thick walls, embattled-like parapets, prominent sprouts, etc. These influenced some of the other civic and institutional buildings too- low

2 Mohammed Makiya, an academic and professional, was practicing in Iraq since the end of the WWII. He opened an office in Muscat at the beginning of the renaissance, and later in London.

3 Examples are the Ottoman Bank, Girls School, al-Nahda Hospital, Tribal School, Hayma Clinic, etc. by Harris, and several residential renovations, city gates, Ministry of Finance, the Sultan Qaboos Grand Mosque etc. by Makiya.

4 These offices historically took care of most public projects under the rulers' patronage in the Islamic countries.

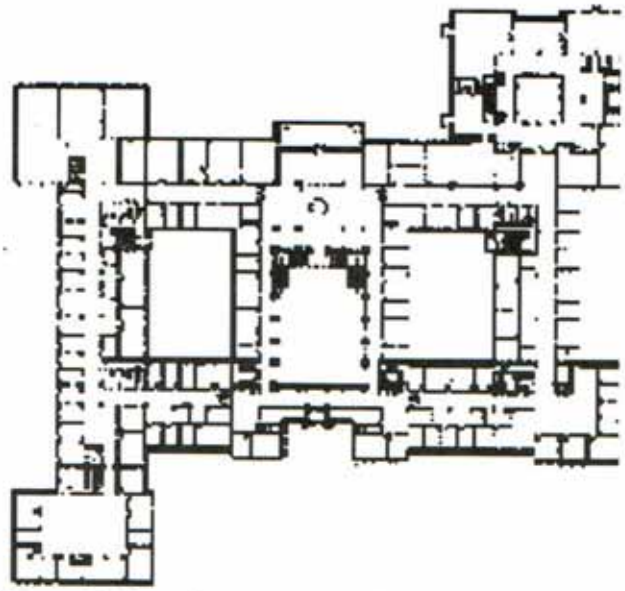

Figure 10: Plan of a government office building conceived around a court, designed by the Diwans

height white or sandy blocks organised around landscaped courts surrounded by colonnades, treating the climate and space maturely (Figure10).

Besides these institutional buildings, and some exemplary works by the pioneering architects or the Diwan's office, there were other developments inheriting the notion that should have influenced the local architecture positively. For example, efforts were put to beautify the environment through landscapes and abstract sculptures erected in the middle of the roundabouts and islands at huge expenses (to water the trees and keeping the greens), typical in the region (Figure 11). Due to the religious inhibition on building images of living beings etc., motifs were mostly adopted from the nature, domestic cores and physical structures, like oysters, fruits, books, clock towers, arched openings, Turkish kiosks or Indian *chatris* (umbrella-like turrets), etc.

Facing the present with architecture in a land full of heritage is not easy, particularly when some of them are among the world's heritage. Oman particularly has hundreds of both stone and mud forts and watch towers, many from the pre-Islamic period, and other structures, like the thousands of years old *falaj* (via duct). Exemplary restoration works have ensured the future of many *killas*

Figure 11: A roodside sculpture

(forts), *kasrs* (palaces) and *bayts* (large mansions). Awareness to the value of these old structure and traditional architecture is now extended to the beauty and simplicity of its masjids (Figure 12) and residential quarters recording the cultural context of the urban fabric and social customs. With the involvement of the reputed European and North African archaeologists and restorers, the Ministry of Culture and Heritage is continuously endeavouring to preserve its architectural marvels.

Harris suggested the renovation of some structures to be put into use by the tourists. The idea was taken up and is gradually being implemented lately as a part of the national Tourism Plan. Makiya

Figure 12: A government office (Diwan) near the palace and the renovated al-khwr masjid, Muscat

Figure 13: A new mosque-one in a series of some beautiful new structures

also endorsed the idea, but saw it in a wider context. He proposed that exemplary restoration works with people's involvement could be utilised to educate and encourage them as references for future developments. He believed that a vocabulary of elements was needed to be developed in this regard and to be used to conserve the traditional fabric. He advocated utilising the traditional craftsmen to build in vernacular style but with an injection of modern and adopted facilities. He also suggested that the Municipality promote good practice through workshops disseminating designs and techniques and producing elements cheaply.

