ATTITUDES TOWARDS DESIGNED LANDSCAPES IN TWO DESERT CITIES: MEDINA-SAURI ARABIA AND TUCSON-ARIZONA.

VOLUME I.

A DISSERTATION SUBMITTED TO THE FACULTY OF ARCHITECTURAL STUDIES IN CANDIDACY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF LANDSCAPE ARCHITECTURE.

BY
ASHRAF ALTURKI

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Its visitor is secure, and likewise is its games,  
Its trees are the most cohesive in Allah’s wise creations.  
If humans learned about its sacredness,  
They would stick to the behavioural norms,  
righteousness, and extol its status.  
On it, scholars have wrote the most precious volumes,  
How much victory one would gain only by tracing and learning from them.  
(excerpt from a poem written by: Saied Amien Kutbi).  
Enchanted by Sheikh: Zain bo-Yan.
Abstract.

In the past, knowledge about desert was the most dominant knowledge among the public in Medina-Saudi Arabia. This knowledge was informed and inspired by a firm embrace of and commitment to religious rules, traditions, and advice. Medina historic landscapes (e.g. palm garden) were evidence of a sustainable natural-cultural relationship that developed over long history. Many designs have their roots in Quranic verses and/or Prophetic Hadith revealed or narrated 14 centuries ago. Meanwhile, the western culture that accompanied imported technology in Saudi Arabia has brought huge changes to most aspects of urban life. Western technology might has brought convenience to city life, but the paradoxical reliance on this technology has caused the historic natural-cultural relationship to decline. One of the most severely distorted aspect of this relationship is the societies cultural and aesthetical perception and preference of natural desert and traditional urban and suburban landscapes. Ironically Saudis became alienated from desert at a time the westerners living in dry environments, e.g. Arizona, abandoned their historically negative relationship with desert and began to create nature-like desert landscapes in cities, (e.g. Tucson-Arizona). This study utilised an ethnographic approach to research the first part of the study to unfold the history behind this phenomenal alteration in perception of desert landscape in the two different cultures, American and Saudi, at two different times in history, (before and after 1960). The second part of the study utilised a quantitative research methodology for the purpose of investigating the effect of factors, that were identified as important in the first part of the study (and in particular knowledge and familiarity), on perception of desert landscapes on both cultures. The results demonstrated clear trends among both cultures and their interpretation bear clear testimony to the strong contrasts between American and Saudi contemporary perception of desert landscapes. At the same time, the study demonstrates some rewarding opportunities in the suburban part of the city of Medina by which desert landscape can be re-established successfully.
Acknowledgements.

I would like to express my special gratitude to the Mayor of Medina Municipality, Mr. Abd-al-Aziz bin Abd-al-Rahman al-Husaien who generously offered me his time, support, and various sorts of assistance. I would like also to thank the Mayor of al-Taief, Mr. Mohammed bin Abd-al-Rahman al-Mukharraj (the previous Deputy Mayor in Medina during the initial phases of this study), the Deputy Mayor of Medina Municipality, Mr. Mohammed bin al-Ali al-Ali, and from the Mayor office, Mr. Yahya bin-Salih Saif for their unlimited support, valuable help, and kind permission for access and use of the various resources of Medina Municipality. I would like also to acknowledge the President of Saudi Umran Society in Medina, Mr. Hatim bin-Omar Taha and his Assistant Manager, Mr. Hazzaa bin-Zaki Mahrous for their enormous support and assistance in the arrangement for the empirical study, ‘assessment of landscape perception and preference’ conducted and took place in the Society office in Medina. I am also thankful to all those who attended the ‘landscape visual assessment sessions’ and made their contributions to the discussion sessions held after presentations in Medina, Saudi Arabia and Tucson, Arizona.

I am indebted to many people whose help and advice was valuable in many respect: Mr. Atif bin-Nasief Saliem for his devoted and limitless technical assistance in Medina during all site visits and during my stay away from home; Mr. Emad bin-Faried Badarb who was my patient and devoted assistant and organiser of field trips and interviews conducted in Medina; Mr. Abd-al-Rahman bin-abd-Allah Nour and Mr. Yasien bin-Mansour abu-Habrah for their enormous effort in organising the experiment of ‘Saudi children drawings of nature’ in the secondary school of Omar bin-abd-al-Aziz in Medina; Mrs. Carolin Andersson, whose gift of some articles on the American desert was a source of inspiration for the design idea of this research; Professor James Corner for his thoughtful challenge and advice during the first phase of this research, and Dr. Mohammed bin-abd-Allah al-Bassam who was my consultant on and source of references on Islamic doctrinal literature. I am especially indebted to the dearest of my friends who shared me the ambition of research and the cheer of discovery, Medina’s gifted artist, Dr. Hasan bin-Ali Shokri who kindly allowed me unlimited use of his rich library dedicated to the history of Medina and Muslim art, I owe him more than a great deal.

I am greatly thankful to three of Medina eldest gardeners, Shiekh abd-al-Qadir bin-Ibrahim al-Turki, Sheikh al-Sharief Shahhat Sharief, and Sheikh Sulaiman al-Sarrani; the two famed historians and poets of Medina Sheikh Abd-al-Rahman bin-Awwad Raffah and Sheikh Hasan bin-Ali Sairafi. I appreciate the fact that, despite their busy schedules and serious health problems, have kindly and generously offered me their valuable time, hospitable reception,
patient participation in the multi-sessions interviews, and precious knowledge and experience on Medina desert gardens. The information they provided to me during interviews was a valuable contribution to this study, without which, Medina historic gardens would have not been discovered.

I can not seal this statement of appreciation without expressing my great, great gratitude to Dr. James Hitchmough, Reader in Landscape, whose unlimited support, thoughtful counsel, intelligent guidance based on his rich knowledge in this field of research was a major contribution and enlightenment to this study. I am especially thankful for the fact that although he maintained busy schedule, was always there whenever a comment, an advice, or a consultation was sought by me.

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Ashraf Alturki.
to the woman who brought me in this world,
To ‘Umi,’ my Mother.
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Transliteration of Arabic Words and Names.
The following table shows the system which the author have followed in transliterating letters of the Arabic alphabet:

<table>
<thead>
<tr>
<th>Consonantal sound</th>
<th>a</th>
<th>e</th>
<th>i</th>
<th>o</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long vowel</td>
<td>à</td>
<td>è</td>
<td>ì</td>
<td>ò</td>
<td>ù</td>
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<table>
<thead>
<tr>
<th>Consonantal sound</th>
<th>a</th>
<th>e</th>
<th>i</th>
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<th>u</th>
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</thead>
<tbody>
<tr>
<td>Diphthong</td>
<td>à</td>
<td>è</td>
<td>ì</td>
<td>ò</td>
<td>ù</td>
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</table>

Short vowels:
- ضمة: û
- فتحة: ì
- كسرة: ì

Abbreviations and symbols used:
A.H.: Anno Hidjrah, year of the Islamic Calendar
A.D.: Anno Domini, year of the Gregorian Calendar

Because the Islamic year is based on the lunar calendar, it may be up to 11 days shorter than a year based on the Western calendar. The Islamic calendar, which is established by Omar bin-al-Khattab (586-644), began at the year of the Hidjrah, the migration of the Prophet Muhammad (pbuh) (570-632) from Makkah to Medina in 622 AD. The year 2000, therefore, roughly corresponds to the Islamic year of 1420.
(P.b.u.h): Peace Be Upon Him, the Prophet Mohammed. According to the Islamic doctrine, this supplication has to prefix the name of the Prophet Mohammed in writing as well as in verbal.

Translation From Arabic to English.

All Arabic words are indicated by italic fonts, except words that has an English spelling like Quran, Islam, Medina, etc. Names of personages are spelled without transliteration. Names that starts with (al = the, abd = ‘servent or’ (that prefix one of the Fine Names of Almighty Allah like al-Rahman), abu or abi = father of, bin or ibn = son of), as most Arabic names do, are separated by a hyphen and the first letter of the second part of the name is capitalised, e.g. al-Farabi, abd-al-Rahman, ibn-Sakhawi). On the other hand, in cases in which names and words that have an international nature like names of cities, e.g. Medina for al-Madina al-Munawarah, English names are used.

All quotations that are obtained from Arabic literature including poems are translated in this research by the author. In the translation of poetry, some verses might be found a bit longer than its Arabic origin. This was found inevitable in cases when some poetical metaphores are difficult to render in translation. Therefore, a combination of more than one statement was judged as the most possible way to convey the meaning as accurate as possible. In some cases when certain Arabic terms are significant to the subject matter, they were cited in an Arabic form with an English translation between brackets.

In this research, (he) will be used to refer to both genders, males and females, except in cases when the subject matter is only about females, (she) will be used promptly.

In the translation of interviews from Arabic to English, efforts have been pursued to give as close meaning to the Hidjazi dialect as possible, for Hidjazi dialogue is known to be poetic, metaphoric, and involve great deal of body language. This is especially true with elderly people who possess a unique dialect mastered by using multiple means of expressions simultaneously, i.e. dialogues are full of proverbs, poems, narratives, examples drawn from memories, etc. In few cases, when some statements make no sense in English, yet meaningful in Arabic, a paraphrasing is placed within parenthesis.

Use of Quranic and Hadith excerpts in this research.

It is worth mentioning here that exegetical dealings with Quran must be, as this research does, thoroughly based on the sincere belief that Quran is the Truthful Word of Allah and it is the sacred Book that was revealed to Mohammed (pbuh).
Most excerpts derived from Quran and Sunnah and recited here in this research are not necessarily representing the complete Verse or Hadith. One of the reason is that in Quran and Hadith, different but related matters can be found combined in one verse or Hadith, thus the most relative parts to the subject matter have been excerpted. Al-Nawawi (in al-abdul-Latif 1993) noted upon this subject where he found no constraints in selecting of what is relative from Quran and Sunnah even if this would entails obscuring parts which are not directly relative to the subject under study or would create sorts of distortions upon certain ideas. Al-abdul-Latif (1993) added, relying on most popular Islamic scholars like ibn-Hajar, al-Bukhari, and ibn-Rajab, that the decision of releasing and obscuring parts of quoted Quran and Hadith in research must be judged by the researcher, i.e. he must verify that by omitting parts of excerpted Verses or Hadiths would not change the meaning or alter the Islamic perspective toward an issue a researcher is investigating.
Introduction.
Introduction.
The history of human shaping and transformation of nature is unique to each culture and geographical location. Different cultures created through time and space various examples of connections between their contrived and natural environments (Hough 1995). Various models of urban development were established in different cultures in response to the local natural environments and the culture of their inhabitants. In historic Medina, natural processes were embodied in the planning, design, and use of the desert landscape. From the scale of the city as a whole to the scale of every detail of an individual dwelling, nature was deeply rooted and wisely expressed. This historic linkage between culture, informed mainly by Islamic principles, and the nature of desert landscape has lost its poetic representation in the modern Saudi cultural transformation of nature. The neglect of these historic values has produced alien landscapes, which look and function incoherently with their natural environments. Locally distinctive urban forms and life styles of cities have been replaced by similarity and monotonous copying of one original presumed to be most desirable. A stereotypic sub-division has become the standard layout of almost any urban development even in rural areas. Despite variations in the natural and cultural environment, Saudi cities have duplicated temperate Western cities. The possession of technology subordinated traditional attachments to nature not only in the way nature was acknowledged in urban development, but also in the way people perceive nature aesthetically. People have become subordinate to technology as a result of the ease and improvement it has brought to their living, working, and recreational environments. These dramatic changes, that took place in Medina and other cities in Saudi Arabia over the last thirty years, have formed new cultures, values, life styles and most important of all an alteration in the human-nature relationship.

People in design related professions in general and landscape architects in particular in Saudi Arabia have seemingly been unconscious of potential problems in establishment of a new green image of Saudi cities. These problems include:

i) The modernisation of Saudi cities has been accepted without considering the possibility that such transformation might destroy, not only the local cultural landscape, but more importantly distort the public perception of natural-aesthetic. This has been especially intense in large cities like Medina when such transformation replaced the historic part of the city before its beauty and/or significance was realised.

ii) Secondly, The obliteration of the desert landscape of Saudi cities is motivated by images of western landscapes as an ideal prototype for modern urban, suburban, and rural landscapes. The west has long been the only source of knowledge in the field of urban development. Even in cases when an entire development project is a local product, the whole scheme is
generally based on a western motif informed by international standards. This policy has failed to give people an intimate experience of their natural environment and cultural heritage (Thorpe 1988).

iii) Neglect in considering aesthetic aspects of desert landscape in urban planning and design has given Saudi cities an obtrusive sense of sameness. Within this process of modernisation, natural beauty was seen as green exotic landscapes. The long history of western ideas of gardens and parks has been relocated in Saudi desert cities. Designers ignored the fact that desert has its own aesthetics and natural processes that can be developed in a way that benefits both natural and cultural domains.

iv) Desert landscape is concealed under unsustainable exotic-green materials that rarely survive and have high costs of management and maintenance. Gradually this has removed the chance of the public acknowledging and some how indulge engaging emotionally with the native desert landscape.

v) No particular attempts have been made to conceptualise a 'desert garden' from Saudi cultural perspective. Rather, designers searched for a prototype model that could be applied to all Saudi cities. The result was vast areas of irrigated green lawns, crossed by geometrically patterned lines of footpaths intersecting at a centre decorated mostly by a water feature or a sculpture. Such model was viewed as a means of beautifying cities and creating recreational opportunities. Unfortunately, these prototypes have culminated in many economic, cultural, social, and professional conflicts.

vi) The reliance on importing design schemes in the profession of landscape architecture has mistakenly developed erratic design policies like: 'beautification;' design concepts like: 'Islamic garden;' conflicts with Islamic principles like: 'facilitation of excessive pleasure and amusement in parks and gardens;' stereotyped images like: 'lawns stretching in different kinds of open spaces.'

vii) The cultural tensions between particular dichotomy such as modern and traditional, cultured and wild, exotic and native have been intensified by the power of the market. Goods including landscape materials were imported from abroad to mimic urban images and life styles of the western world. This has yielded many other problems, most of which are potentially negative on the local culture in relation to the natural environment. One of the critical problems is the skewness of attitudes; imported modern, cultured, exotic, . . . , are seen as local and familiar and the traditional, wild, native, . . . , as alien.

viii) Current urban development policies in Saudi cities do not address the desert context. Even in cases when preservation policies have been enacted toward particular desert biomes,
these policies have never been practical enough to reconnect natural desert landscapes with the urban domain in the way that a local-unique landscape can be developed, (as it is the case for example in Tucson, Arizona, as will be discussed in forthcoming chapters).

ix) The different forms of governmental subsidies that supported individual households to possess private homes have expanded urban developments into the nearby desert landscapes. Although these urban developments have sprawled into rural and wild landscapes, they have embraced the same landscape philosophy as that of the inner city. The transformation of the countryside has not created new environments that complement the surrounding natural desert landscape.

x) The absence of rigorous application of legislative acts against misuse of natural landscapes, i.e. waste dumping, wood cutting, etc., has contributed greatly to the distortion the public perception towards their desert landscape, i.e. heaps of building rubbles and domestic refuses, desert trees sprinkled by trapped plastic bags, exposed water table in abandoned quarries, etc., have become common images of desert. This has driven local society to neglect its traditional culture and to develop negative perceptions toward the native desert landscape, i.e. desert become a worthless waste of land in the perception of the public at large. This situation provides a golden opportunity for urban civil projects, e.g. highways, subdivisions, electric pylons, etc., to use desert landscape as they see fit.

xi) The rapid increase in the Saudi population has led a heavier demand on local cattle\(^1\) that depend on desert pasture. The most productive desert areas have been particularly hard hit by overgrazing by cattle, sheep, goats, and camels advancing the already alarming level of desertification caused by natural phenomena.

xii) The neglect of practical public needs, realistic perception of nature, and landscape preference is one of the major unconsidered problems in contemporary landscape practice in Saudi cities.

Sustainable designed landscapes in Saudi Arabia have been replaced by unsustainable design schemes due to western influence at a time the western world abandoned numerous cultural values, which were held dear for long history, e.g. lawn culture, scenic landscapes, etc., for the sake of establishing sustainable development in the desert part of the country, i.e. Southwest of the United States. The author argues that the exclusion of natural and traditional cultural desert landscape in the transformation of Saudi cities has resulted in serious natural, economic, cultural, and social conflicts. This research hypothesises also that the sharp break with the past and the intensive

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1 Local cattle are traditionally considered the most favored by Saudis in the local market for they feed on natural pastures.
reliance on imported-modernity has contributed to developing new negative perception toward natural and cultural desert landscapes and ratified positive perception of exotic landscapes. Thus, the major objective of this research is to unravel and critically evaluate the historic and contemporary cultural-natural relationship in Saudi Arabia cities. For the purpose of this study, the city of Medina has been chosen as a case study. This decision was made to scale down the scope of the work and allow an acceptable level of detail to be investigated (Yin 1994; Wolcott 1993; Cropper 1982), yet findings have the advantage of applicability (Wolcott 1993; Reinharz 1992; Bryman 1988; Masser 1982), to other similar situations in the country. The reason Medina was selected is the fact that Medina as a city showed various forms of sustainable responses to desert environments which were expressed beautifully in the local culture, landscape, and architecture. In addition, Medina is the first established city in Islam, which housed the Prophet Mohammed (peace be upon him, pbuh) who constituted an Islamic legislative system part of which is responsible of managing a benign relationship between Muslims and nature.