The masjid architecture developed in the different regions of the Sultanate has highly distinctive features, often borrowed from Mamluk or Umayyad style (Figure 13). It embraces a wide range of modern and sophisticated buildings, containing the highest level of decoration and attention to details. Mostly designed by the Diwan's office, these overwhelmingly and often religiously followed the said style(s), and remain very good examples of hundred years old architecture honestly created at present. However, traditional masjids in Oman were plain and simple - an influence of the *ibadi* faith that they practice. Most old mosques however were of mud as the predominant materials in the interior provinces where Islam spread first, and therefore, very few examples remained (Figure14).

4- 1980s AND 1990s- THE TRANSFORMATION

The capital area of Muscat was expanded in the 1980s and 1990s into newly developed residential and administrative areas. The city, along with its two ports and trading districts was connected with a highway to the next oasis-town of Seeb about 36 miles away. The new international airport, university, industrial and military areas were established at the mid-distance which helped the greater metropolitan area to grow along this linear network. Areas closer to the core city grew as the administrative and commercial districts, as where farther areas were developed for residential uses.

Figure 14: A 58-dome mud structure-mosque in Bani bu Hassan in the South-East region in the edge of the desert

The foreign embassies (Figure 15), posh hotels, shopping malls and luxury houses occupy a large chunk of Qurm, the expensive beach-front area. The Ministries and other government offices were developed in north al-Khuiyar, where as the south al-Khuiyar is a mixed-use area with many multi-storey apartments (Figure 16). This type, not found in any other areas, is mostly populated by the upper and middle-income expatriates and the Omanis are still uncomfortable with the idea of sharing the entrance. The area was designated commercial status allowing buildings to go up to 10-storey height. But these vertically extended shop houses have mostly commercial uses at the bottom level(s), and form a quarter of the housing stock.

All developments in these new areas since the mid-1980s, and in other areas outside the greater Muscat since the mid or late -1990s may be divided into two major types - institutional buildings and the residential buildings. The two different styles that they adopted defined the emerging architecture of Oman. Most of these contemporary developments, particularly the residential buildings,

Figure 15: High-rise shop houses in the al-Khuiyar area

Figure 16: The French embassy building taking the cue from traditional spaces and elements blending them into a modern structure

are devoid of not only the familiar vernacular elements, but also traditional spatial arrangements were shunned. The categorisation, though based on their use, also distinguishes the emerging style.

4.1 Institutional Buildings

Many of the institutional buildings were consciously designed with sympathy to the local architecture, climate and culture. These consist of low to medium height buildings organised around landscaped courts surrounded by shaded colonnades (Figure 17). Those close to the palace in old Muscat or the first generation ministry buildings have extensively used wooden screens and balconies (origin in eastern African and western Indian coast) and *mashrabiyas* (western-Arab and North-East African origin) (Figure 18)[5].

[5] Mashrabiya, literally meaning dew holders, are wooden frilly work fronting the windows which provide not only privacy yet view, but also cool the flowing air by the moisture these store.

Figure 17: The interior landscaped court of an institutional building

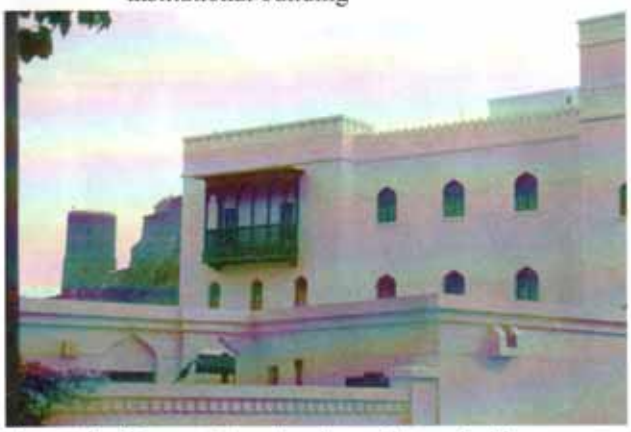

Figure 18: Balcony design based upon the mashrabiya idea

Figure 19: Lowris government of fice building using pergola

These showed a mature awareness to the harshness of the local climate and used shading and other natural (passive) cooling implements (Figure 19). The restrained style of barren façade with small

Figure 20: A ministry building taking the cue from fort- not the resemblance

openings on thick walls visible in the killas and bayts is reflected even in many of the prestigious or important civic-cultural buildings (Figure 20).

The designs of these buildings were the outcomes of not only international competitions, but also the involvement of reputed mainly western architects who already had established practices in the region[6]. The architects generally made extensive studies of the local factors before embarking upon the design exercise, particularly in the winning projects. These were also the legacies of Harris-Makiya era (till the early-1980s) when architects dedicated more time to individual designs, and there were some kind of professionalism involved[7]. Ironically it is seen that the western architects showed more respect and considerations to the scale, material, elements, climate, and spaces that distinguish the local architecture, in comparison to the architects from other countries, with the exception of a few disciples of master architects like Mohammed Makiya and Reefat Chadirji.

4.2 Residential Buildings

Most of the buildings in Oman as elsewhere are residential, which has contributed emphatically to the emerging architecture. Housing activities were booming for a decade until the slump in the oil-price controlled economy resulted in low spending by the people and constriction of the sector into half. Large capitals already invested in construction brought fast development and a saturated market

[6] Besides Harris, the other examples are Huckle and Partners, Fitzroy Robinson, etc.

[7] According to an estimate basing on number of architects and number of buildings approved each year, an architect gets to design more than 50 buildings a year, mostly residential, which affect the quality.

in the 1980s, which led to reluctance in the private sector to invest further in real-estate. The economy picked up again in the mid-1990s with impetus to housing. This was accentuated by the subsidised finance, about US$ 65 million on average available each year. This encouraged many aspiring house-builders to spend lavishly on large houses using expensive finishing. Nearly two thirds of the houses were villas - independent single-family duplex within a plot[8] in the newly developed districts of greater Muscat and other towns.

Need for modern services brought new requirements and technology to meet those requirements and make things apparently more comfortable. The use of the modern fixtures and materials challenged the understanding of the traditional planning principle, and did not try to reconcile the technical advances with the cultural context and upgrade the stock to meet the needs. Instead of standing up to the challenge, an easy way out was sought which has now been established as an acceptable form of design and practice of architecture. The housing generally represented an unobtrusive style that evolved characteristics of new developments, unprecedented in the region in its orderliness and adherence to the so called 'tradition' (Damluji, 1998), due to the more restrictive than creative instructions and guidelines by the authority to keep intact an Islamic/Omani ambient.

The villas in Qurm (Figure 21) and all other types of buildings in other newly expanded areas developed slightly later than the first generation institutional buildings and the highrise flats of al-Khuiyar. In contrast to these first buildings, the shop-apartments and other residential buildings adopted mainly neo-classical style adorned with exquisite and intricate motifs and floral patterns. Many of these motifs were often just concocted in the drawing table without any relation to a particular style, size, scale or use. Perhaps not a coincidence - the majority of these buildings, which played an anchor role in contributing to a kind of popular architecture, were designed by the Indian expatriate architects. The extravagant designs used indiscriminate elements with no reference to the context or function and successfully lulled clients. All villas were conceived as a grand mansion, where each owner applies more expensive or dazzling materials than his neighbour, and aspires to use something new.

A common plan for the villas was dividing a near-square in nine segments (3X3), generated by the required offsets from the site boundaries, where the central bay is often less wide (Plan 1). Usually the four corner oblongs were used as rooms while stairs, toilets etc. are placed in the central bays. The main entry is invariably placed along the central axis, and often the space correspondingly above this is just left over without being integrated into the spatial scheme. A typical façade is intricately decorated with pairs of bay windows and the main entry through a lofty marble-clad arch-opening with recessed wooden door. Beautiful large window(s) sometimes with stained glass may front the lobby above the entry hall (Figure 22).

Figure 21: Luxury villas in the Saati al-Qurm area

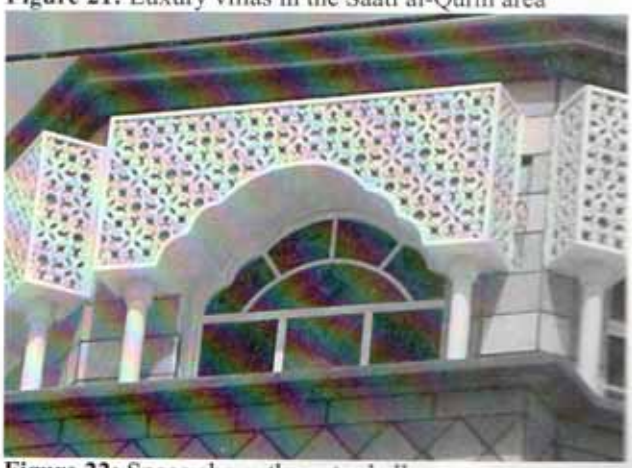

Figure 22: Space above the entry hall

[8] The concept of demarcating a site is a major tradition shattering idea imported from the West and imposed upon many African and Arabian traditional societies. Now a house has to be confined within the boundary walls.