When early settlers in the Southwest of the United States claimed desert was God’s curse, Saudis in Medina saw it as testimony to the ultimate wisdom of Allah. Modern Southwest American perception of nature is guided chiefly by the idea of sublime, pragmatism and ecological-scientific acknowledgement of desert environments. At the same time, Saudis in Medina relinquished their knowledge and long history of adaptation to desert by attempting to create a temperate landscape image for Saudi desert cities! This phenomenal contrast within these two cultural perception of desert landscape is examined to highlight justifications that could help the revitalisation of the Madani (adjective of Medina) natural-cultural relationship in the urban desert landscape. Revitalisation in this sense means shaping new urban landscapes in a way that restore the essence of local historic values and expresses the modern interest in reinforcing benign relationships with nature.

Although the focus of this research is tight to the cultural acceptance of desert landscape in Medina-Saudi Arabia and Tucson-Arizona, this research consulted diverse sources of data of different areas of studies, (e.g. theology, art, literature, environmental psychology, axiology, and history) in an attempt to establish a complete picture of reasons that underlie the formation of two contrast perceptions of desert landscapes, (Tucsonans and Madanies), at two different times in history. Although this trend has not fully been appreciated by some researchers and others who went beyond criticism to refusal (Macougall 1984), no body can claim that, this attitude has not brought the profession of landscape across other rich and interesting research directions (Appelton 1986). Contemporary research, as Al-Biliaihi (1995) and Abu-Zaid (1990) highlighted, is supportive to
this trend. Shortage of data on the history of cultural-natural relationship in the side of Medina, in addition, forced investigation to embrace manifold research methodologies which included, as Kearins (1984) suggested, ethnography and creative interviews (Holstein and Gubrium 1995; Douglas 1985).

In the case study of Medina, an ethnographic approach has been embraced. Ethnography, as Dorst (1995) sees it, is about reasoning and interpreting differences among people in the way and the thing they say and act within their environment. It allows investigators to penetrate through hidden connections and obscured relationships for the purpose of reasoning and construction of meanings for particular phenomena under study (Denzin and Lincoln 1998; Rose, 1990; Wilcott 1983). This entailed, as Jones (1996); Brymann (1988); Pandya (1989); Denzin and Lincoln (1998); Atkinson (1990) suggested, intensive field research-trips in the city of Medina. Interviewing is one of the common and powerful investigative devices in ethnography, which aims the understanding of attitudes of human beings at particular subject of interest (Fontana and Frey 1998; May 1997; Jones 1996). The major task was to interact with subjects of the study for the purpose of recording and interpreting all encountered formal and casual, visual and verbal observations, experiences, and perceptions. This was carried out by interviews that took place in residences of interviewees or in sites, i.e. Medina gardens, poetry sessions, valleys, desert, etc. In addition, extensive photographic documentation has been applied to record visual artefacts (Denzin and Lincoln 1998). The integration between photographic documentation and ethnographic interviews is facilitated also to supplement data collected from interviewees in order to construct a complete picture for the way Medina people perceived their desert landscape in the past.

For the reason, interviewees were of elderly people, who were unfamiliar with interview methods, unaware of the wisdom of using such method in scientific research project, and the author had no clear expectations for the type of information interviewees would offer, creative interview method (Douglas 1984) was used in Medina. This interview method allows interviewees to operate the discussion themselves, but, under the control of the author who only raise the issue. Interviewees were chosen on the basis of their knowledge in the subject of the study, being well informed, observers, viable in term of time, represent the society of the study, and have the willing of participation (Holstein and Gubrium 1995). Moral dimension regarding age, the controlling role of the interviewer (Fontana and Frey 1998; May 1997; Holstein and Gubrium 1995; Denscombe 1985), and local culture about treating elderly people, have been remarkably maintained in all interviews sessions. A considerable effort was taken to write down the verbatim answers of the interviewees who have refused recording their responses on tape. The interviews
were ordered, to proceed from the general to the specific to capture unexpected responses (McPherson and Saarinen 1977), and to allow reasonable follow up of situations unfamiliar to the author.

This research has also relied heavily on literature and visual art that recorded intellectuals' representation of societal relationship with their natural landscapes. Poetry is one of the principal documentary devices that have its historic cultural significance in the Arab world. Mill (1997) illustrated, 'the word poetry does import something quite peculiar in its nature, something which may exist in what is called prose as well as in verse, something which does not even require the instrument of words, but can speak through those other audible symbols called musical sounds, and even through the visible ones, which are the language of sculpture, painting, and architecture...'. Taha abd-al-Bar (1984) said 'a poet does not merely convey what he sees in nature and therefore what he feels into aesthetically structured words in a poem. However, he aesthetically materialises his interpretation of a particular experience in a complete work of art.' Thus, a poem aesthetically transforms a visual art into a verbal art via a particular perceptual process. Most importantly is the fact that abd-al-Bar (1984) stressed that a poem resonates what a poet possesses of culture and what this culture constitutes of faculties of feelings. Creative literature has been one of the major sources for landscape researches. Salter and Lloyd (cited in Zone 1999) attributed this to 'creative literature is inherently evocative. It calls up within the reader essential images of the world images which might remain elusive, and intangible in the absence of the clarifying power of literature.' Therefore, poetry, as Sharab (1985) concluded, is subtle, yet rich in reflections of a society that can be invested in research to illuminate obscure aspects of particular culture. In Medina, voluminous proportion of documentary material lie in poetry, however, has rarely been investigated as source of data in design related fields of research.

The first task in this study was to establish natural-aesthetic theory from an Islamic-Saudi perspective. To do this, the investigation has been directed toward various aspects of Saudi historical cultures related to nature, i.e. Islamic law, traditional garden culture, contemporary landscape practice. Lines of investigation were established to answer the questions: how and why Madanies, Saudi Arabia saw their desert landscape in aesthetic terms in the past and the present in two different ways? What are the major causes for this extreme change in attitude toward desert environments? On a comparative basis, these questions were addressed also to Tucsonans, Arizona to highlight techniques and strategies facilitated in this field to enlighten the Saudi landscape practice in order to re-win the desert environment. In other words, a second task for this study was to investigate the natural-aesthetic theory of the Southwest of the United States in order to answer
the questions: how and why Americans see their desert landscape positively after long history of hatred? What were the means, strategies, and principles by which Americans changed their attitude toward desert environments? The third task then will be to examine empirically Madanies’ and Tucsonans’ knowledge of desert environment, perception of desert nature, and landscape preference on exotic and native landscapes.

The following questions have also formed the basis for overall theoretical inquiries involved in this research:

- How have Medina people perceived their natural desert environment through history and what was the impact of their perception on the shaping of the landscape?
- What changes in cultural believes, values, forms of knowledge and kinds of technology caused rejection of what had been developed through history as a unique understanding, acknowledgement, and appreciation of local desert environment?
- What drives decision making toward embracing a belief in the superiority of exotic urban landscape schemes that are not only unresponsive to the natural environmental setting, but also irrelevant to the social and cultural context of the city?
- How can these changes be altered to realise more meaningful and practical investment in cultural heritage and natural desert environment in a way that lead to a better cultural-natural living environment?
- What are the different possibilities of regenerating the essence of the historic models of environment responsive urban development in contemporary practice?

Thus, the major objectives of this study include the following:

1. To synthesis an Islamic theory of aesthetics as a basis for a better understanding why desert landscape should not be excluded from urban development in Saudi cities.
2. To investigate the historic perception of desert landscape exemplified in historic Medina gardens and traditional desert recreational activities. This involved exploring the means by which different social groups through their cultural themes, ideas and methods of involved natural features and processes in the design and planning of landscapes and places inside and on the urban fringe of Medina; and how the value of nature through history has changed and influenced the processes of making the urban landscape.
3. To investigate the major cultural, social, economic, and technological factors that have changed Saudi societal perception of natural and cultural desert landscapes.
4. To investigate historic and contemporary perception of natural and cultural desert landscapes in Medina, Saudi Arabia and Tucson, Arizona. This empirical study aimed to examine
social and cultural factors that shaped distinctively different perceptions of natural and cultural desert landscapes. More objectives for this part of the study will be discussed in detail in chapter 9.

5. To identify practical ways of reconnecting desert culture with the contemporary society in Medina and Saudi Arabia as a whole.
Islamic-Saudi attitudes to aesthetics, desert, and nature.

Attitudes towards designed landscapes in two desert cities: Medina, Saudi Arabia and Tucson, Arizona.
1. Islamic-Saudi Attitudes to Aesthetics, Desert, and Nature.

1.1. Islam As a Source of Knowledge.

This part of the study focuses primarily upon the construction of an Islamic perspective upon the aesthetics of nature. This perspective aims to establish Islamic strategies and criteria for landscape planning and design in relation to nature. The literature review will be directed toward drawing out and interpreting Islamic regulations and laws regarding nature, human-nature relationships, and urban landscape development.

In order to establish an Islamic approach in a particular line of research, a fair understanding of Islamic sources of knowledge must to be attained. Of an equal importance is to define how such sources can be facilitated in a way that formulate academically acceptable stands of theory. This section of the thesis lays a foundation of understanding of Islam represented in its two major sources of knowledge, the Quran and Hadith, not only as a position on religious deeds, but also as a philosophical doctrine on secular issues related to human conducts, of which nature is a significant component.

To Muslims, the Quran is the Divine word, the Divine Message, the Divine inspired wisdom revealed through inspiration to the heart of the Prophet Mohammed (pbuh). Allah says:

'Here is a Book which we have sent down unto thee, full of blessings, that they may meditate on its Signs, and that men of understanding may receive admonition' (the Holy Quran Sad: 29).

In Islam, the Quran is the foundational base for Muslim's practical, social, and cultural life. This explains, for example, how the Quran transformed an ignorant, primitive, and busy in tribal confrontations social groups into a powerful nation that engulfed other societies to form a civilisation that is, uniquely, defined by its religion. Malik bin-Nabi (cited in Ukashah 1986) stressed that the Quran does not offer ready plans for civilisations, however, it enlightens Muslims with concepts, principles, and a legislative framework. Shaban Ismaeil (1980) added 'the Quran is not a scientific teaching book, which can be used, for example, to teach chemistry. The Quran includes various cosmic realities which science by its modern achievements have detected and facilitated in the way that serve human beings (al-Najjar not dated). What is important here is the appreciation that no contradiction has been reported so far between what the Quran cites of cosmic realities and scientific discoveries.
From the time of revelation (610 AD) until now, scholars in the whole Islamic world have enriched the Islamic library with new and valuable interpretations and discoveries from its parable and legislative verses. These numerous investigations, interpretations of the Quran revealed the fact that in the Quran there are fewer words, but immense and deep meanings that order these kinds of studies to carry on responding to the divine command to ‘learn’ (Ismaeil 1980). Ibn-Taimieah (cited in bin-Ethaimien 1992) said ‘it must be known that Allah commanded His believers to meditate on, study, and understand His book for the reason He sent it to illuminate the life on earth by knowledge and learning for the benefit of the whole humanity.’ Al-Ashqar (1993) stressed that there is no one particular field where research can find significant areas of investigation in the Quran and Sunnah (Prophetic tradition). Rather, it has been established that the Quran and Sunnah are profound sources even for most scientific subjects in wide range of research (al-Najjar not dated).

On the other hand, Islamic scholars split up into three groups in confronting the interpretation of the Quran on a scientific basis. These groups are: 1) entirely rejecting, 2) greatly approving, and 3) amalgam between the two extremes. The last group thought of Islam, exemplified in its holy book, as a supporter of knowledge and scientific discoveries and found no conflict between the two sources of knowledge. Scholars like Jamal al-Dien al-Afghani, Mohammed Abdah, Rashied Reda, Mohammed Iqbal, Tantawi Jowhari, Faried Wajdi, abd-al-Hamied bin Badis, Malik bin-Nabi, ... composed the foundation of the alignment between Islam and science in its various fields. Al-Ghazali was one of the first who approved and called for the scientific interpretation of the Quran (al-Sharqawi 1976). Abu-al-Fadl al-Mursi, for example, said (cited in Ukashah 1986) ‘the Quran includes the whole knowledge of the past, of the present, and of the future including science.’ However, most scholars warn against considering the Quran a mere documentary book of all terrestrial phenomena that science discovers over time. One of the reasons ShaiefUkashah (1986) alleged that religious methodology facilitates faith to realise absolute reality, whereas scientific methodology facilitate hypothesis prone to rejection to establish questionable theories. He adds ‘what support this argument is that the Quran is an unchangeable book that does not accept addition or omission, whereas scientific theories are very changeable, i.e. what is considered, scientifically, a fact nowadays might be rejected in the future.’ ‘What we must learn is that the Quran and Sunnah are sources of factual knowledge and divine inspirations that do not contradict with scientific ambition and accomplishments’ (Ismaeil 1980). On the other hand, Islam in its two sources of knowledge has its complete legislative system that could not be skipped in cases when science holds a contrast position of thought. Laws toward nature in Islam, for example, are clear and straight forward. The comprehensive rule of thumb is ‘Islam enhances good and
forbids harm' (Ismaeil 1980). When science proposes ideas that violate such basic laws, then Muslims are obliged to commit to the religious law which would restrict acceptance of such invention.

Muslim scholars in the Quranic exegesis have identified two major methodologies of interpretation of the Holy Quran. These methodologies are: transcribed exegesis and rational exegesis. Transcribed exegesis is that which has been conveyed from generation to generation of Muslim scholars yet developed progressively with development of other related Quranic disciplines like language, grammar, metaphor, etc. With this methodology researchers infer legislatures and laws of all religious, social, cultural and other affairs related to life on earth or to life in the Day-after. Rational exegesis according to Mohammed al-Siouti (cited in al-Shawkani 1995) is an interpretation based on inference drawn from meaning and evidence. The primary strategy of such studies is the construction of reliable and related semantic and virtual references and relationships between the scriptural Quranic verses and other scientific disciplines recognised by Islamic doctrine. The only restraint for such interpretation is the avoidance of contradictions in meanings with the exegesis of other methodologies. The association between religious knowledge based entirely on scriptural revelation and Prophetic sayings and secular science is not a new trend in the Islamic research body. Islamic scholars like ibn-Rushd (Averes 1126-1198), ibn-Khaldoun (1332-1406), ibn-Bajjah (Avembace 1138), ibn-Seina (Avicenna 980-1037), and al-Kendi (796-873) were some of the early pioneers who dealt with various fields of knowledge from an Islamic background and perspective. This was based on their appreciation of the Quranic declaration of knowledge on which Allah says:

all that we relate to thee of the stories of the messengers, with it we make firm thy heart: in them there cometh to thee the truth, as well as an exhortation and message of remembrance to those who believe' (the Holy Quran Houd : 120). In most verses, the Quran calls on those who believe 'uli al-Albab,' which means those who possess intelligent talents to think. Al-Alousi (not dated) said identifying the title 'uli al-Albab,' which recurs frequently in the Quran for some of 'those who believe' as 'individuals whose intellects do not take familiar issues for granted, and thereby are, as al-Raghib (cited in Alousi) beheld, able to detect from the visible, what is invisible of realities.' In this verse those intellectuals are called 'those who believe' because they have mentally been able to use the light of the visible to evidence the invisible reality, i.e. 'almighty Allah.' Al-Razi added that those people had high intellectual status because they were able to meditate in history, understand, learn, and apply what they have learned in their practical life.
In Islam most laws and regulations for life, are derived from the Quran's citation of history that come in the form of narratives. The Quran on the other hand has not covered the whole history of humanity. Some of these narratives are completed in the Quran, others are hinted about in the Quran but detailed in Sunnah (the Prophetic sayings) (al-Jama’aah al-Islamiah 1988). In both sources, a selective history, in terms of degree of details covered, and time period is presented. It can be concluded therefore that the chief criteria the Quran adopted in dealing with history was 'Selectivity.' The selectivity can be broken down into various forms or categories, for example:

i) Selectivity in term of importance. Allah says in the Quran:

'we do relate unto thee the best and most beautiful of stories, in that we reveal to thee this (portion of the) Quran before this, thou too was among those who knew it not' (the Holy Quran Yousuf: 3).

ii) Selectivity of subjects, Allah says:

'such were the towns whose some of their stories we (thus) relate unto thee' (the Holy Quran al-aa’raf : 101); in another place the Quran says 'Of some messengers we have already told thee the story; Of others we have not' (the Holy Quran al-Nesa: 3; Ghafir: 78).

iii) Selectivity of degree of details. This can be concluded from the histories cited in the Quran such as that of Moses with his people, which is the most recurring history in the Quran. Allah for example recurrently says:

'we rehearse to thee some of the story of Moses and Pharaoh in Truth, for people who believe' (the Holy Quran al-Qassas : 3).

iv) On the other hand some other histories are only mentioned briefly, for example the story of Habib who invited his people to believe in their prophets. Most parts of the story are not included in the surah (section in Quran) of Yasien, however, can only be completed from Sunnah:

'for me I have faith in the lord of you (all): listen, then to me! It was said: enter thou the garden. ' he said: ah me! Would that my people knew (what I Know)!' (the Holy Quran Yasien : 26).

Between the two occasions, inviting his people to his religion and his admittance to paradise, the killing of Habib is not mentioned in the narratives. Saied Qutb (1993) put forward that the elimination of details in narrating history in the Quran was not only to fulfil linguistic and rhetorical aims, but also to prioritise important events. He added, 'the major use of the tool of history in the Quran was explicitly directed toward supporting Islamic cultural principles, concepts, and values.'