Domes, usually interpreted as being Islamic though in use before Islam came, were unreservedly used in residential buildings (Figure 23). However, even the majority of the vernacular mosques in Oman have no dome. Sometimes glass or concrete domes were used above the entry lobby or the central core, without taking advantage of the atrium or using natural lights. Disproportionate slender columns, to accentuate the entry and to give grandeur are used with no structural reason, spatial urge or functional need. Turkish kiosks are also built by combining thin columns and hollow domes. Most of the window lintels are in arch shape forcing the metal frames to be bent into expensive geometric patterns, as in rose windows or lunettes (Figure 24). Rarely used sunshades were arch shaped, serving only a decorative purpose, which could not protect the window. Many decorative screens often with intricate patterns, have developed to cover the ACs- mass-produced in moulded gypsum or plastic (Figure25). However, in some cases creatively designed covers have merged these with the background. Similar pattern has also been repeated in covering the service ducts or as screens in the verandas, all elements in cohesion to blend beautifully in the overall scheme (Figure 26).

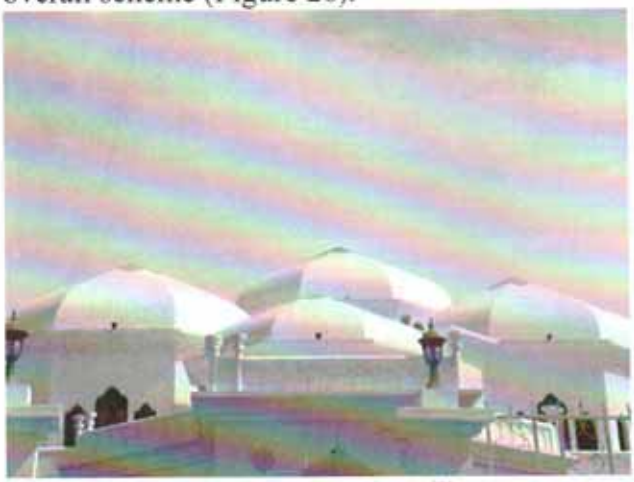

Figure 23: Use of multiple dome in a villa

Figure 24: A window in a modern house

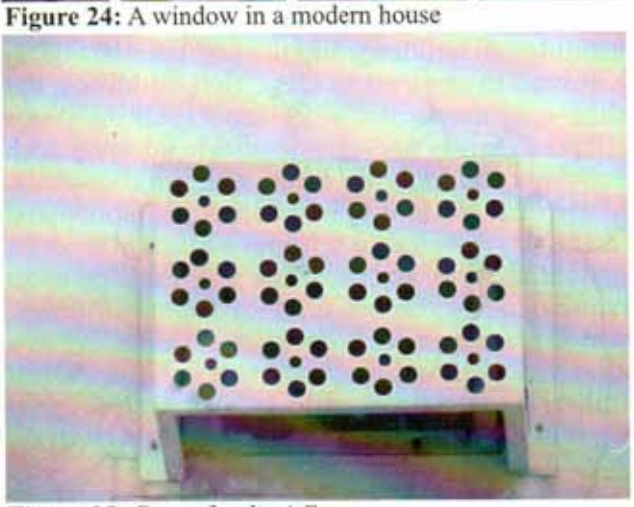

Figure 25: Cover for the AC

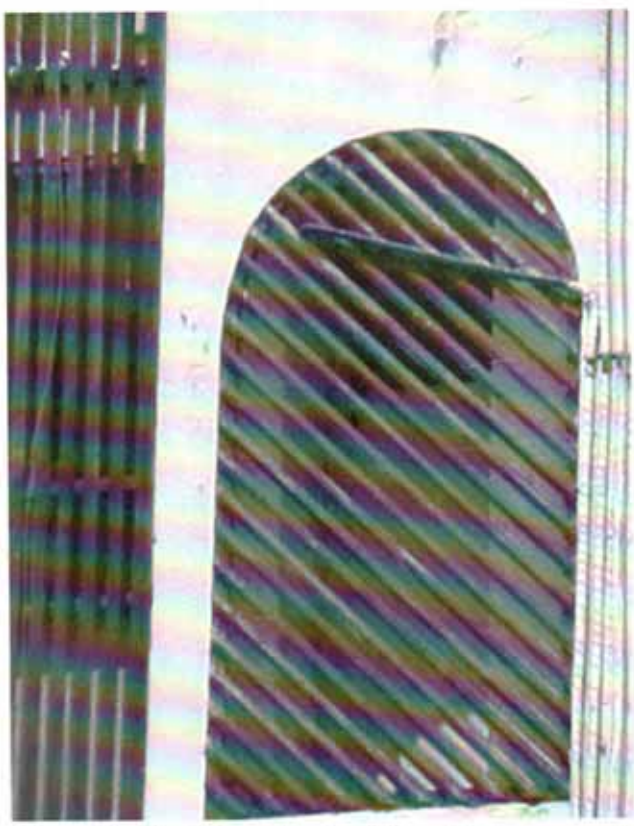

Figure 26: A building where the AC and duct covers and railings are blended into an uniform design

Parapet is a prominent element in the Omani buildings, which follows a pattern developed as a copy from that with more functional value used in the fort embattlements (Figure 27). However, this is different from the traditional parapets, which are high enough and have screens integrated into panels to provide privacy as well as ventilation (Figure 28). Glazed ceramic tiles are also clad in a band at a lower level of the parapet (Figure 29). These have influenced the other elements like the boundary wall, railing etc. too. Spouts, common in traditional style, are not used now[9].

Rooms in the traditional Omani houses are organised around small courtyards (Figure 30), with either leaks to invite controlled air to be circulated to the interior or traps and cool air from the top (Figure 7). This has a multipurpose use

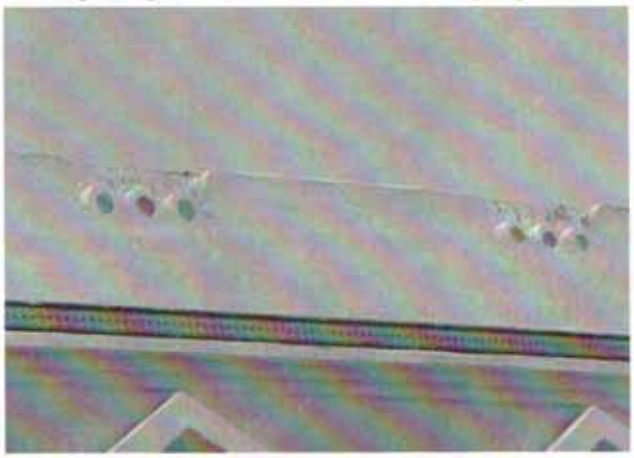

Figure 27: A typical modern modern parapet

Figure 28: Traditional roshan-high parapet with privacy and ventilation

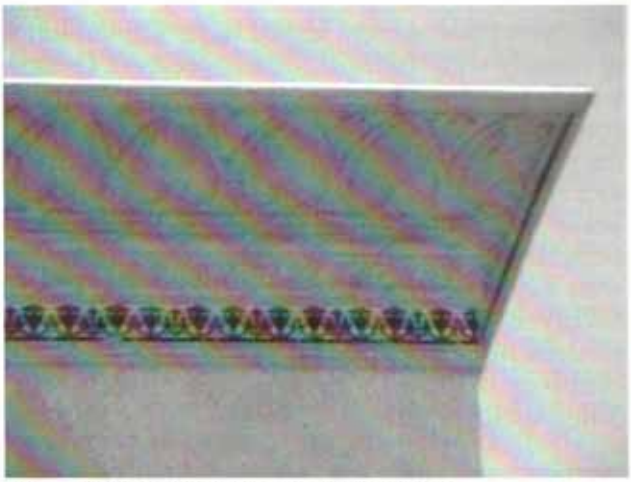

Figure 29: Horizontal band of glazed tiles

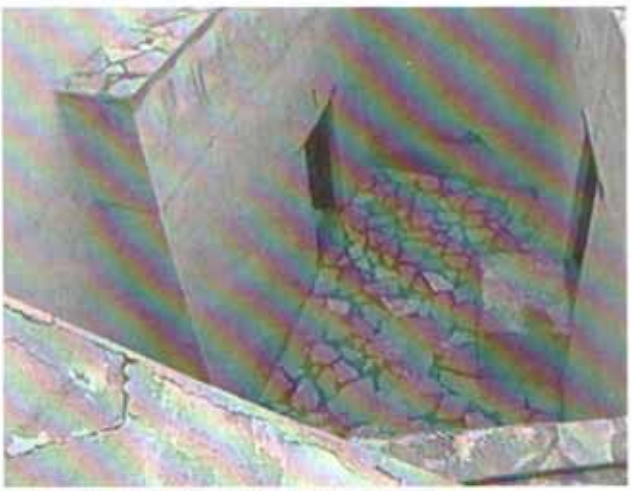

Figure 30: A small-scale residential court

(Figure 31) and plays different roles from climatic and physical, and socio-cultural and conceptual viewpoints. Courtyards have rarely been used to the advantage of residential architecture. In a few houses this has been transformed into atriums often filled with circular stairs and covered with transparent sheets or domes - a token recognition without understanding the essence and multiple advantages of the space.

5- The Practice - serving the chaos

This paper will not be complete without covering the practice and the planning regulations, particularly the 'guideline'. Construction activities in Oman were increased in the 1980s, so much so

[9] The style is so pervasive that pre-mould readymade overhead water tanks also use the design on the rim.

that prescriptions were issued requiring buildings to comply with 'Islamic' form to preserve Oman's architectural heritage. These were too extreme, consisting of arbitrary requirements of constellating the parapets, arches over the windows and referred to a non-existent building style (Damluji, 1998). Many attempts of covering the buildings already built in modern style with traditional elements were eventually abandoned on the ground of cost involved. But the understanding was that no modern building using anti-solar glazing, metal cladding or post-modernist facade would get Municipality approval.

In 1987 'Elevation Guidelines for the Saati al-Qurm Area' (the elitist beach-front diplomatic area) was framed by the Diwan's office "to ensure the high quality of architectural design, in an uniquely modern Arab/Omani and Islamic architectural style, while using modern building materials, and to establish the origins of cultural values in contemporary Arab architecture by acknowledging the Arab and Islamic social values in architecture (Diwan, 1987)." Intentions of the above were irreproachable; yet