From another point of view, the Quran states clearly the objectives of documentation and delivery of history as follows:
1. 'determine instructions, exhortation (lessons), message of remembrance' for generations to come.

2. 'Explanation' of the details of a piece of history so each part of history would serve a particular purpose.

3. 'Guidance' for the forth-coming generations where they can learn what they have not known of before.

4. 'Mercy' from the Lord to the believers (i) in this life on earth by learning from their forebears rather than repeating their mistakes; and (ii) in the Hereafter, had they not learned from this history would face the punishment.

5. 'Confirming the legitimacy of the Prophet (pbuh). The fact that the Prophet was illiterate and had not been one of those who learned from Christians and Jews like Waraqah ibn Nowfal (Prophet's brother in law), is seen as key evidence of the truth of the Quran as a divine book rather than being an invention of the Prophet (as non-believers at the time had argued). Allah says talking to Mohammed in the Quran:

   ‘this is part of the tidings of the things unseen which we reveal unto thee (O Prophet!) by inspiration’ (the Holy Quran Aal-Imran: 44; the same meaning came in Houd : 49, Sad :67-70; al-Qasas : 44-46).

Thus, history in the Quran is not an objective by itself, rather it was a device of providing evidences, supporting arguments, creating analogies, and many other subjects that go under the categories, not only religious, but also artistic purposes. Qutb (1993) argues that the Quran repeats histories with different degrees of coverage and details in different Quranic surahs according to the purpose of each situation. Although history in the Quran is very purposive as previously discussed, it also embraces a unique artistic Arabic writing style. Saied Qutb (1993) stated: 'the Quran mates between artistic writing style and religious purposive discourse for the reason that when the soul apprehends the message of beauty of art, it would like wise receive the implicit religious message. The Quran makes use of the artistic aesthetic as an intentional tool for the aim of emotional influence.'

As a legislative code, Islam covers most subjects of human life from birth to death. From an example as simple as the relationship between neighbours, to that as crucial as a verdict upon murder, Islam formulates a comprehensive code of laws that support a public welfare and justice. Allah says:

   ‘This day have I perfected your religion for you, completed my favour upon you, and have chosen for you Islam as your religion’ (the Holy Quran, al-Maedah: 3).
Nature as well as all other aspects of life in Muslim countries is fully prescribed by Islam. *Shari'ah* (the Islamic law) is the ultimate reference and the only authoritative legislative constitution for Muslims in countries such as Saudi Arabia. Until recently, interpretation of major Islamic judicial references in ‘Quran and Hadith’ had not encompassed issues that are not closely related to religion. Environmental laws, for example, are not yet operated and enforced by official authorities in the modern Muslim states like Saudi Arabia. In most cases, such laws are primarily subject to public interpretation based on personal judgement, and governed by personal interest.

In general, however, Muslims in general and Saudis in particular are greatly influenced by Islam in all fields of life. Islam is currently interpreted and linked to many various disciplines and areas of studies. As scientific knowledge has developed, Islamic scholars have reinterpreted the Quran in the light of these discoveries (al-Naijar 1983). The Quran that once challenged Arabs to create a similar book in its language (see the following verses in the Holy Quran: al-Esra 88; Houd 13-14; al-Baqarah 23), in the modern world where science became the common language of the international community, scholars concluded that *al-şajaz al-ailmi fi al-Quran* (the scientific miracle in the Quran) came as a contemporary addition to *al-şajaz al-hughawi* (the linguistic miracle in the Quran) that once was the chief challenge against Arabs’ arrogance and ignorance. Although most Muslim scientists facilitate *al-şajaz al-ailmi* by interpreting the Quran in parallel to scientific discoveries, al-Qattan (1983) adds ‘it might be true that the Quran depicted no conflicts between what man discovered of scientific theories and what the Quran cited of scientific facts, we must confess that the Quran concentrated more on stimulating people to think, analyse, understand, rationalise, and discover the nature around man’ (al-Qattan 1983) (see the following verses in the Holy Quran: aal-'Emran 190-91; al-Roum 8; al-Dhariat 20-21; al-Ghashia 17-20; al-Baqarah 189, 219; al-Hashr 21; Youmus 24, 61; al-Ra‘ad 3; al-A’araf 32; al-An’aam 65, 97, 98, 125; al-Hijr 22; al-Tariq 5-7; al-Hadj 5; al-Anbiaa 30). Zaghloul Al-Naijar (1983) also highlighted that in many verses the Quran expressed the high status people gained when they reached the level of *ţulama* (scholars). This is because Islam assumes that the more man thinks and acquire knowledge, the more sincere his belief in Allah would be. The Quran says

‘Those truly fear Allah, among his servants who have knowledge’ (the Holy Quran Fatir 27-28; see also the following verses in the Holy Quran: al-Mujadalah 11; al-Zumar 9; Taha 114).

*Al-şajaz al-ailmi fi al-Quran* (scientific miracles in the Quran) is the term given to when Quranic verses and scientific discoveries are miraculously compatible (Jad al-Haq 1987). Al-Zandani (1987) explained *al-şajaz* (miraculous) as al-fawt (precedence) meaning that the Quranic listing of realities preceded
humans’ discoveries when scientific realities were beyond humans’ abilities. In other words, al-Zandani defined Al-e’ajaz al-)elmi as a tool of investigation that stimulates discoveries of human interest. Yaldram (1987) consider this tool of investigation a form of Quranic exegesis that maintains coexistence between the Quran and science and allows the Quran to address contemporary issues over time. On the other hand, he stressed, as Othman al-Safi (1993) did, that such a tool needed to be used with caution. These cautions are based on the fact that the Quran is a religious book and the over use of this tool might forge other meanings that the Quran never meant. Wald-al-Sheikh (1987), however, argued that this must not be used as a reason to defy the fact that the Quran can inspire lines of investigations in non-religious affairs if used within an academically authoritative frame. Even with no evidences that scholars in the past had used the Quran in this way, this does not mean that the modern world, predominated by science, could not be inspired by a religious book such as the Quran (wald-al-Shiekh, 1987).

1.2. Islamic Definition of the Aesthetic.

Islamic literature has not satisfactorily outlined a clear theoretical framework that sums up the entirety of Islamic understanding of and perspective upon the aesthetic. Nor has it clearly considered the distinctiveness that lies between western and Islamic definition of the aesthetic (al-Qaffash 1981). Radi Hakiem (1984) argues, for example, as John Locke (1632-1704) (cited in Townsend 1997) established that, tasting beauty is a function of personal experience, however one of the major factors that set Islamic definitions apart from all other cultures of art is the fact that any constituents of the aesthetic, as well as all other cultural aspects in Islam, have to be conceptually evaluated against Islamic principles, virtues, and traditions. The foundational concept that underlies the Islamic definition of the aesthetic is the fact that there is no abstract beauty in Islam. Every being in the whole universe, including attributes of beings like beauty, ought to be referenced to its Creator and governed by His rules and regulations: the almighty Allah (Jamal 1984; Burchahardt 1984; al-Tawhidi; al-Qaffash 1996).

The other major point is that Islamic literature has not clearly highlighted in the definition of the aesthetic is the western segregation of natural beauty from the aesthetics of art. In the Islamic tradition, “natural beauty” and “the aesthetics of art” can not be segregated in this way. This is because, as Hamdoun (1984) concluded, in Islam there is no difference between manmade and naturally occurring beauty as both originate and ultimately belong to the One, the One Creator: Allah (this point will be discussed in more detail in section 1.3.2). Thus, when some being or object, whether natural or man
made, is attributed as beautiful, the praise of beauty is basically submitted to the Creator, the One who created the natural feature and who at the same time created the cultural feature via man (al-Qaffash 1996; Izetbegovic 1994). This is because beauty, whether natural or man’s production, means reality (Izetbegovic 1994) and reality means beauty (Burckhardt 1984), but reality in its two forms: ālim al-yaqīn and acronym al-yaqīn’ (with certainty of mind and with certainty of sight) (the Holy Quran al-Takathur: 5-7), is what shapes Muslim artists’ talents whose work is always focused towards the Ultimate Reality, Allah (Mitchon 1984). The beauty that Muslim artists create is not what only and simply can be perceived visually, but more importantly it is what can be perceived and harvested as expressions of haq, khair, and ma’arifah (reality, good deeds, and knowledge) (Hamdoun 1984). This is to say; Muslims’ understanding of beauty has found its definition in an ‘application attitude’ rather than merely ‘a theoretical trend.’ They transformed what they learned of haq, khair, and ma’arifah (reality, good deeds, and knowledge) from the Quran into intellectual forms of art that has a powerful expression and practical functioning in the real life, i.e. vocal beauty-Quran recitation; prayers’ calling; chanting, visual beauty-architecture; gardens; tools and instruments, and spiritual exhilaration-dhikr (praising Allah which is considered a form of beautifying the soul as will be discussed in section 1.2) (Hamdoun 1984; Burkhardt 1984). In short, Muslim artists grasped the beauty of the Creator in His creation, natural or manmade, who He Himself is Beautiful and loves beauty (Hamdoun 1984). Their work is founded upon paradigms which contradicts the basic constituent of modern arts (Hamdoun 1984), and links art with humanistic exhilaration to raise man into the highest levels of faith. The Muslim artist aims to adhere the beautification of Muslim’s soul by enhancing faith.

As a discipline, the study of aesthetics is a body of knowledge that works to evaluate and identify aesthetic dimensions of art works and expose them to the people outside the profession (Baumgarten 1961). Paul Falirae agreed upon this definition and added that aesthetics is a field of sensing and understanding beauty rather than creating beauty (Hakiem 1984). Thus, most researche in aesthetics inevitably raises questions of definition and what constitutes aesthetics. In this research, questions raised about this subject are considered as foundational tools in the process of conducting a theoretical discourse through which a clear definition of Islamic aesthetics can be established. These questions are as follows:

Is beauty what we can perceive visually as shapes and forms, i.e. is it the external traits; or is it what we can understand mentally and detect intellectually of ethics and values, i.e. is it the internal values?

Is there a relationship between external and internal beauty?

Is beauty a personal subjective entity or is it an unprejudiced objective one?
Is beauty what we see in nature or is it what man enhances or creates of beings or objects?
Is there any common ground where beauty is both personal and unprejudiced; external and internal; natural and cultural?

Al-Imam Al-Ghazali answered the first question by saying ‘the beauty of the outer form which is seen with the bodily eye can be experienced even by children who can make a sound decision that might equate grownups’ judgement, . . . while the beauty of the inner form can only be perceived by the eye of the ‘heart’ and the light of inner vision of man alone’ (cited in Nasim 1998). For Muslims, the appreciation of both forms of beauty, internal and external, are not autonomous, both are governed by laws of shari‘ah (Islamic law). From an Islamic standpoint, a piece of art can be neither independent of Islamic ethical critic, nor intrinsically valued in itself. The two major laws in shari‘ah are halal (lawful) and haram (unlawful), which could not be induced from beyond the revelatory determinations, i.e. the Quran, Sunnah, and their derivatives such as Ijma‘ al-‘ulama (scholars’ accreditation), which are the only source of judgement upon halal and haram. According to this shari‘ah, deeds that are halal are considered beautiful, and deeds that are haram are considered un-beautiful or ugly. Meanwhile, the haram may seem beautiful in its outer appearance, but when looked at with the religious inner eye of man, as al-Ghazali (1998) mentioned, ‘this so-called beauty degrades into something against the Absolute, making it something repugnant to the heart of man’ (Nasim 1998). Thus, if beauty and ugliness are revelatory expressions of good and evil, then it would be safe to say, beauty and ugliness, as Omar Nasim (1998) stressfully put forward, are not independent of revelatory judgement. Consequently, when art conforms to the Islamic halal and haram, it would be then eligible for Islamic judgement.

On the other hand, it seems that detaching art from the Islamic framework of ethics and values has established its roots in the modern theory of art in the Arab world. Theoreticians in the philosophy of art in the modern Islamic world such as Radi Hakiem have adopted such an attitude. He argued that this problem is unnecessary. He said ‘any work of art could not be considered for intrinsic characteristics solely on external characteristics, but it has to be judged in respect to both, intrinsic and external aspects (Hakiem 1984). He, relying on a romantic background, alleges that ‘acknowledgement and appreciation of works of art does not entail connection between art and criteria of ethics, religion, and philosophy, rather it should be based solely on personal experience.’ In total agreement with Hakiem, Eiz-al-Dien Ismaeil supports this position by suggesting that ‘Arabs’ appreciation of the beauty of works of art is heavily based on valuing external aesthetics rather than intrinsic beauty.’
Hashim Diftardar (1984) argues against this trend by asserting two major points. First, the whole universe is a creation of Allah; thus appreciating beauty of this creation must be attached with a sincere faith as this beauty is a creation of Him. Secondly: if we established this base faithfully and firmly in our hearts, then the logic postulates that we should appreciate this beauty according to the instructions of its creator. Diftardar (1984) adds, ‘as Allah created this beauty in His nature to teach man how to know his Creator, man should also use his art to enhance this mission, to acknowledge the natural beauty in his work as to make Allah present in both natural and cultural aesthetic.’ ‘Islamic art may be judged to be aesthetically successful if it conforms to the Islamic worldview,’ which is based on the Islamic values formed by the Quran and Sunnah (Nasim 1998). Muslims believe that what they perceive in particular beings of beautiful attributes are but reflections of Allah’s beauty that He, by His will, annexed to His creatures (Qutb 1993).

Lois Lamya al-Faruqi (1984) supports this argument, where she said ‘Muslims learn from the Quran and Sunnah, that all deeds must be done according to Allah’s instructions and for the sake of Him only. Consequently, it seems illogic to greet a passing by person according to a divine instruction and neglect these instructions when it comes across vital subjects like art.’ Islam views beauty as something that observers hold in their minds and governed by judicial sets of rules and principles. From a western perspective, for example, few people coming across a statue by Michaelangelo would fail to find this beautiful. On the contrary, to a Muslim eye, this statue lies outside the cognitive definition of beauty. For an Islamic mind governed by set of particular rules and principles, neither the look, nor any aesthetic dimension or epistemological justification would conceive such a work as an accepted form of art. Islam opposed the ancient Greek model of abstract beauty; e.g., Greek worshipped the beauty of the human body dissociated of any sexual desires. This controversy originates from an Islamic perspective that argues Islam deals with all aspects of human life on a realistic and pragmatic basis. According to Qutb (1982), Greek art camouflaged the natural senses of love of beauty by arguing for an
illusive principle such as ‘the abstracted beauty of human body.’ Qutb adds, this concept put man in an idealised status that does not correspond with human nature and possible human flaws. Usama al-Qaffash (1996) attributes this tendency to the ancient Greek performance of art which was not a reproduction of nature, as most literature suggests, but rather a role of God Greek artists opted to play. This obviously contrasts the Islamic pragmatic picture it draws for the Cosmos in which man could not be rival to God neither conceptually, nor physically. In this situation, man is an agent of God, but not rival to God. Rather, Muslims appreciate Allah’s creation according to His law by meditating in its beauty and by enhancing its presence.

1.3. The Definition of Beauty in Islam

The adjective of the noun ‘jamāl’ (beauty) is ‘Jamiyīl’ (beautiful) or ‘jummal’ of the verb ‘ajmala’ (beautify). Arabs also say ‘jummal’ as an adjective to express an exaggerative form of the adjective ‘jamiyīl’ (e.g. ‘a flower is jummal’ means ‘a very beautiful flower’) (al-Bukhari 1994). The other verb-form of the noun ‘beauty’ is ‘ahsana;’ Arabs say ‘ajmaltu or ahsantu which means (I have done something beautifully), however, ‘ahsantu’ (the verb form) is the more commonly used verb and jamīl (the adjective form) is the more commonly used in informal Arabic, but both are used in verb and adjective forms interchangeably in formal Arabic. Allah’s Apostle, for example said to Bilal bin-Rabah and another companion ‘. . ., if you have ahsantuhuma wa ajmaltahuma (amended and beautified) your prayers . . .’ in a Hadith narrated by abu-Ziad al-Kendy (in Musnad al-Imam Ahmed). In another Hadith narrated by abi-Ka‘ab who said’, ibn-Msaoud and I read a verse in two different ways. We went to the Prophet (pbuh) consulting Him upon our readings, and the Prophet (pbuh) said both of you mulsimun, majmil’ (which is the object form of the verbs ‘ajmala’ and ‘ahsara,’ which means ‘both of you read well and in a beautiful way) (in Musnad al-Imam Ahmed). Jabir bin-Abdullah narrated that the Prophet (pbuh) said ‘oh people, fear Allah and ajmilu (literally means ‘be beautiful,’ but came here to mean ‘be wise, rational, modest) in what you strive to gain, i.e. guide your possession’s behaviour according to Islamic laws, since no soul is dying until it gets all its destined livelihood. Therefore, take what is lawful and leave what is unlawful’ (Musnad al-Imam Ahmed).

We find in the Prophet’s dialogue with Bilal ‘if you have perfected your prayer i.e. did your prayer (sincerely, heart conscious, complete and on time),’ contains no gestures to visual beauty. In another Hadith narrated by abi-al-Tufail that the Prophet (pbuh) said ‘Me among all Prophets is like a man who built a house so he ‘beautified’ it in every way except for a position of a brick. A passing by person
would admire his accomplishment but say: if he has placed this brick, i.e. it would make it more ‘beautiful’ or ‘perfect,’ (in Musnad al-Imam Ahmed). Although ‘beautify’ here literally mean ‘decorate’ or ‘amend’ to a degree that makes some being look visually sound, it does conceptually mean ‘perfectly completed with no missing item that would flaw the structure’ (bin-Hajar 1986). This meaning can be inferred also from another Hadith narrated by Shahr ibn-Hawshab who said ‘a man of us accompanied Allah’s Apostle and witnessed the most ‘beautiful’ battles . . .’ (in Musnad al-Imam Ahmed and ibn-Majah). In another Hadith narrated by Abu-Umamah it was said: ‘I was underneath the Prophet’s (pbug) horse in the day of al-Fateh when the Prophet gave ‘qawal_an hasan_an jamiel_an’ (uttered good and beautiful preach) . . .’ or in other words ‘a perfect preach’ (Musnad al-Imam Ahmed).