the accompanying illustrations were thin. Drawings to control elevation prescribed the style of gates and boundary walls, entry doors, motifs, parapets, railings etc. It illustrated types of arches, window detailing and louvers; elevations of four villas show the materials (concrete block, seldom stone cladding), paints and colour (white, light buff or silver-grey) that could be used.

Figure 31: Court and house-centre of productive activities as well

that prescriptions were issued requiring buildings to comply with 'Islamic' form to preserve Oman's architectural heritage. These were too extreme, consisting of arbitrary requirements of constellating the parapets, arches over the windows and referred to a non-existent building style (Damluji, 1998). Many attempts of covering the buildings already built in modern style with traditional elements were eventually abandoned on the ground of cost involved. But the understanding was that no modern building using anti-solar glazing, metal cladding or post-modernist facade would get Municipality approval.

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Despite falling short in creativity, the manual somehow brought uniformity among the chaos associated with rapid urbanisation (Damluji, 1998). The guidelines were followed to the dot almost everywhere besides the Saati area. The houses were limited to three floors painted white with few screened windows (Figure 21). Other extensively used features were the coloured window leaves with aluminium frames (Figure24), Zanzibar-style carved wooden doors (Figure32), repetitive decorative perforations and cast relief panels.

Since all new constructions must get approval from the local municipality, people sought help from the consulting offices for the drawings, not necessarily to prepare a design. These were more

Figure 32: A carved and moulded main entrance door.

often not tailor-made, but copies made from prototype designs with small adjustments. Sometimes the same design was seen repeated on the adjacent plots or elsewhere. Because of the requirement, spurious practice has developed like mushrooms, which employ technician draftsmen instead of competent designers.

Most of less than 100 Omani architects work in the government in desk jobs. In private practices, there are about 150 architects for 2.5 million people, All of them are working with 84 consulting companies in Muscat. A majority of them are from India, a small part is from the Philippines, Pakistan, Egypt, Sudan and Levant. These architects are mainly from technology-oriented architecture schools or graduates of architectural engineering claiming to be designers. The experienced architects could help to develop good architecture, and guide the young practitioners, both local and foreign, which however did not happen. While hiring the expatriate architects, mostly cost rather than the quality was the prime consideration. Therefore, senior and reputed architects were seldom hired, and often they did not stay, treating Oman as a stepping stone for better prospects elsewhere.

Architectural education in the engineering schools usually does not espouse creativity, but approaches design as a routine exercise, rather than by forming a design concept based on site investigation and analysis of the forces. They emphasise more on the structure, services and construction, rather than tradition, history, aesthetic, and spatial quality. This leads to a drawing board architecture where functions were assigned to a series of rooms irrespective of required size, location, orientation, relation with other rooms (spaces) and so on. These lacked essence of congruent spaces, became dysfunctional, unnecessarily large and hence less efficient. Energy requirements in these buildings were high and these were most often structurally expensive. Much wasted and negative spaces in these designs could not inspire any spontaneous activity.

The Omanis are shy of forming associations. An engineers' society in a very rudimentary form has just been constituted. There is no Architects Act, which could guide the design, regulate its quality, and make the practitioners accountable. A system of pre-qualification or registration with individual corporate or large government organisation is often enforced. Most commissions are usually tendered to the lowest bidder. Design competitions following the internationally approved procedure are very rare, though there are excellent examples achieved through international design competitions, for example, the Sultan Qaboos Grand Mosque (Figure33) and Oman International Bank (Figure34).

Lack of professionalism, quality in design, economisation in structure and space and extravaganza are also reflected in the engineering part of the building design. All structural sections like columns, beams and slabs are over-designed to a great extent. This is usually done to cover the generally bad quality of construction - as is told by the Municipality. But it probably owes more to lack of experience, confidence, guidance and accountability. The Municipality, which has the approving power, is too paternalistic; most often

Figure 33: Sultan Qaboos Grand Mosque-competition won by Mohammed Makiya.

interfering with designs and imposing upon methods which they became familiar with decades ago. The practice is noted also for extensive use of computer programs, which too block the path to creativity and encourage eclectic façade architecture.

All floor slabs are mostly designed as simply supported uniform sections placing columns at each corner of a room and too frequently irrespective of the grid and size (span). The grids are not selected to be uniform where it requires to be, for example in large institutional buildings. On the other hand often uniform grid is imposed on buildings which do not need so, for example in residential buildings. Both make structures expensive and often increase negative areas and waste areas. This also occurs due to a lack of understanding and interaction between the architect and the engineer(s). In ideal situation, structural solution and if necessary space adjustments should be derived at through a mutual exchange among the different professionals involved in the design.

6- The Direction

The discussions should end with a set of recommendations providing direction(s) to be taken to make both the creation and practice of architecture in Oman more responsive to the climate and sympathetic to the culture. No doubt the unique geographical[10] and social context of Oman is diverse and rich. It gave rise over the

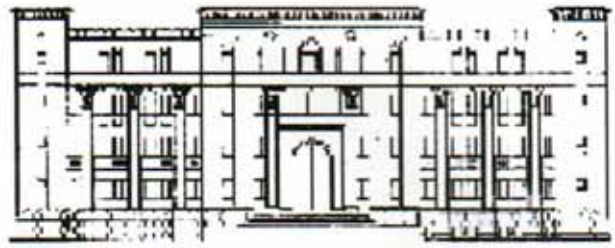

Figure 34: Front Elevation of Oman International Bank by Huckle and Partners.

ages to a range of locally suited materials, techniques and buildings. Until recently a large array of existing practices and a skilled use of materials that could provide viable, durable and comfortable solutions to building needs were in substantial use. These can still in many cases give directions to defining and achieving a sustainable and comfortable built environment which is at one with both tradition and contemporary needs. The situation cannot be improved overnight. But the following steps could have a positive effect on the gradual change in the trend.