Not only in the Quran and Hadith, but also in the Arab’s daily life, beauty has always been used to mean ‘perfection.’ Muawiah bin-abi-Sufian, for example, said: ‘I used to be the most ‘beautiful’ person of the Quraish’s tribe of Maccah with the most admirable mouth i.e. in term of language’ (in Musnad al-Imam Ahmed). Beauty in this context has not implied external traits, look, or shape, however, it was used in this context to express beauty as the perfect combination of being young, powerful and energetic.

Islam has also sought to regulate the relationship between man and certain forms of beauty. Although Islam approves of beauty, it also differentiates between spiritual and physical beauty. Al-Khudri narrated that the Prophet (pbug) said:

‘the woman would be married for one of three reasons, for her wealth, for her beauty, and for her sincere faith, so be the one who marry the woman who hold a sincere faith for your own good.’

This Hadith is considered the most influential factor that has shaped Muslims’ accountability for internal spiritual beauty over the bodily external beauty (Khan, not dated). The Hadith insists that, what matters is the state of soul and what this soul assumes of beliefs and virtues rather than external, superficial beauty. It has clearly stated also that, and from an Islamic point of view, the hidden intrinsic quality is more accountable than the exposed facial and external body qualities. Another Hadith Narrated by Abu-Hurairah supports the argument in which the Prophet (pbug) said:

‘seven people Allah would place within His divine shade in the Day of Judgement:’ and He counted: ‘a man has been seduced by a woman of wealth and beauty (overwhelming him to commit adultery), but he says: ‘I fear Allah’ (al-Bukhari 1986).

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1 The battle of concurring Maccah in the 10th of al-Hidjrah, 630 AD. was called al-Fath (the concur).
With this kind of beauty, Islam imposed firm restrictions not only to restrain illegal sexual relationships between men and women, but also and more importantly to maintain ‘pride, power, and dignity, demand tolerance and respect’ for this beauty (O’Kane 1998). Allah says:

‘And say to the believing women that they should lower their gaze and guard their modesty; That they should not display their beauty and ornaments’ (the Holy Quran al-Nour : 31).

Arabian poets have also expressed this notion of beauty that extol the intimate-internal rather than what they considered ephemeral-external beauty. Some of the most popular poems in this subject, have excessively been used as proverbs in situations in which local definition of beauty is infringed, as follows:

Amro bin-Ma’adi Karb al-Zubaidi wrote:

*Beauty is not a wearable gown*

*But know, even if you have been wore a garment.*

*Beauty is manners and behaviour that bequeath glory.*

Al-Farazdaq said:

*No good is in the beauty of grand bodies,*

*If they have not been beautified by intellect.*

Abi-Taieb al-Mutanabi said:

*There is no honour in the beauty of a guy,*

*If this beauty is not expressed in his deeds and behaviour.*

Al-Samawal said:

*If a guy has not desecrated his soul with malice*  

*Then, any dress he wears is beautiful.*

Ibn al-Wardi said:

*But roses are from a thorny bush,*  

*And narcissus grow from nothing but an onion.*

Tracing these literal and linguistic forms and cultural meanings of the term ‘beauty’ in Arabic language evidently indicate that beauty is not literally an entity of shape only. The verb ‘ahsana’ which has been used in all above examples explicitly attribute an action, a deed, a relationship by perfection. In the Quran, Hadith, and Arabs’ everyday speech, the meaning of ‘beauty, beautify, and beautiful’ has always adheres to ‘perfection.’ Moreover, when Islam approved beauty it also advised man to consider intrinsic spiritual beauty.
1.3.1. The Arabic Language as a Tool of Expressing Forms of Beauty.

In his article, Mohammed Jamal (1984) highlighted places in the Quran and Hadith where art is powerfully utilised to establish analogies between the beauty of perfection of man as a sincere believer and visual beauty expressed in plants, e.g. sincere believer (the perfect Muslim) is assimilated by an *autrijjah* (*a sort of flowers*), *thamarah* (*a fruit*), *shajartun mubarakah* (blessed tree), and *raiwanah* (*a sort of flowers*). The Quran, for example, draw a very genuine example of linguistic expression in various occasions, one of which is in Surah Ibrahim (24-25). In this Surah Allah says:

‘Seest thou not how Allah sets forth a parable? A goodly word like a goodly tree, whose root is firmly fixed, and its branches (reach) to the heavens. It brings forth its fruit at all times, by the leave of its Lord so Allah sets forth parables for men, in order that they may receive admonition.’

We find also a similar example in Sunnah, in which a Hadith narrated by abd-Allah ibn-Umar in Moslim (1992) says:

‘the Prophet (pbuh) once puzzled his companions saying, ‘whom of you could name a tree to me, of which its likeness is of a sincere believer?’ The people bewildered upon the puzzle and thought of various desert plants, while I, abd-Allah ibn-Umar, ‘thought it must be al-nakhlah (palm tree), though felt reluctant answering for I was the youngest among the congregation. When the Prophet noted their silence as unable to figure out the correct answer he said ‘it is al-nakhlah (palm tree).’ Al-Imam al-Nawawi (not dated) said ‘the Prophet (pbuh) made this analogy between the sincere believer and palm tree for both share many physical and moral aesthetics.’

In another Hadith Narrated by Abi-Mousa the Prophet (pbuh) said:

‘The like of a righteous believer who read the Quran and do by it is al-utrojjah (citronella); it smells good and taste good. The like of a believer who does not read the Quran is the date; it has no smell but tastes good. The like of a disbeliever who read the Quran is raiwanah (*Ocimum basilicum* a nicely smell and look flowery shrub); it smells good but tastes awful. The like of the a disbeliever who does not read the Quran is handhalah (*Citrollus colocynthis*) (a fruit that tastes very bitter, grow naturally in the wild); it smells and tastes awful.’

The Rich Linguistic expression in both the Quran and Sunnah promoted the possession of mastery of the language and linguistic expressions that established a rich vocabulary and terminology in all fields of life in the Arabic language. In the field of landscape and aesthetics, for example, palm tree and its
derivatives possess more than 79 names in formal and local-Madani Arabic language (see appendix 1). The tree itself has more than twenty five names, that only describe forms it takes during different phases of growing. Reading through these names indicate that the visual expressions of, in this case the palm tree, had been transformed into a rich linguistic expressions that provoke mental images in the mind. Instead of spending a long sentence to describe an image of a tilting palm tree, for example, a single word had been developed to convey precisely the image, which is Rujabiah (a tilting palm tree from the base).

This richness in the vocabulary exemplified here in the palm tree has found a similar abundance in formulating adjectives of beauty. Dounby Townsend (1997) demonstrates that ‘beautiful’ as an adjective is rarely used but may be most frequently delegated by other more precise attributes. He says: ‘We seldom say simply that X is beautiful. If we want to offer a critical aesthetic description, we are much more likely to say that X is elegant, well composed, balanced, fascinating, graceful, or any one of an endless list of adjectives that either are primarily used in aesthetic contexts or can be adapted to aesthetic contexts easily.’ Similarly, formal Arabic language is precise in selecting the appropriate attributes that can be used in accordance with particular forms of beauty. The Arabs’ fascination by beauty caused them to use adjectives of beauty as names for what they agreed upon as beautiful, however this is not the case, for example, with the English language. Most of these names were given to praise beauty of women like: jamilah (beautiful), ghaniah (whose beauty is not in need of any sort of adornment), hasna (beautiful-looking), fatinah (seductive beauty), aasirah (possess a beauty that capture the heart), hawraa (her beauty owe to her beautiful eyes), sähirah (charming), Wadhi-a-ah (a woman has a bit of beauty), hussanah (a woman is equally beautiful in each and every aspect and in every part of her body), mid'ital (a woman would not mind of having no pretty dress and amedments on because of her beauty), wasyimah (a woman possess an unchanging beauty as if it had been stamped), qasyimah (if a woman has been bestowed with lots of beauty), raeidah (a woman of whom the looking at her pleases the eye), bahirah (a woman that exceed other women in beauty), najla-a (a woman with large and black eyes), hawra-a (large and intensely white and deep black eyes), hayfa-a (a woman whose beauty come for she possess a tall body), meqasa-a (dazzling beauty), ghaida-a (delicate beauty), and wadhahah (a woman with an exceptionally beautiful face as if it is illuminating), etc.

2 These 79 names and attributes are extracted from various Arabic dictionaries, philological annals, poetical works, exegetical books of Quran and Hadith, and interviews with senior citizens in Medina. This collection exclude other traditional accents of other regions in the Kingdom or of other Arabic states, which are expected to form a different collection.
1.3.2. Beauty as a Holy Name of Almighty, Allah.

Abu-Huraira narrated that the Prophet (pbuh) said ‘Allah possess ninety nine names . . . ’ and He named **Al-Jamiel** (the most Beautiful) as the thirtieth name. Al-Dimashqi (1280) said ‘the belief in Allah’s most beautiful Names and attributes\(^3\) is a substantial pillar in the recognition of Allah’s reality. Although Muslims are to believe in these attributes with no separation between His reality and purposeful meanings of these attributes\(^4\), it is very cardinal to believe also that they do not represent the qualities of synonyms present in secular languages’ (abd-al-Khaliq 1997; Al-Shanqiti 1994; Al-Asqar 1993; Al-Ethaimien 1992, al-Humoud 1987). This can be attributed, as Al-Dimashqi (1280) declared, to the Quranic verse:

‘There is nothing whatever like unto Him, and He is the one that hears and sees’ (The Holy Quran al-Shoura: 11); Allah says also ‘. . . but they shall comprehend Him not’ (the Holy Quran Taha: 110); He says also: ‘And pursue not that of which thou hast No knowledge’ (the Holy Quran al-Esra: 36). Allah declares also that these Names and Attributes are in origin of His possession: ‘. . . Knowest thou of any who is worthy of the same Name as He?’ (the Holy Quran Mariem: 65).

Al-Ethaimien (1992) states that humankind is obviously with no ability to conceive the ultimate nature, neither the divine actuality nor the metaphysical reality of these attributes. On the other hand, when we read names like Al-Rahman, Al-Rahiem, Al-Wahid, Al-Hai (the most graceful, the most merciful, the only one, the ever alive) we have to learn and believe that they also functionally mean the same as the secular meanings humans hold for these adjectives (Al-Shanqiti 1994; Al-Asqar 1993; Al-Ethaimien 1992). This learning and belief should not be an aim of approving His physical look, however, it must only aim approving His divine reality and presence in a way that inspire humans’ relationship with their Lord (abdul-Khaliq 1997). Thus, although Muslims have no idea exactly how these divine attributes fit

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\(^3\) This field of knowledge in Islam is called ‘tawhyīd al-asma wa al-sifat’ or theology of the Divine Names and Attributes.’

\(^4\) There are stray groups which are lined off the Islamic foundational doctrine and involved false arguments in Islam. Some of which are those who believe not in the Fine Names and Attributes of the almighty Allah as al-Jahmiah, which was initiated by Jahm bin Safwan al-Tirmidhi in Khorasan (Persia) during the first century of the Hijrah calender. Other groups like al-Muqtazilah, al-shaeriyah, al-Falasifah, al-Mutakalimoun and al-Jahmiah groups (Al-Shanqiti 1994; Al-Asqar 1993; Al-Ethaimien 1992; Al-Dimashqi 1280) approved some of the divine Beautiful Names and opposed some others. They categorised what they approved of Names into six categories relying on what they invented of variant conceptual understanding for the divine reality. These categories were evaluated against humanistic logistics and rational understandings of attributes’ meanings (Al-Shanqiti 1994; Al-Asqar 1993; Al-Dimashqi 1280). In a sense, they authorised themselves to approve and oppose what Quran and Sunnah stated of Beautiful divine names and attributes. On the other extreme, other groups like al-Soufiah overstated the interpretation of the divine Names and Attributes to the extent that brought some of their performances in clash with the basic Islamic convictions (Al-Dimashqi 1280).
into the actuality of almighty Allah, they ought to make use of them in the recognition of His presence, supplications and worshipping rituals according to the secular meanings declared by scholars (abdul-Khaliq 1997; Al-Shanqiti 1994; al-Asqar 1993; al-Ethaimien 1992). The Quran says:

‘The most beautiful names Belong to Allah: So call on him by them; but shun such men as distort His names: for what they do, they will soon be requited’ (the Holy Quran al-Araf: 180).

When a Muslim, for example, prays to Allah appealing for His Mercy, he might say something like: ‘oh Allah, the most Merciful’ calling upon Him seeking His forgiveness. Another example is the divine name ‘the Well seeing,’ such a divine attribute should not pertain the divine means of seeing, rather what matters here is that Muslims have to behave bearing in mind that Allah can observe them in all occasions. Muslims thereby can derive no figurative imagination and personification for the divine reality on the basis of the possession of the knowledge of these Divine Names and Attributes, however, they have to react in their religious rituals and behave in their secular life according to the secular understanding of these divine attributes.

Meanwhile the recognition of beauty in His reality is absolute and can not be explained by the ‘beauty’ in the human sense (Al-Shanqiti 1994, al-Humoud 1987). When the Prophet (pbuh) said

‘anyone who has an atom’s weight of arrogance in his heart would not be admitted to Paradise.’

A man said ‘oh Allah’s Apostle I used to have the fascination of wearing clean dresses, new shoes, comb my hair, and (he counted many other things until he mentioned the beautiful hook he possessed for his sword); and then continued: is this of arrogance? The Prophet (pbuh) replied, ‘no, this is al-jama\l (beauty); Allah is Jamiel (the most Beautiful) and He loves beauty.

Arrogance is when one refuses the intimate reality and undervalue other people’ (Moslim 1992).

When the Prophet says ‘Allah is beautiful and He loves beauty,’ the beauty of Allah and the beauty He liked for His creatures are similar in the functional meanings but it is entirely in contrast to any formative representation. In this Hadith jama\l is more comprehensive and cover a broad dimension of visual beauty. Just like in the other Hadith in (Sahih Moslim 1992) in which the Prophet said: ‘Allah is clean and He likes cleanliness’ and in another Hadith ‘Allah likes to see the consequence of His bounties on His people, i.e. healthy, well dressed, tidy, clean, and beautiful.’ This is what al-Jawziah (a) (1248-1308) categorised under external beauty that Allah liked to see on His people. Meanwhile, the way people thank Allah for these bounties is what al-Jawziah (a) called ‘the internal beauty’. This interpretation of ‘external and internal beauty’ is expressed implicitly in Surat al-Araf where Allah says:

‘O ye Children of Adam! We have bestowed raiment upon you to cover your shame, as well as yo be an adornment to you. But the raiment of righteousness-That is the best, such are among the
Thus, Allah beautified humans’ bodies by clothes, but beautified their souls by piety. This categorisation of beauty is not only found to be on earth, in other places in the Quran, Allah expresses these two categories of beauty for human beings. When believers say in the Quranic words:

‘We only fear a Day of frowning and distress from the side of our Lord.’ Allah will reward them as the Quran says ‘Allah will deliver them from the evil of the Day and will shed over them brightness and a blissful joy . . . . and will reward them with a garden and (garments of) silk’ (the Holy Quran al-Ensan: 10-11).

Al-Jawziah (b) (1248-1308 : 263) declared that Allah will beautify their faces, which is part of their external bodies, by brightness and their bodies with silk. He will also beautify their internal souls by delight and their hearts by the feeling of calmness by housing them in the eternal paradise. A similar attitude is found also in the Sunnah. Um-Salamah narrated that she asked the Prophet about the look of _hours_ (the paradisic wives Allah promised the believers with in the Hereafter) in regard to their beauty mentioned in the Quran. At the end of the Prophet’s answer she asked:

‘. . . which of us will be better in that day, i.e. the life of the hereafter, we the women of this life on earth or _hours_ of paradise. The Prophet (pbuh) said ‘women of this life on earth are better.’ Um-Salamah asked as she was surprised by the Prophet’s answer that implied women of this world will possess magnificent emblems of beauty, ‘how is that?’ He said ‘they are more beautiful by the sincere belief in Allah they maintained in their hearts in this life’ (al-Salman 1993).

The state of ‘external beauty,’ i.e. being liked by Allah, does not lead literally to the concept that Allah detests ‘external ugliness.’ On the other hand, when Allah liked and promised those who are committed to maintain ‘beautiful internals’ with good rewards, He proclaimed His dislike to those who are not devoted to beautify their souls by faith and govern their deeds by _akhlaq_ (ethics) (al-Jawziah (a), 1248-1308; Qutb 1993). There is no evidence in the Quran and Hadith that demonstrates Allah’s recognition of ugliness in a single creature in the whole universe, i.e. an animal or an environmental setting. However, both sources are full of verses and Hadiths that express Allah’s admiration of all His entire creation in term of beauty. Allah says in the Quran:

‘He who created all things in the Best way’ (the Holy Quran al-Sajdah: 6); and ‘Such is the artistry of Allah, who disposes of all things perfectly’ (the Holy Quran al-Naml: 88); and ‘He who created the seven heaven one above another : no want of proportion wilt thou see in the creation of the Most Gracious. So turn thy vision again: sees! Thou any flaw’ (the Holy Quran
These verses provide evidence that there is no creature in the whole universe that Allah dislikes for its ugly look or visual imperfection (al-Jawziah (b), 1248-1308). An ancient Arabian poet said:

‘If you see creatures by themselves
You will soon be acquainted that
all in the entire universe is surely ‘beautiful.”
(cited in al-Jawziah (b), 1248-1308).

Al-Demashqi said ‘what we know as jamal (beauty) that Allah likes for His creatures is only a form of many other forms that Allah contained in His sifah (attribute) which is ‘al-Jamiel’ (the most beautiful). This is because He, Allah, derives all His names from His sovereignty that has no secular matching analogy, rather it is more immense, broader and comprehensive. Ibn-Abbas said (in al-Jawziah (b), 1248-1308) ‘the divine reality has been concealed by attributes, and attributes have been concealed by His deeds, i.e. signs of His presence exposed in His creation.’ Al-Jawziah (b) (1248-1308) said annotating what ibn-Abbas stated ‘from this we learn some meanings of His beautiful reality. Thus, a believer ascends in his recognition of his creator from His deeds to His attributes, and from His attributes to His reality. So if he sees something of His beautiful deeds, he infers the beautiful attributes, then from the beauty of His attributes he infers His beautiful reality.’ He added ‘knowledge and behaviour’ are the two bases for the acknowledgement of the beauty of Allah. Muslims can acknowledge the divine reality by detecting the beauty He inserted in His creation exemplified in wisdom, integrity and balance. They can also acknowledge the divine reality by worshipping Allah by beautifying their souls by embracing the true faith and showing ample signs of piety in their behaviour.

This notion of beauty as deeds and behaviour can be inferred also at humanistic level from the second part of the Prophet’s reply in which He said ‘Arrogance is when one refuses the intimate reality and undervalue people.’ The Prophet (pbuh) gestures implicitly in this part of the Hadith to the opposite of ‘beauty’, which is ‘ugliness’ exemplified in ‘arrogance’ which is considered a form of behaviour rather than a form of appearance. That is to say, ‘beauty’ and ‘ugliness’ are not only attributes of appearance, but also and may be more intimately of behaviour. This is what al-Jawziah (b) (1248-1308) highlighted in forms of the divine definition of jamal (beauty) that includes external and internal beauty. He said ‘beauty is of two forms: external and internal beauty. The external beauty is the one that matters with the appearance and can be detected visually. Internal beauty is that concerns the soul and what this soul holds of beliefs, ethics and values that shape an individual’s behaviour and can be detected by deeds.
In a Hadith narrated by abu-Hurairah, the Prophet (pbuh) said ‘Allah looks at your hearts and deeds not at your looks and possessions’ (Sahih Moslim 1992). This is to say that Allah is not concerned with external appearance that might involve beauty attained even through unlawful means, i.e. (unveiled woman would transgress an Islamic law although they may in themselves be beautiful). This would be considered the ultimate ugliness from a divine perspective. Although, the commitment to such beliefs might result in a less beautiful external appearance according to secular standards, from an Islamic perspective it is considered the ultimate beauty. Allah asserted this notion in Surat al-Munafiqoun when He warns the Prophet against the hypocrites in Medina. Allah says:

‘When thou lookest at them, their bodies please thee; and when they speak, thou listonest to their words, they are as worthless and hollow pieces of timber propped up (unable to stand on their own). They think that every cry is against them. They are the enemies; So beware of them. The curse of Allah be on them! how are they deluded (away from the truth)! (the Holy Quran al-Munafiqoun : 4).

In another verse, Allah puts forward to His Messenger that wealth and beauty is not justifiable and must not delude believers away from the truth. Allah says:

‘But how many (countless) generations before them have We destroyed who were even better in equipment and in glitter to the eye? (the Holy Quran Mariem : 74).

In short, every single creation, in what is known to man and what is unknown, are manifestations of His divine Names and Attributes (Siddique 1998). The boundless cosmos with its endless extension, the consecutive days and nights, the potential energy released by splitting the nuclei of an atom and other countless signs of His wisdom conform with His Attribute ‘the most Wise.’ Allah says

‘He is Allah, the creator, the originator, the fashioner to him belong the most beautiful names: whatever is in the heavens and on earth, doth declare his praises and glory: and he is the exalted in might, the wise’ (the Holy Quran al-Hashr : 24).

Similarly, is the Divine Attribute ‘al-Jamiel.’ Following the same logic would pertain into the fact that the whole universe is beautiful, since its beauty is derived from His Divine beauty. Even when it does not look beautiful to the human eye, in Islam it merely give evidence of humans’ limited vision and knowledge.
1.3.3. Islam's Judicial Perspective of Jamal (Beauty).

The Quran and Hadith are the only two sources of judicial guidance that informs and therefore unify all sorts of jurisprudence and knowledge under one divine scheme. Past Islamic critics of art like ibn-Sallam, al-Aamdi, al-Jirgani, ibn-Rashiq, and ibn-Tabatba (Hakiem 1984) have drawn other forms of perceiving and valuing aesthetics other than poetry. They have established the basis of evaluating art and aesthetics relying on Islamic principles. On the basis of this paradigm, research in various fields must exercise no separation between secular and religious aspects of all epistemological fields, as it has inherently been the case in early writings of Islamic scholars (Bucaille 1990). This understanding is vital for the credibility and accountability of the use of the Quran and Hadith and their lawful judicial derivatives in the establishment of the Islamic perspective in this field.

In the Quran, the concept of Jamal (beauty) involves three major contexts. The first one is derived from the fact that the Quran is a legislative book that proposes a complete framework for all Muslim concepts and activities (Qutb 1993). In contrast to what Muslim ascetic groups forged of ideas that accuse Sunni Muslims with a general refusal of jama (beauty), the Quran and Hadith express in many places how Islam adheres to a pragmatic definition of beauty that conforms with austerity it seeks for Muslims' secular life and richness it seeks for Muslims' spiritual environment.

Allah says talking to Qaroun (who was known as the most rich of his time) in particular and to all Muslims in general: 'but seek, with the wealth which Allah has bestowed on thee, the Home of the Hereafter,' but because Allah knows that humans have fascinated themselves by the life of this world He advised 'do not forget thy portion in this world' (the Holy Quran al-qassas : 77).

Allah also says: ‘Say: who hath forbidden the beautiful bounties of Allah, which he hath produced for his servants, and the things, clean and pure, (which he hath provided) for sustenance? say: they are, in the life of this world, for those who believe, and purely for them on the day of judgement. Thus do we explain the signs in detail for those who know’ (the Holy Quran, al-Araf: 32).

It is apparent in this verse that beauty is part of Allah's creation in that He approved it for His creatures, however denying such a bounty is in itself a sin. al-Qurtubi (1960); Ibn Katheir (not dated) in their declaration of this verse said: sustenance in this context is a general broad term that includes all that can be possessed for various humans' secular needs and benefits. Meanwhile these possessions, as all other

5 Austerity in Islam is considered one of the leading concepts that shaped Muslims way of life and thereby influenced their variant forms of art and artefacts.
Islamic issues, are conditioned by being obtained from *taiebat* (good and lawful sources) which is opposite to *al-khabaeth* (evil and unlawful sources). This apparently contradicts with what *Soufiah* argues when forbidding Moslems from indulging in simple forms of luxuries in life. The exaggerated interpretation of some other verses in the Quran, plus the fanatical interpretations of some Islamic groups, has introduced alien philosophies to Islam. Al-Qurtubi (1996) reported that it had not been declared that the prophet had held himself from eating certain food just because it is solely good. On the contrary, He used (pbuh) to like good and beautiful goods and food. Allah says:

"But say not for any false thing that your tongues may put forth, this is lawful, and this forbidden, so as to ascribe false things to Allah, for those who ascribe false things to Allah, will never prosper" (the Holy Quran al-Nahl : 25).

In Al-Shawkani's and al-Alousi's interpretation of this verse, they included all forms of ornamentation, under the word *zeinah*, not only clothes as in al-Kurtubi, Ibn Katheir, and al-Tabari, for the reason that in the Quran doctrinal rules always take a comprehensive approach. They also commented on the extreme view of austerity that goes to the extent of forbidding what Allah has not. Al-Razi asserted that in this verse, Allah emphasises the fact of accepting what He approves and leave what He forbids for Moslems of the two forms of bounties, *zeinah* (beauty) and *taiebat* (lawful fine goods), which can be grouped under the categories of *al-Manafie* (useful for human beings) and *halal* (lawful).

Omar bin al-Khattab⁶ was reported to have said when he used to write to his ministers in the conquered lands: 'Do not indulge in luxury and the costumes of Ajam (people whose mother language is not Arabic such a people of Persia and Rome) and maintain an ascetic life. According to al-Qurtubi (1996), in his messages, Omar had never meant to forbid something that Allah approved, however, he was greatly worried about losing the simplicity that characterised the Islamic life style by leaning too much on beauty and the ease of life, that characterised the Persian and Roman life style of the time. In an other occasion Omar was reported to have said: 'if God has expanded his bounties on you, surely you must therefore do on your selves.' al-Qurtubi (1996) declared in his interpretation of (verse 32, Surat al-Aaraf) that; 'not all that bring charm and delight to an individual must be condemned in the purpose of showing ascetic attitude that Islam calls for.' One profound reason for this is that Islam supports beauty that does not lead into a transgression of an Islamic law, principle, and virtue. Makhoul narrated that Aisha (the Prophet's wife) reported that, on his way out the Prophet (pbuh) looked at himself in a small

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⁶ Omar is The second Wise Caliph (586-644) who succeeded abu-Bakr al-Sidieq who was the first caliph after the death of the Prophet Mohammad (pbuh). He was known for his vigilant care toward Islam. During his dynasty, many countries introduced to the Islamic territory like Palestine, Egypt, etc.
water pond combing his hair and beard. I said to Him: ‘even you.’ The Prophet (pbuh) replied: ‘yes, if you were going to see friends you should adorn your self, God is beautiful and He loves beauty.’

Secondly, Islam approves the enjoyment of beauty as expressed in the following example in Surat al-Nahl, Allah says:

‘And cattle he has created for you (men): from them ye derive warmth, and numerous benefits. And ye have a sense of zinzh7 beauty and pride in them as ye drive them home in the evening, and as ye lead them forth to pasture in the morning’ (the Holy Quran Al-Nahl : 5-6). Allah says also: ‘We have indeed decked the lower heaven with beauty in the stars’ (the Holy Quran, al-Saffat : 6). In another place the Quran says: ‘O children of Adam! wear your beautiful apparel at every time and place of prayer’ (the Holy Quran al-A’araf: 31).

Another verse in the Quran counts ‘beauty’ as one of the bounties that proceed from Allah. Within this Quranic context Allah rhetorically asks His creatures for the reason they do not believe in Him despite the provision of all His fine bounties including forms of beauty. Allah says:

‘And who has created the heavens and the earth, and who sends you down rain from the sky yea, with it we cause to grow well-planted gardens full of ‘beauty’ and delight’ (the Holy Quran, al-Naml : 60).

In those two verses, the Quran expresses Arabs’ recognition of forms of beauty in cattle and gardens. Another verse in the Quran categorises both: cattle and gardens under the category of mal (wealth). The Quran says:

‘Wealth and sons are allurements (beautifying features) of the life of this world: but the things that endure, good deeds, are best in the sight of thy Lord, as rewards, and best as (the foundation for) hopes. (the Holy Quran al-Kahf: 46).

In the first part of this verse Allah mentions mal (wealth) and children as emblems of beauty in life on this world. At the second part of the verse, the Quran declares that although ‘beauty’ is lawful and people can enjoy these privileges, it is still the ‘life of this world’ that is no match for the heavenly life of the Hereafter. By this Allah is asking Muslims to be neither ascetics nor luxurious sybarites in enjoying worldly life on earth in order to win the life of the Hereafter.

Thirdly, Islam consider all secular bounties as forms of beauty that is offered to man in order to

7 According to Yousif Ali (1992) ‘zinah’ in Quran is beauty in its both forms natural beauty and artificial ornamentation.
examine his stand toward his Lord. Allah says:

'That which is on earth we have made but as a glittering (beautifying) show for it, in order that we may test them-As to which of them are best in conduct (the Holy Quran al-Kahf: 7).

Al-Qurtubi said: 'the glittering features Allah mentioned in this verse are not only things that are visually beautiful, but also signs of beauty that come in the form of perfection and wisdom that lie in the whole creation of almighty Allah' (al-Qurtubi 1996). This depiction of beauty has been meant to be offered to mankind as a trial to find out who will be thankful and who will be ungrateful. Prophet (pbuh) said: 'life of the world is khadiratun hulwah (green and beautiful). Allah will make you vicegerents on earth so He will see how would you do' (al-Qurtubi 1960). In another Hadith narrated by al-Khudri, the life of this world was expressed as a flower, the Prophet (pbuh) said:

'Allah asked a believer to choose between giving him of zahratu al-hiatu al-dunia (the flower of life in this secular world) or what He holds of luxurious privileges for him in the Hereafter, but he, the believer, chose what Allah prepared for him in the Hereafter' (in Musnad al-Imam Ahmed). Narrated al-Khudri that the Prophet (pbuh) said: 'the most I'm worried about for you is what Allah brings forth of barakatu al-Arad (blessings of earth) i.e. wealth in all forms, that come out of earth. It has been asked: what is barakatu al-Arad? He said: it is zahratu al-roatu al-dunia (the flower of this life in this secular world). Allah also says: 'O prophet! say to thy consorts: If it be that you desire the life of this world, and its glitter,-Then come! I will provide for you enjoyment and set you free in a handsome manner' (the Holy Quran al-Ahzab : 28).

Al-Qurtubi declared in his interpretation that the Prophet meant to say by zahratu al-hiatu al-dunia is the affluence of wealth that can be generated from earth and the consequences that would reveal from anticipated excessive involvement in the material on the cost of Muslims' piety, faith and the doing of good deeds' (al-Qurtubi 1960).

From this Quranic and Hadith discourse it might be concluded that the Quran stresses that beauty is a lawful bounty that Allah does not only accept, but also likes for His creatures and mankind. We find also that as Islam differentiates between worldly and Heavenly life, Islam consider worldly beauty as subsidiary in comparison with the Heavenly beauty that could be won by embracing simple forms of beauty in the life of this world. Islam seek a balance in exposing and entertaining beauty. The Islamic logistic that this stand embark on is that Islam consider pure indulgence in luxury of life would betray Muslims tenets and deviate Muslims behaviour off the righteous path, i.e. Muslims would be heavily involved in secular life for the sake of secular life, when Islam invite Muslims to enforce balance between secular and religious life for the sake of the Heavenly life. Lastly Islam consider both
expressions of beauty and enjoyment of beauty as tools of examining Muslims' faith.

1.3.4. Beauty as Deeds

The second form of beauty in the Quran is beauty attached to behavioural expression such as patience. An ancient Arabic poet said:

My camel complained of long travels
Hold your self in 'beautiful' patience,
both of us are in the problem alike.
(al-Qurtubi 1996).

Scholars said, the reason Islamic literature established a relationship between 'beauty' and 'patience' is that by exercising patience, the most beautiful behaviour, would lead into beauty in all subsequent occasions that entailed patience (al-Shawkani 1995). This understanding is conspicuous in surat Yousuf in the Quran where Allah says:

'Jacob said: Nay, but ye have yourselves contrived a story (good enough) for you. So beautiful patience is most fitting (for me). May be Allah will bring them (back) all to me (in the end). For he is indeed full of knowledge and wisdom' (the Holy Quran Yousuf: 83).

Narrated al-Hassan (cited in al-Alousi not dated; al-Shawkani 1995), that the Prophet (pbuh) said 'al-sabr al-jamiel' (beautiful patience) is the one that is not followed by complaint and/or objection. Al-Alousi (not dated) said:

'Jacob's invitation for patience in fa-sabrun jamiel was described as 'beautiful' because the one who hold to it, like Jacob in this case, show no signs of anger, (i.e. changing the character of his face to be no longer peaceful and beautiful), and had the willing to live with his sons in peace with out complaining for the lose of his two sons, Josef and Benjamin despite the inner pain he was suffering.'

It might also be interpreted that, what Jacob did in being patient is a 'beautiful' deed as opposed to what they did i.e. the ugly (bad) deeds of his sons toward their brothers. Such behavioural expressions of beauty in the Quran are numerous, e.g. al-Ahzab 28, Al-Ahzab 48, Al-Muzamil 10, Al-M'aarij : 5. In all these verses, beauty is maintained as an indication of good deeds. To clarify this point the story of Jacob and his sons can be reformed as if Jacob exercised no patience, but allowed his anger to lead to culmination of negative feelings the result of which might be another tragedy. This leads to the conclusion that Jamal (beauty) in Islam is always referred to in an ethical context that deals with all creatures on the basis of equality, rather than visual traits that might involve segregation on the basis of personal characteristics, i.e. economic, social, political, etc. (al-Qaffash 1996).
1.3.5. Beauty as architecture *(Jamal al-benaq)*:

Architectural beauty in the Hidjaz⁸ in general (Jomah 1992), and in Medina in particular was not heavily concerned with decoration and adornment. From the Prophet time, fancy decoration was seen as unnecessary for the natural materials used in buildings and sometimes contradicting the basic characteristics required for the buildings. The Prophet (pbuh) at the time of erecting His mosque, for example, said:

‘beware of red and yellow decoration for they distract their, i.e. Muslims in prayers, prayers and distort their reverence’ (Khan not dated).