a. Besides the killas, bayts, souqs and masjids, vernacular houses should also be considered for conservation. The renovated structures should be adapted for diversified general-purpose public functions like schools, clinics, restaurants, libraries, book shops, offices etc. in other than using only as museums or for tourism. Small scale conservation, restoration and renovation at private level, along with conserving an entire belt or a street, should be encouraged by instituting awareness and education, finance and incentives, and in more desirable cases enforced through a method of legislation, compensation and rehabilitation. A system of listing and protecting the buildings with heritage value should be introduced, which may also include moderate or low scale buildings of everyday use and vernacular residences.
b. Good practice of architecture should be ensured through strict regulations. Consulting firms should have specified number of architects and other building professionals in relation to the volume of work. They should be accountable to an independent commission

[10] Oman has the most geographical features one can find in a text book- sea, mountain, desert, fjord, ravine, cliffs, spring, river, and geyser. It is also a treasure trove for the geologist where examples of many strata and natural stones exist.

set up through an Act and the law of the country to oversee their work, ensure quality, completeness and adherence to the cultural values and practices, and to hold them responsible for any fault. There should be local building codes and laws to ensure the development of comfortable and hygienic, less costly and less energy consuming buildings.

c. The existing design instructions and guidelines should be revised to a less restrictive and more creative manual which should be optional rather than compulsory to follow, accommodating features of different areas of the country reflecting the local climate, materials, and ways of life. There should be similar but separate guidelines developed for the historic areas or areas with extensive examples of vernacular architecture, to preserve the essence. Helps from the traditional artisan and craftsmen should be sought in formulating the manual(s), and to provide impetus for the vanishing crafts.

d. A design-oriented university based architecture education program should be introduced soon. This should aim to produce local architects with awareness of the traditional architecture, history and culture of the society, local climatic constraints, available materials, and designs in hot-arid and humid-temperate climates[11]. Research and study in all aspects of human habitat, including environment, urbanisation and housing, which is virtually absent, should be initiated.

e. Demonstration workshops on building techniques, suitable materials, etc. should be held regularly with participation by the municipalities and government officials, academicians and professionals, traditional craftsmen and artisans. These should aim at disseminating appropriate building design and construction knowledge cost effectively, and preparing and distributing manuals at nominal price. Reach-out programs should be introduced to reach the remote communities or address particular issues.

f. Designs for large and prestigious projects, social housing projects and important government and public buildings should be selected through international design competitions following the UIA guidelines.

g. Renowned international offices with work experience in the gulf and Arab region should be encouraged to maintain offices in Oman, and will also be given preferential treatments, but not by compromising the quality of work■

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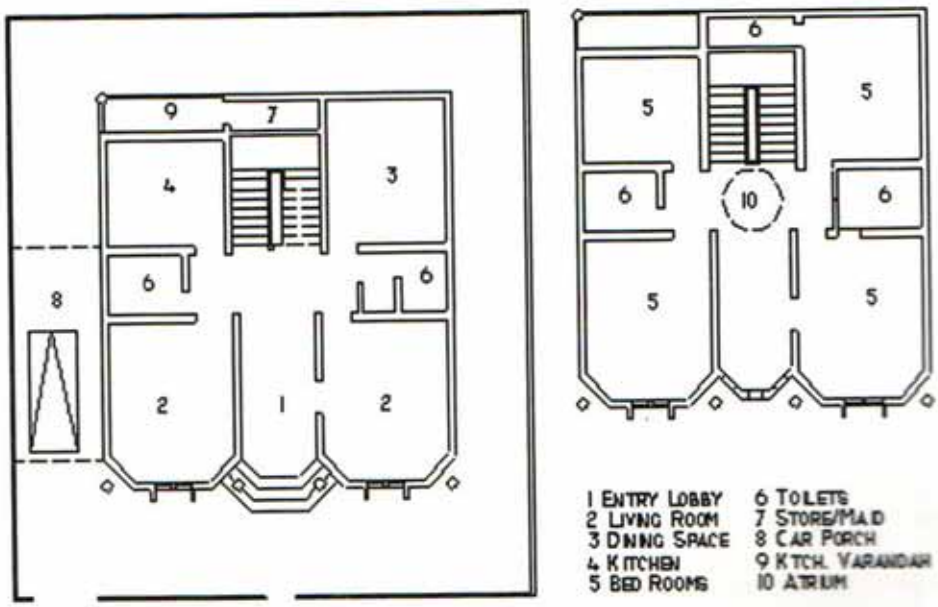

[11] The author has prepared one such program, just approved by the only government university.

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