For Medina people, the quality of the building structure seems to have been the main constituent of architectural aesthetics. Attaching unnecessary ornamental and fussy details to the facades was not part of *sanâa at al-bina* (the professions of architecture) in this city (Raffâh 1998). *Al-manfââiâh* (functionality) of each architectural unit, *al-salih al-âam* (the public right), *haq al-jar* (neighbours’ rights), *âurf wa usoul al-sanâa ah* (common and normative principles of the profession), *al-ââdad wa al-tagâaliâed* (common norms and traditions), were among the major variables with which *mu‘aalimien* (master builders) worked to form Medina architecture (Jumah 1992). The skill of realising these objectives was enough for Medina people to attribute the production of *mu‘aalimien al-bina* as an art.

The practice of dealing with ethics, morals, traditions, public rights, common norms, material, and space was considered as part of the art of creating beauty. The author asked the question, ‘why do we call rowshan (Hidjazi traditional window) beautiful⁹? to four elderly residents of Medina prompted four answers that confirmed that beauty in Medina architecture had never been purely concerned with external shape. The answers contained no reference to colour, shape, form, etc. which express visual traits. They all praised the successful relationship that the early builders realised between the local cultural and natural environment and resolved the inevitable need of having an opening between the indoor and outdoor spaces.

Sheikh al-Turki, for example, said:

*Al-rowshan was beautiful because was completely different from our nowadays’ windows. We used to open our windows, and we had no problems at all in doing that. In the case of modern windows, you open them and you are risking your privacy, your house will be awfully dusted,*

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⁸ Hidjaz is the western province of the Arabian peninsula that is geographically isolated from the hinterland of the Najd plateau by the mountains of Hidjaz, which start at the city of al-Taief in the Asir mountains stretching for around 600 Kms towards the north. Hidjaz province geographically include the cities of Taief, Makkah, Jeddah, Ynabu, and Medina and many villages.
and your indoor will be as hot as outdoor. In summer there is nothing in these widows that can restrict the dry hot wind. For us people of that time, rowshan was an air conditioner, a balcony, an inter-phone (neighbourhood women used to talk to each other from behind the shiesh (wood mesh of the rowshan), and used to see who is on the door. It is something we manufactured for generations and used efficiently. People of today have windows but they are deprived of opening them. Windows of today function only as an opening in the house and they are rarely used because they contradict with our traditions.  

Sheikh Raffah said:

. . . Najjarien al-rowshan (carpenters of Hijazi windows) used to talk about their skilful carpentry proudly as san'a-ah (profession), as if it is a precious diamond or a well dressed bride they are producing. They incredibly know the art of doing it within the available openings size, alley's width, budget, and according to al-ansoul (norms of the profession) in a way that would not 'offend anybody' (violate any local traditions, ethics, and values that might have a particular impact on neighbours negatively). . . . Even the patterned woodwork on rowshans, there was always no need to have it designed in advance, for najjar al-rowshan, like al-mu'a-alim al-Subaihi, every rowshan is an independent project. There is no way najjar al-rowshan can standardise his work. Every time he works on a rowshan, he produce something new, however, you walk in Medina streets and you do not want to go away (you find yourself blessed by the harmony that lie between all Medina's rawashiens).

Sheikh al-Turkustani, who is himself an old najjar rowshan (rowshan carpenter) said:

Rowshan is the most beautiful architectural unit in old Medina houses. Frankly speaking, it was about the half of the project of building a house. . . . Once the walls were erected, it was our turn, najjarien al-rowashien, to come in to take measurements to figure out how we are going to deal with it. Each detail of the rowshan had a certain function, yet they all work integrally together.

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9 This question was first raised by the architect Ibrahim Khatiri (head of the Planning Office in the Municipality of Medina) during one of the 'visual assessment sessions' held in Medina in the summer of 1998.

10 In all researches on modern architecture of Saudi Arabia, rowshan has always been mourned as a successful architectural unit that has not been yet developed in modern architecture. However, modern architecture have adopted new forms that have approved no comparable aesthetic, cultural, social, and environmental efficiency that rowshan had possessed (see Joma 1992; Hariri 1991; Mousa 1983).
‘al-masalah masalat san’aha ma-ho bass shakil, yiqoul al-matal ‘abbis al-bousah tsier ‘aarusah’ (the big concern here is the craftsmanship not only the shape, a proverb says: ‘dress up the bamboo shoot, and it will look a bride to you.’

Sheikh al-Sairafi said:

Al-rowshan was very beautiful, all people of my age knew that, it was part of our beautiful history, we used to sit in al-rowshan, ask any one about the rowshan that was in their house and you will attend endless beautiful stories. It was like a room, it was unique in every thing (it held a very special architectural entity) not only in the profession of benaa (field of building construction), but also in the public knowledge, the young as well as the old, they all knew what is the rowshan (the value of rowshan in the house sentimentally and functionally). We used to call rowshans as we call homes, we say for example: ‘rowshan bait Aulfut’ (the oriel of Aulfut’s house). We used to see who on the door through the rowshan, we used to know what is going on in the neighbourhood, we used to enjoy rahamt rabi (the blessing of my Lord, which is the rain, as Medina people call it) from behind the rowshan, we used to smell the spring from the rowshan, all of this and more were how we knew the rowshan . . . (I must tell you) rowshan was the most valuable evidence that we people of Medina in the past offered chance for our families to enjoy outdoors without going out.’

Even when questions were asked about beauty of Medina historic buildings, the answers have always come across the craftsmanship of the màcalim (the master builder), which is the title Medina people give to the builder, which was considered the master of all arts and craftsmanship (al-Turki 1998). Sheikh al-Turki said:

For Medina people, building by natural stones was the whole art (considered an art by itself). If I was to compare it with buildings of nowadays, I must say those builders of the past were asiadahum (the masters of the masters). The way the màcalim (the builder) shapes al-hajar al-ghashiem (organic looking stone) into hajar makhdoum (geometrically shaped stone). The way he yijalis al-hajar mistarieh (sets the stone ‘comfortably’ or structurally fitting) and use the right takhshinah (small stones fitted under the large stone to keep it still) hasab al-ausoul (according to the norms of the profession). Look at the way corners of three or four story building are erecting zai al-alif (straight as the letter A in Arabic “I”) though made out of either shaped stones or natural stones. The way he fits roushan (oriel) in the wall with out leaking during the rain season.
Sheikh Raffah and Sairafi agreed that ‘Modern buildings nowadays use paintings and marble slabs to conceal the ugliness of the material used in modern buildings’ (Raffah 1998). Despite its dark grey colour, rough, and crude nature, Medina people recognised the beauty of the natural look of Medina granite stones more than the polished granite slabs of today (al-Turki; Raffah; Sairafi; and al-Turkustani 1998). ‘These stones were mined and shaped locally, built by local mu‘a‘alimien, need no coping and painting, look familiar, we know how to deal with it, and most important of all its durability entails no running cost’ (al-Sairafi, 1998). Therefore the aesthetic justification for Medina historic architecture had much less to do with superficial visual traits, than with the understanding of beauty people of Medina possessed at that time. It has been clear, for example, that ornamentation was not a second phase in the aesthetic formation of an architectural formation, i.e. a wall can be erected and then ornamented by coping or colouring, however it seems that ornamentation was an intrinsic part of the construction process by which an aesthetic effect can be produced. In contrast to Lisa Golombek’s definition of Islamic architectural ornament and decoration in which she said ‘it is that which can stand alone and have meaning beyond the architectural context,’ ornamentation and decoration of Medina Islamic architecture was an interwoven part of the architectural composition that would quickly lose its meaning and beauty if detached from its architectural context. This is because Medina architecture had not established a sculptural type of architecture. Each architectural unit had its material, constructional method, and function and each one of those components had its own cultural value that mutually contributed to the formation of the aesthetics of Medina architecture. When Sheikh al-Turki (1998) was asked to comment upon nowadays’s stereotyped statement that says ‘al-Madinah ma ṣaraf jamilah zai zaman’ (Medina of today has lacked its intimate beauty), he said:

‘people’s seeking of beauty is not something new, we used to say ‘Allahuma itrah al-barakah’ (oh Allah, bestow your blessings upon it) at every time we see something beautiful. At that time, we had no problem of ‘missing barakah,’ but now, lack of barakah seems to be the common problem among our modern society. The difference between our time and this time, which you will find as the profound justification for this problem, is that in the past our houses were built completely by material obtained from and by people of the blessed Medina. The stones were brought from within the sanctuary of Medina, the roofs were made of the trunks of Medina palms and fronds, the earth used as mortar was collected from within the sanctuary of Medina, mu‘a‘alimien al-bina were from Medina, ate and drank of its blessed crops and water, our furniture was made by the wood of Medina’s trees, everything was from this blessed city, so no wonder barakah was more efficient at that time than now in which everything around us is not from this blessed city, except for the earth under our feet. Without this barakah (the divine blessing of
Allah) you can not see the beauty of the place you live in.’

From al-Turki’s comment we can infer how local cultural beliefs played a substantial role not only in the formation of aesthetics, but also in the perception of aesthetics. The argument al-Turki (1998) made has its historic-religious reference in Sunnah in which Narrated Jabir bin Abdullah:

‘my father was martyred on the day of the battle of Uhud and his creditors demanded the debt back in a harsh manner. I went to Allah’s Apostle to inform him of my problem. He asked them to accept the fruits of my ha'ait (wall, which in Medina dialect means garden) as to excuse my father, but they refused. Allah’s Apostle (pbuh) did not trade the garden for the loan, nor did he harvest the crop and distributed the assets among the creditors. The next morning, the Prophet (pbuh) reported to the garden, he used to walk about in the garden and between the palm trees he prayed to Allah to bestow His blessings on the garden’s fruits. I plucked the fruits the same day and was enough to pay back all the settlements in full, yet a surplus of fruits were left for us’ (in Musnad al-Imam Ahmed).

For Medina people, perspective of an object as ‘beautiful’ was unique as it was exemplified here in the example of the ‘rowshan (window).’ The beauty people of Medina see in rowshan was not only a function of familiarity, neither a response to visual preference, nor an expression of nostalgic yearn to the past. Tracing the answers of the interviewees leads to the assumption that a close compatibility existed between the rowshan as an aesthetic device and the desired functions sought in rowshan as a window. This form of aesthetic appreciation had some how perfected a visual appreciation that caused this society to attribute this architectural unit as beautiful rather than saying for example ‘perfect.’ ‘Beautiful’ therefore had not been applied to the rowshan because it looked beautiful, but because it worked beautifully or perfectly within the local natural and cultural context of Medina. As it has been concluded before, perfection had always been understood as a matter of aesthetic appreciation that somehow appropriated the adjective ‘beautiful’ to express admiration of beauty released by perfection. In Medina, beauty in architecture was realised by facilitating four major approaches: i) the application of simple, but thoughtful design that fit cultural needs, ii) a realistic understanding of the local culture and practical dealing with natural environment, iii) minimise cost, not by compromising level of craftsmanship, but by utilising and valuing the natural look of local materials, iv) to serve diverse and maximum number of goals and objectives.
1.3.6. Islamic Art And Aesthetic Appreciation Of Beauty.

'Created beautiful, man in Islam treads his way into a beautiful work of art, thus responding to God's wisdom and returning inwardly to the genuine self' (Hitoshi 1987), which is sustained by iman (belief) and amended by akhlaq (ethics). The dichotomy that exist between the western and Islamic conception of art is determined by the ethical dimension inherently rooted in the later. In contrast, art, in its various modern forms, is autonomously defined in Western culture. The major concept that governs all forms of Western art is that "art has its intrinsic values that are enough to warrant its own existence, which also justifies its own perception of 'truth' and 'reality' per se" (Nasim 1998). In other words, art is neither assumed to be bounded, inspired, evaluated, and/or critiqued by other 'disciplines and social realms,' nor conjured to pursue a role of education (Nasim 1998). From an Islamic point of view, art is never autonomous. As is the case with all the affairs of Muslims, art is unified with all other religious and secular epistemologies (Daghir 1999). Art from an Islamic perspective is supposed to perform a particular role in and for the Muslim community, one of which is to unify its spatial environment to sustain spiritual exhilaration a Muslim needs to be in perpetual contact with his God (al-Jadirji 1999).

'This unification,' as Omar Nasim (1998) highlighted, finds its source in tawhid (unification), which 'directs and integrates all knowledge into one aggregate whole, each finding consistency in the other.'

This tawhid (unification) that has been facilitated in the process of making art does also apply in the idea of possession of art. At the completion of a work of art, the ownership of this work is unified by the ownership of the ummah (the Islamic nation). Usamah al-Qaffash (1996) highlights that as Islamic art is not a production and reflections of self: the authorship of an artwork does not ultimately remain in the possession of the artist per se. Once an artistic work is finished its authorship transfer to the Ummah. The artist's role in the production of an artefact is not an important part of the exhibition of the work by the mere reception of the work by the Ummah. 'This should not be regarded,' as Omar Nasiem (1998) stressed, 'as the negation of the author; rather, the authorship is given to the ummah as whole, and the centre is not in the author or artist, but in the Absolute upon which the piece is built.'

'Islamic art expresses nothing but pure submission to the Absolute One God' (Nasim 1998). The contrast that persist among artefacts of different cultures in Islam is attributed, as Lamya al-Faruqi (1984) indicated, to 'all civilisations consist of different worldviews that affect their conceptions and perceptions of truth and reality.' In Islam, truth and reality are Absolute since they can only be deduced by reference to the Quran and Sunnah. The conception of truth and reality therefore could not acquire different interpretations, as some writers have proposed. However, the diverse techniques of facilitating of truth and reality in works of art leads to diverse forms of art, yet maintain the fundamental spirit of
Islam (al-Farouqi 1984). This is one of the most contentious issues in the discourse of Islamic art that led to the question: can ‘Islamic’ as a title be used to describe a wide range of various regional styles at different localities within the Islamic territory. Bianca and Anqawi (1989) asserted that despite unity and coherence that characterizes most Islamic genres of art, each region and locality has performed a certain cultural interpretation of common Islamic principles. Different materials, local building techniques, local cultural purposeful objectives and climatic factors have also contributed to a great extent in enriching the quality of ‘unity and variety’ that uniquely characterize Islamic art. ‘unity in terms of common attitudes and approaches and variety in terms of physical means adopted’ (Bianca and Anqawi 1989).

This unique character of Islamic art is what should have encouraged its development in a modern idiom had it not concentrated on replication of the past. This is what Serageldin (1980) stressed in his invitation to revitalisation of the Islamic heritage of art without being captive to the past. Like most advocates to the idea of ‘contemporarily adapted past’, he proposed a rejection of the hegemony of style and form that globally predominate art across the world. He proposed art based upon a schematisation of Islamic thoughts, ethics, values, ideals, and ideas, rather than nostalgic replication of forebears’ forms, patterns, and styles. The establishment of such a school of art would maintain connections with the past for a modern Islamic perspective on beauty according to an Islamic framework.

1.3.7. Beauty in ‘Natural’ Landscape.
It has become widely believed that beauty is an alluring component of nature that somehow has a positive impact on humans and human well-being (Ulrich 1977). As early as the time of the Quranic revelation, Muslims articulated a new perspective toward natural beauty shaped mainly by the Quran. Allah says:

‘The likeness of the life of the present is as the rain which we send down from the skies: by its mingling arises the produce of the earth-which provides food for men and animals: (it grows) till the earth is clad with its golden ornaments and is decked out (in beauty)’ (the Holy Quran Younus: 24).

The verse on the other hand, rhetorically, gestures to the landscape both as fodder and as a scene of beauty. Al-Alousi (not dated), relying on what ibn-Abbas noted, said “the ‘golden ornaments’ here is a metaphor of the bride sustaining her beauty by golden jewelry.” In the case of the earth, the Quran rhetorically depicts plants as ‘golden jewelry’ that clad the surface of the earth with beauty. Once again, it is the productive landscape, which produces fodder for man and animals, that is the one that provides
earth with beauty, rather than the wild landscape. In the landscape portrayed in this verse and in all other similar verses, the garden is always presented as a productive landscape. Man has not, however, been placed in the scene as have ‘rain and earth.’ Whether man is involved in this process of production or not, the Quran always tells us that it is always the munificence of Allah that causes this process of production to proceed and deliver. Thereby, it might be safe here to say that the role of man in the Quran has always been subordinated as an agent in the production in what the Quran calls a garden. The Quran clearly states that whether it is a production of man, i.e. a garden, or grown in the wild, i.e. a pasture, both are a creation of Allah. Naturalness of the landscape (i.e. manmade or wild), therefore, does not make any difference since both landscapes are referenced to their original Creator.

In Islamic literature on gardens, few authors have considered the distinction between nature as wild and nature as designed landscape (see for example Fakhouri 1907; Mawaldi 1992). On the other hand, after reading the Quran one might conclude that the difference between ‘natural’ and ‘designed’ landscape does not really exist in Islam.

As previously discussed in the first section of this chapter, from an Islamic point of view, every thing on earth, be it vulgar or charming to the eye, possess some form or another of beauty. Even a bare rock, or a sterile ocean of sand has its own, not necessarily known to humans, justification for being considered beautiful. Allah says

‘It is only a little that you have been bestowed with of knowledge, (o men!)’ (the Holy Quran al-Esra: 85).

The most significant reason is that Islam considers every thing on earth as a creation of Allah and He is the Ultimate Beauty and He is the One who embraces every being by His knowledge, i.e. man is not qualified to judge all phenomena on planet (Lewellyn 1980).

In modern Western writings on nature we can also find examples that confirm this trend of thought that consider nature, as a whole, as beautiful. Saito (1998), for example, claims that every thing in nature is aesthetically appreciable. On the other hand, he questions the moral dimension in the humanistic generated theories of natural perception. According to Saito, the moral dimension is not fully satisfactory here for the whole scenario of the theoretical formation is based on and operated by human paradigms. He says ‘as long as we are talking about our aesthetic experience based upon our all-too-human sentiments, capacities, limitations, and concerns (moral concerns in particular), not everything in nature can or should be appreciated aesthetically‘ (Saito 1998). In Islamic culture, this paradigm is irrelevant; nature and man, are both creations of Allah and both work according to his will; and the
relationship between both entities are constituted only by Him (Masri 1986). Allah created man and gave him intellect that enable him to discern between true and false, originally, to lead man to the tawhid unity of Allah (Nasr 1966). This unity would pass to him through the teaching of the Divine knowledge that would eventually lead him to a better life on earth and in the Hereafter as well. One of the Divine teachings concerns man’s physical and emotional, relationship with nature.

We find in the Quran, for example, how various aspects of the natural landscape have been highlighted in a way that develops man’s awareness of the aesthetic qualities of nature. One of the aesthetic aspects raised in the Quran is the depiction of natural beauty and the bio-diversity in the Landscape. Allah says:

‘And (further), thou seest the earth barren and lifeless, but when we pour down rain on it, it is stirred (to life), it swells, and it puts forth every kind of beautiful growth (of all varieties)’ (the Holy Quran al-Hadj : 5).

Allah says also:

‘Seest thou not that Allah sends down rain from the sky with it we then bring out produce of various kinds and varieties; and in the mountains are tracts white and red, of various shades of colour, and black intense in hue; and so amongst men and beasts and cattle, are they of various nature. Those truly fear Allah, among his servants who have knowledge: for Allah is exalted in might, oft-Forgiving.’ (the Holy Quran Fatir : 27-28).

In these two Quranic verses, plants and animals are mentioned to expound the phenomenon of variety, which is correlated with the diverse colours of mountains. Despite the knowledge these verses contain with their simple gestures and words (al-Alousi, not dated; al-Razi, not dated; ibn-Kathier, not dated) the second verse turns the first verse from a merely informative statement into an invitation for obtaining knowledge. It can then be concluded, according to scholars’ exegesis of this verse, that investigation and exploration that lead into possession of knowledge would raise an individual into the rank of ulama (plural of ‘alim or scholar). The Quranic definition of ulama, however, is the ones who facilitate his knowledge to pertain into the sovereignty, authenticity and reality of almighty Allah. Saied Qutb (1993) said ‘when the intellect ascends to the level of discovering, the soul would be ready to deeply appreciate the Ultimate Reality of the almighty Allah.’ Through such epistemological process, man discovers nature, the beauty that lies in this nature, and the ways that enhance this beauty. Without this discovering, the concept of khilafah, (man as a vicegerent on Earth) (Idris 1992), would not be realised.
Muslim scholars also consider such citations of natural landscape and phenomena in the Quran as a Quranic technique of depicting the Divine capabilities to amaze the unbelievers (Ali 1938), and to instruct the believers. Nevertheless, through such citations in addition to some of the Prophetic scripted preaches the Quran has not only instructed the nature-literature of Arabs (Mawaldi 1995), but also enhanced Arabs’ understanding of the natural landscape. This emphatic instruction has been interpreted in the gardening techniques and garden culture of Muslims. This had only been the case when Muslims were indisputably relied on the Quran and Sunnah as source of knowledge and worked sincerely to give their works in general and gardens in particular a profound Islamic character.

The Quran also says:

‘And we send down from the sky rain charged with blessing, and we produce therewith gardens and grain for harvests; And basiqat (tall and stately) palm-Trees, with shoots of fruit-Stalks, piled one over another; As sustenance for (Allah's) servants; And we give (new) life therewith to land that is dead: thus will be the resurrection’ (the Holy Quran, Quaf 9-11).

In this verse, as in most similar verses, the Quran navigates through the landscape not as a scene, but as a series of interwoven natural phenomena. In this particular verse the creation of the landscape starts by the delivery of water by the will of Allah. The water itself does not only give life to the landscape, it is also the blessing of Allah that causes such a natural phenomenon to prosper on Earth (see al-Qurtubi 1960; al-Shawkani 1995). As will be explained in detail in forthcoming sections, Medina people until date call rain ‘rahmat rabi’ (the mercy of the Lord). We see also, as has been explained before, how the landscape is always described as a creation of Allah even though it is produced by man as an agent. From such large-scale-depiction of the landscape, the Quran proceeds to a smaller scale in the scene, which is the palm tree. It starts by stating the external characteristics of the palm tree and then moves to the description of the intricate structure of the fruit-stalks.

This example in the Quran, has been found only with some plants which are familiar, economically and culturally valuable to Arabs. Although such citations were only used as examples, the mere mentioning of these plants in the Quran gave these plants special cultural values in Muslim culture. Al-Shwkani (1995) said, the fact that palm trees are mentioned by name in many places in the Quran reflects the virtue of the palm tree over other trees. This has been expressed in numerous poems which were traditionally written praising palm trees. One of the early poets, for example, said:

The molasses of ours is not of grab,
But, a product of the *basiqat*\(^{11}\) in shape.

Generous in the horizon stretched in high, deprived the bad ones its crops but the sly.

In conclusion, this cultural dimension had played a significant role in shaping Muslims' appreciation of natural beauty in the landscape. In other words, Islam created a religious form of appreciation towards natural beauty. The foundational base here is that, natural beauty exists in both natural and designed landscapes for, according to the Quranic discourse, both are creations of Allah who regulated the relationship among His creatures. Natural beauty in addition and from an Islamic perspective could not only be detected visually but also by knowledge that Allah in the Quran provokes Muslims to acquire to realise *khilafah* (vicegerency over the earth).

\(^{11}\) Extremely tall.
Nature in Islamic culture.

Attitudes towards designed landscapes in two desert cities: Medina, Saudi Arabia and Tucson, Arizona.

Within the growing environmental crisis of global proportion, a research body has been oriented toward restoring religious doctrine in humans' relationships with nature (Zaidi 1986; Izzi Dien 1992; Greeley 1993). This field of research, which is known as ecotheology (Ouis 1998), seeks to contribute to addressing and resolving the negative aspects of modern civilisation in order to live benignly with nature (Steiner and Nauser cited in Ouis 1998; Khurshid Ahmed cited in al-Hasan 1992; Nasr 1990; Rahman 1984; McCharg 1964; Khalid 1992). Most recent eco-theological studies support the assumption that a religious paradigm for the management of the current environmental crisis can be developed by bringing together various sound principles derived from religion and then applying that paradigm to developmental strategies (Greeley 1993). The 1992's United Nations Conference on Environment and Development has appreciated the role of religion in embedding a cultural understanding of the necessity of maintaining sound developmental approaches. Agenda 21 of the United Nations Conference on Environment and Development 1992 (as cited in Agwan 1993) highlighted the need 'to develop methods to link findings of the established sciences with the indigenous knowledge of different cultures. They should be developed at the local level and should concentrate on the links between the traditional knowledge of indigenous groups and corresponding current advance science.' Hornborg (cited in Ouis 1998) argues, in his 'Establishing of Monistic Approach to Ecological Issues,' that traditional, religious, and symbolic values prospered in past societies could significantly instruct modern societies' relationships with the natural environment. Sayid Nasr (1990) supports this position on which he finds a persuasive logic in restoring a theology of nature that is capable of being a judge and critic upon methods and hypotheses of science. Even theoreticians of post-modernism find no escape from going back to religion in cases where intelligence is not a reliable reference. D. Harvey said: 'reason continues to be held in high regard. But where reason falls short, one must turn to faith. Different faiths will see different landscapes' (cited in Turner, 1996).

On the other hand, Mohammed Qutb (1982) in his 'Illiteracy of the Twentieth Century' called the twentieth century the century of humans control of nature. This is due to modern society having given up authentic values and inherited codes of religious ethics that regulated its relationship with nature (al-Hafiz 1992). Modern societies in general and Muslims in particular have ignored the fact that they have particular duties toward nature based upon adherence to religious ethical principles (Zaidi 1986). The problem of overlooking nature in urban development is not new. As early as the writing of Ibn-
Khaldoun during the fifteenth century, nature in the Islamic world was not part of the urban environment. Abd-al-Rahman Ibn-Khaldoun (1332-1406), in his *Tarikh al-'aalamah ibn-Khaldoun* (the history by the scholar ibn-Khaldoun), described how cities of that time prospered at the expense of the surrounding nature. He said ‘Arabs in early Islamic cities, like al-Qairwan, al-Koufah, al-Basrah, considerations were given only to issues that satisfy humans’ needs and wellbeing. For this reason most of these cities had catastrophic impacts on natural systems, most of which had to do with the severe neglect of nature-ethics and issues related to this matter. The re-establishment of environmental concerns within the Islamic body of literature, therefore, would contribute to the initiation of public awareness of environmental issues that influence the public’s daily life (Fahs 1999). It would, in addition, restore societal values toward nature through an Islamic perspective, which would make it, in contrast to scientific presentation and justification, more acceptable and perceivable by the various social and economic strata of Islamic society (Greeley 1993).

The evolution of Islam changed the social, legal, and political order of the societies in the Arabian peninsula. Tribal and all other forms of ethnic segregation were replaced by a uniting ideology of *ummmah* (one community) (al-Hasan 1992). The Quran, Sunnah, and the history of early Islamic period has dealt with this concept on frequent occasions and through a diversity of ways. This has mostly led to the conclusion that the concept of *ummmah* has not only changed Muslim identity, but also committed them to responsibility toward the whole Muslim community regardless of societal position, social rank or economic status (al-Hasan 1992). The Prophet (pbuh) says:

‘the like of you is like the one body, if an organ complains, the whole body would suffer of fatigue and fever’ (al-Bukhari 1991).

Shaief (1986) highlighted that nature in Islamic civilisation is based on three variables. The first variable is nature itself. Nature came in the Quran: i) as a tool and way of realising the reality of the Almighty and as evidence of His capability and wisdom. ii) to reject other ideas that turn nature into a God while asserting the fact that nature has been created to be the *amanah* ‘the trust’ that man was given to bear. This was to be undertaken responsibility by man to actualise the divine command of being a vicegerent of Allah on earth. Thus nature is *amanah* (a trust) created by Allah who accepted man to be His vicegerent for the purpose of development.

The second variable that influenced the Islamic definition of nature considerably is time. Time before Islam was an oblique notion that involved nothing of actions and activities. This can be easily inferred
from pre-Islamic literature that was full of metaphors that depicted their fear of time, death and the unknown. The past was also neglected in Arabs’ recognition of time, not as history but as part of their present, when their major concern was accorded to present secular life on earth. Islam came to set a new philosophy for time by connecting the past, the present, the future, with life after death. The incremental deeds of human’s life would be rewarded during life on earth and accounted for in the Hereafter as well. This concept causes Muslims to think of time as endless layers of deeds that they would eventually be responsible for. Not only for their time being, but also for the generation to come because the consequences of their deeds would be influencing and handed over to the next generation.

The third variable is man himself. He is the one who opted to bear the _amanah_ (trust for nature) and he would be held to account for this responsibility. Different civilisations defined man according to its major trends of thoughts in art. Despite their great accomplishments in art, these trends are opposed by Islam because rivals for Allah, be it ‘man’ or ‘nature’ itself are unacceptable (Qutb 1982). Most of these ideas turned man into God (as in the ancient Greek civilisation), animal (as in the Darwin theory of ontology), and lastly a devil (as in the realism and rationalism movements) who is controlled by a series of inevitable wheels generated by the power of economy, society, production, and social values. . . etc. Thus a definition of humans is changeable and these changes are functions of humans’ thoughts.

‘The Islamic paradigm of nature is based upon _tawhid_ (the absolute unity of God), a unifying thread that pervades all natural and social sciences’ (Nasim 1998). Thus everything emanates its being and form of life from Allah who appreciated Islam as a state of being and way of life for those who follow this path on the planet Earth (Ali 1992). Allah says:

‘This day, I have perfected your religion for you, completed My Favour upon you, and have chosen for you Islam as your religion’ (the Holy Quran, al-Maa’idah: 3).

_Islam_ (submission to one God) is also the basic intention of the entire Muslims’ deeds and the intrinsic meaning of the religion of Islam. To submit to Allah is to acknowledge that every thing belongs to Him, and He only is worthy of worship. This basic monotheism of Islam divides the universe into two domains, the Creator and the creation, the worshipped and the worshippers. Moreover, none of these two entities could wilfully or mistakenly take the place of the other, or otherwise it would be considered _shirk_ or _kufr_ (associating other rivals in worship with Allah or infidelity). For this cardinal reason, nature has never been sacred in Islam (Nasr 1990), but rather a creation that coexists with man (Izzi Dien 1992) and shared with him to grace the worshipping of Allah.
Nature in different cultures has been an object of worship, of pleasure and of utility. Islam holds no reverential attitude toward nature, neither concedes man to subjugate and therefore embroil nature, nor deprive man from obtaining life supporting sustenance from nature in a balanced way. Islam is a balanced religion, as the Prophet Mohammed (p.b.u.h) declares in his Hadith, which maintain balance in every and each secular and religious situation. On the basis of this paradigm, one might ponder upon the order in which Islam classifies various creations within the natural world, i.e. desert versus temperate landscapes.

From a linguistic point of view, the term Tabi‘aah originate from the verb taba‘a, which means possessing a particular being with a perpetual attribute or property in a way that could not change without the facilitation of an external force (al-Qurtubi 1960). Al-tabi‘aah according to Gharib al-Quran (al-Āaris 1997) is al-sajiah (innate quality) or the maintained primordial state that Allah destined for a particular being whether it comes in the form of appearance or behaviour. The tree, for example, and according to its tabi‘aah grows in its original form and colour and does not have the power to change any of its perpetual properties possessed by inheritance except by the facilitation of genetic transformation. In the interpretation of the 108th verse of surat al-Nahl: ‘Those are they whose hearts, ears, and eyes Allah has (taba‘a) sealed up and they take no heed’ (al-Nahl 108). Al-Razi (not dated) says ‘it has been approved that tab‘aa here means attributes and properties the heart possesses and take the value of perpetuity. In contrast to the word ‘nature’ in English, the Arabic counterpart, tabi‘aah is not a defective noun like for example rajul (man). According to the Arabic structure of nouns which rhyme the word fa‘al, tabi‘aah is on the rhyme of fa‘eel or maf‘aul. Ahmed Farahat (1986) indicated that words that rhyme fa‘al (the object of the verb fa‘al) are the ones that come under the category of sajaia (innate qualities) or tibā‘ (nature).

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| (create) | (creator) | (created) |
Thus the semantic-root-analysis of the word tabi’aah, (nature) confirm that nature from a linguistic basis could not be a God, nor an autonomous being, however, it is something that is operated by an external power, its creator Allah. On the basis of this linguistic definition tabi’aah is not different from the other term used in Arabic for nature, which is bia-ah. The term bia-ah originates from the verb ba-a or tabawa-a, and from the noun ‘maba-ah’ (place). The Quran says

‘And those who came before them, (tabawa-ai) had homes (in Madinah) and had adopted the faith’ (the Holy Quran: al-Hashr 9).

In Surat Yonus, verse 87, Quran says:

‘We inspired Moses and his Brother with this message: ‘tabawa’ provide dwellings for your people in Egypt, make your dwellings into places of worship, and establish regular prayers: and give glad tidings to those who believe!’ Allah says also ‘Thus did we give established power to Joseph in the land, ‘yatabwa-ai’ to dwell, (take possession) therein as, when, or where he pleased.’

Al-Shawkani (1995) identified the term by saying the verb tabawa (the past form), yatabawa-a (present form), or in its plural form tabawa-ai comes from the noun maba-ah or ‘place’ in which one or group of living organisms, capably and firmly, dwell and according to its original or (natural) terms and conditions.

Like tabi’ah, the term khalifah (vicegerent) (the object of the verb khalafa) also rhymes fa’aiilah (the object of the verb fa’il). Thus, both man as khalifah on Earth and tabi’ah as tabi’ah or home for man are objects from a linguistic point of view. The linguistic analysis of both entities suggests that they are both creatures of Allah, al-khaliq (the Creator) (which rhymes the subject fa’il of the verb fa’il), al-baria (the Originator), as it is the case with all Fine and Beautiful Names and Attributes of Allah. The term makhliiq (created, on the rhyme of mefiil is a synonym to or another form of fa’il, which is an object form of the verb fa’il) include both tabi’ah and khalifah.

In Arabic, al-tabie’ah means any thing in its original state (al-Fairouz-Abady, 1978; Abi-Shaibah, 1981; Al-Jowhari, 1984; al-Razi, 1985; Makram, not dated). It gets part of its meaning from the term fitrah (the original intimate created state of all creatures) (Abi-Shaibah, 1981; Al-Jowhari, 1984). Makram (not dated) added that the verb of al-tabie’ah, is yatba’a that means God possessed every thing in the whole universe with a specific look, behaviour and way of development. Abi-Shaibah (1981) said al-tabie’ah also means al-sajiah which means the innate state creatures are created with and therefore forms their instant look, behaviour and way of development and over time. Tabie’ah in the Arabic
language therefore has a dynamic definition that correlates with time and change, however, the agent of change over time is a function of a pre-ordained way of development rather than external changing forces. This is consistent with the English translation of 'nature' that considers nature to be all the material world existing in a primitive state independently of humankind. On the other hand, Arabic definitions of nature contradict the Western in that in Arabic man was implicitly considered part of nature whereas in Western definition of nature explicitly put him apart from nature. In an Arabic-Arabic dictionary, Abi-Shaibah (1981) for example said: 'al-tabie'ah is the cardinal nature God created man and the whole universe with.'

'Island is close to the scientific attitude to nature\(^1\) rather than romantic attitude like that of natural philosophers or the theologians' (Hitoshi 1987). Metaphors extracted from the Quran in professions related to nature, for example, have flourished in cultures that understood and perceived Islam through their ancient religious vocabulary. In Arabia, the Quran was a source of legislative rules that govern the relationship between man and all his surrounding, and his Creator. This importance comes from the fact that in all his every-day-life transactions, a Muslim deals directly and ultimately with his Creator, Allah (Nasr 1966). When a Muslim decides, for example, not to step on an ant, such a simple action is most likely referred to the belief that the contrary action would contradict rules derived from the Quran or Sunnah. Thereby, this action has been intentionally induced on the basis of establishing a direct relationship with the Creator of the ant, not only the ant. Igarashi Hitoshi (1987) explained that such behaviour is ordered by the Islamic doctrine that places man in direct relationship with his Lord in all deeds including, for example, a purposeless breaking of a twig.

The Islamic conceptualisation of man's relationship with nature is expressed in the concept of amanah (trust). Man rather than all other creatures, opted to shoulder this amanah. But to act and behave in the way to meet this burden, he ought to embrace iman (faithful belief in Islam) by which Muslims believe that they will be accounted for all sort of deeds. Both iman (belief) and amana (trust) have the same verb root (aman) and their meanings are internally connected. Jalal al-Dien al-Rumi (Hitoshi 1987) confirm this interpretation by suggesting that presence of man was a must for the realisation of the divine creation; al-Rumi said:

\(^1\) Al-Jawahir fi tafsir al-Quran (the Diamonds in the Exegesis of Quran) for Tantawi Jowhari, highlighted 750 Quranic verses that gesture to scientific theories, which encourage man to discover his nature, and direct his attention toward natural phenomena.
God asked heavens to deposit it, and yet they were not able to take the responsibility. Think that they can do many things and maze our intellect. Their power could transform stones into rubies and emeralds, mountain into a mine or wealth. They give life to grasses and plants in the fields and thus realise a garden of Eden upon our earth. The earth itself can revive seeds and raise them up into fruits, cover every kind of pollution and thus hug and produce many marvellous things and materials. So does the mountain with its mine of wealth. With all this heavens and earth could never do that one thing. It could only be done by man alone. ‘we Allah gave special benevolence to sons of Adam’ says Allah. He did not say, ‘we gave a special benevolence to heavens and earth.’ That is to say only man can do that one thing that could not be done by heavens, earth or mountain. It is when he will have finished this task that he is not said to be ‘too bold’ or ‘too ignorant.’ (al-Rumi, cited in Hitoshi 1987).

Thus, man, amanah and iman are the three principal variables that work collectively to guarantee continuity to the miracle of creation on earth, i.e. nature. Following the same logic, Hitoshi (1987, with some emphasis added) confirmed that ‘man as a khalq (creature) having a special khuluq (talents to deal with the amanah) is to be most excellent by treading the path of akhlaq (ethics that are derived from his iman).’ Akhlaq (ethics) ‘according to shari’ah is a state, hayah (life) that resides in our souls’ (Izzi Dien 1992). Without this akhlaq nature would succumb to the interest of man, who possess power and intellect to do whatever they need to satisfy their desires. This akhlaq (ethics) are prescribed in the Quran and Sunnah. Allah declares for man two paths, al-sirat al-mustaqiem (the straight path which is the way to al-jannah, paradise) and sabiel al-shaitan (the path of the devil which leads into the Hellfire) (al-Hemaidi 1997). The first path can be attained by tracing al-khuluq al-kariem (the prophetic ethics on which Quran says ‘And surely thou hast sublime ethics,’ and was articulated by the Quran as Aishah, His wife, declared). Muslims all around the globe recite in the 27 daily prayers the verses of al-Fatihah, which in the middle reads ‘Show us the straight path. The path of those on whom thou has bestowed thy grace’ (the Holy Quran al-Fatihah: 6-7).

As a religion and a system of cultural life, Islam is based on setting a model to be followed. Mohammed (pbuh) was not a Prophet whose task was merely conveying a divine message of God, but rather to provide an example to be followed, a genuine example who personified Islam in its all dimensions. ‘His inner reality,’ as Hitoshi (1987) highlighted, ‘has been traditionally grasped and handed down from an individual to another’ and from generation to generation. Early Muslims had a
practical application of these three principles in their relationship with nature; which are man as a creation of Allah, man as a holder of and responsible for amanah, and man as governed by iman. The story of abu-Hanifah’s father is a good example for the serious actualisation of these principles in the real life.

‘He was walking by a stream when he saw a fig floating by. Being hungry he picked up the fig and ate it. After eating it he remembered that the fig might belong to someone else. He followed the flow upstream and found that it led him to a plantation of figs. The owner of the plantation told him he would not accept any money for the fig that he had eaten without permission. Rather, the price he asked was for him to marry his blind and dumb daughter. The God-fearing man had to accept in order to clear his conscience. After he married her he discovered her to be most beautiful and completely healthy, with all her faculties intact. Abu-Hanifah’s father asked his new father-in-law why he had lied. The man replied, ‘I did not lie. I told you the truth in a different way, because I wanted a man of great character to marry my daughter. She is dumb since she has never heard nor spoken evil, while she is blind because she has never seen evil’ (cited in Izzi Dien 1992).

Within this belief system, the Muslim is convinced that his role is in no way comparable to Allah’s uncconceiveable ability. Thereby, all that is present on the earth is Allah’s creation and man with his limited knowledge has only peripheral action upon this natural, balanced, and harmonious world. For example, when a farmer plant his seeds, he sincerely acknowledge and believe that Allah and only by Allah’s action and will those seeds would germinate. Allah says:

‘Seest thou not that Allah sends down rain from the sky, and leads it through springs in the earth then he caused to grow, therewith, produce of various colours: then it withers; thou wilt see it grow yellow; then he makes it dry up and crumble away. Truly in this, is a message of remembrance to men of understanding’ (the Holy Quran al-Zumar: 21).

2.1. Examples of Quranic and Hadith’s citation of nature and natural phenomena.
In Islam, natural history, (e.g. plants, mountains, etc.), and natural phenomena are subjects found in profusion in many Islamic sources (e.g. Quran, Hadith, purported sayings of al-Sahabah and al-Tabiyyin, narratives of early Muslims, and old compiled and un-compiled scripts and books of early scholars). In this part of the research, the investigation in these sources is restricted to Quran and Hadith for the limited time available for this study. The objective is to invoke some of these writings only as
examples of Islamic pragmatic teachings that enlightened Muslims' relationship with nature in the way that created scholars in science like ibn-al-Haytham (965-1039), writings in nature like of ibn-al-Baytar (on plants) and ibn-Khaskawaih (on animals) (of the thirteenth century), poetry (on nature and natural scenes) like ibn-Khafajah (1058-1138), and places like Medina gardens.

A different way of approaching Islamic sources as inspirations for issues related to the relationship between man and nature (e.g. planning, design, development, management, etc.), is to acknowledge their pragmatic and implicit instructions. One of the major examples of such instructions is the evolution of green in the landscape. Allah says:

'It is he who sendeth down rain from the skies: with it we produce vegetation of all kinds: from some we produce green (crops), out of which we produce, close-Compounded grain out of the date-Palm and its sheaths (or spathes) (come) clusters of dates hanging low and near. and (then there are) gardens of grapes, and olives, and pomegranates, each similar (in kind) yet different (in variety): when they begin to bear fruit, feast your eyes with the fruit and the ripeness thereof. Behold! in these things there are signs for people who believe' (the Holy Quran al-An’aam : 99).

In this verse, Quran details the evolution process of secular gardens by establishing connections between two main themes: the natural processes, and production of green (e.g. rainfall and plants' growth behaviour and other related phenomena). Al-Shawkani (1995) highlighted that Quran state only examples here that gestures for further investigations necessary for the understanding of the full process of plant growth. Without such investigation Allah's vicegerence to man that imply application of His norms and rules on earth could not be realised. This can be concluded from the terms used in the Quranic invitation for meditation and investigation, (e.g. anidhurou, which is translated into 'feast your eyes' and 'behold' jointly in the English translation of Quran). Al-Alousi (not dated) and al-Shawkani (1995) explained that when Allah used this term in this form, He does not only invite man to gain knowledge that lead to the possession of power, but He implicitly blames him for sitting and leaning on what he has in hand of little knowledge. This interpretation can be inferred clearly from another verse where Allah teaches Quraish (the old tribe of Macca) from ancient lessons. Allah says

'Do they not travel through the earth, and see how were those before them, they were superior to them in strength and knowledge: they tilled the earth and constructed it more extravagantly than these have done’ (the Holy Quran, al-Roum: 9).
Al-Alousi (not dated) declared that construction of earth does not mean building construction only, but also the entire activities that sustain human presence on and inhabitation of earth such as planting, farming, irrigation, mining, crafting, etc. Al-Tabari (not dated) explained that such tasks could not be surrogated to irresponsible unwise people who hold no knowledge. Not solely religious knowledge, but also secular knowledge that would sustain public welfare within the Islamic limits and laws (Qutb 1982).

In another example, Quran gesture to man how 'earth produce' (desert plants) are valuable resources from which bees extract nectars to produce what Quran called 'healing drinks for men.' Scholars consented that, the relationship that Quran cited here between this creature, which inhabits mountains, extract nectars from diverse plants and the fact that bees' produce is a healing drink for humans, gave emphatic hints to man about the interrelationship between creatures in the landscape (habitats, diversity of plants, bees, human diseases, etc.) Allah called 'instructive signs' (al-Shawkani 1995).

And verily in cattle (too) will ye find an instructive sign... And thy Lord taught the bee to build its cells in hills, on trees, and in (men's) habitations. Then to eat of all the diverse produce (of the earth), and follow the ways of thy Lord made smooth: there issues from within their bodies a drink of varying colours, wherein is healing for men: verily in this is a sign for those who give thought' (the Holy Quran, al-Nahl: 66-69).

Al-Shawkani (1995) in his interpretation of the first verse of this Quranic script highlighted that the 'instructive signs' here means the investigative realities of things of which findings could be facilitated in away that promote life and sustain welfare to all creatures. In another verse Allah says:

'All that we relate to thee of the stories of the messengers, with it we make firm thy heart: in them there cometh to thee the truth, as well as an exhortation and message of remembrance to those who think and believe' (Quran called in many places 'uli al-Albab') (the Holy Quran Houd: 120).

Al-Alousi (not dated) said identifying the word 'uli al-Albab' as the individuals whose intellects are not distorted by illusions and also who do not accept familiar issues as for granted, and thereby are, as al-Raghib (cited in al-Alousi, not dated) beheld, able to detect from the visible, what is invisible of realities.' In the second verse those intellectuals are called 'those who believe' because they have mentally been able to use the light of the visible to evidence the invisible reality, i.e. 'almighty Allah.' Al-Razi (not dated) added that those folks had this high status of intellectuality for the reason they were
able to meditate, understand, learn, and somehow appropriate an application of what they have learned in their practical life on Earth.

Colours in the landscape are highlighted in the Quran, as al-Razi (not dated) indicated, to instruct Muslims of the diverse bounties Allah inserted in nature, (i.e. visual marvels, for man to admire). Quran says:

'Seest thou not that Allah sends down rain from the sky with it we then bring out produce of various colours. And in the mountains are tracts white and red, of various shades of colour, and black intense in hue' (the Holy Quran, Fatir: 27).

In another place in Quran, a verse express the state of people who could perceive emblems of beauty Allah created in Earth as ‘mindful’ and wise. Al-Razi (not dated) attributes this correlation between visual characteristics of objects in the landscape and a state of mind to the Quranic nature of forwarding man to contemplate diverse phenomena in the whole creation in different ways. Quran says:

'And the things on this earth which He has multiplied in varying colours; Verily in this is a sign for men who are mindful’ (the Holy Quran, al-Nahl: 13).

Citation of natural material in Quran and Hadith does not only express Muslims’ love of gardens and trees, but also show how Quran and Hadith facilitated this love to promote Muslims’ good deeds that include faire and wise use and development of natural material. In most verses and Hadiths that outline the privileges Muslims promised with in the eternal life of the heaven, gardens and trees are the prominent rewards. The following Hadiths are examples that reflects this distinctive culture of garden and trees in Islam:

Abu-Hurairah narrated that the Prophet (pbuh) said: ‘Allah will rise a tree to a man who had never prepared for the day of Judgement but had kept looking forward for the divine mercy. The man would entreat the munificence of his Lord and say: ‘oh Allah grant me an eternal life underneath this tree so I can enjoy its shadow, drink of its water, and eat of its fruits. I swear God I would never ask for any more.’ So Allah would give it to him, but the man would ask for the same every time he confront a larger tree. Allah would say: ‘didn’t you swear me you would not ask for any more? But Allah by His mercy grant him what he has asked for’ After he would have the third tree, he would be eventually very close to the gate of Paradise to the extent he could hear people’s sounds of happiness. He will say: Oh Allah let me enter your paradise, but Allah would say: ‘ask for whatever you wish’ and would admit him to Paradise” (in Musnad al-Imam Ahmed).
In another Hadith narrated by abi-Saeid al-Khudri, the Prophet (pbuh) said:

‘a man said to me: Oh Allah’s Apostle, Touba is to the one who saw you and believed in you.’ I said: ‘Touba is to whom saw me and believed in me and Touba (the Prophet repeated the word three times as for Arabs such repetition yield the importance of the subject matter) is to whom would have never seen but believed in me.’ Another fellow asked: ‘what is Touba?’ the Prophet (pbuh) said: ‘it is a ‘hundred years walk’ as large tree in Paradise’ (in Musnad al-Imam Ahmed). In another Hadith narrated by abu-Huraira the Prophet (pbuh) called it ‘al-Khuldt tree’ (the tree of eternity) (in Musnad al-Imam Ahmed).

In another Hadith, the Prophet (pbuh) describe the beauty of paradise by some secular pleasing experiences, one of which was a desert flowering plant.

Narrated Ausamah bin-Zaid that the Prophet (pbuh) said ‘is any of you devoted to paradise; I swear the God of K’aba that it is an illuminating light, swinging rayhanah (Ocimum basilicum), . . .’ (in Musnad al-Imam Ahmed).

Another established analogy in the Prophetic tradition was recurrently found between the sincere believer and desert plants.

Ibn-Umar also narrated that ‘the Prophet (pbuh) once puzzled us saying: ‘among trees is an ever green tree; for this it is similar to the true believer i.e. his heart is always conscious of piety.’ All people present thought of native desert trees, except for me, however, I was a bit shy to say it loudly for me was the youngest in the crowd. Allah’s Apostle said: it is the date palm tree’ (al-Tirmithy not dated).

A very similar analogy was expressed also in Quran in which Allah says:

‘al-kalimah al-taiebah (a goodly beautiful Word) is alike of al-shajarah al-taiebah (a goodly beautiful) tree, whose root is firmly fixed and its branches (reach) to the heavens. It brings forth its fruit at all times, by the leave of its lord’ (the Holy Quran, Ibraheem : 25).

The beauty of the goodly tree in this Quranic context is derived from its stability; its roots are firmly anchored to the ground so it would stand for desert storms. It abides in all the changes and chances of this life. It has wide canopy provide shade and habitat for other creatures e.g. small mammals, birds, and worms. Its abundant fruit, which it yields at all times sustain life for countless other creatures including humans (al-Qurtubi 1996; al-Shawkani 1995).
In a similar Hadith, the Prophet (pbuh) used the analogy between characteristics of the righteous Muslims and desert plants. Narrated Abi-Mousa that the Prophet (pbuh) said:

"The like of a righteous believer who read the Quran and do by it is al-utrujjah (citronella); it smells good and taste good. The like of a believer who does not read the Quran is the date; it has no smell but tastes good. The like of a disbeliever who read Quran is rayhanah (flower of Ocimum basilicum); it smells good but tastes awful. The like of the a disbeliever who does not read Quran is handhalah (fruit of Citrullus colocynthis) (a fruit of bitter taste, grow wild in the desert); it smells and tastes awful.

We can also trace the significance of desert trees in Muslims culture from other Hadiths, in which trees has always been nodes of significant historic events.

Narrated Abi-Mohammed al-Ansari ‘while I was sitting under a tree on my way to Mecca, Abdullah bin-Umar came to me and said: ‘what caused you to sit under this tree.’ I said: ‘I was desperate for its shade.’ Abdullah said ‘I heard Allah’s Apostle said: if you were between Al-Akhshahain (the two ridges that border both sides of Mina valley in Mecca), and He blew in His hand toward the East; there is a tree in a ravine called al-Surar under which seventy prophets were delighted’ (Muata Malik).

Narrated bin-Abdulrahman said: ‘In my way to Mecca to perform Hadj (pilgrimage) I passed by a folk praying, I asked what is this mosque? They said: it is the place of a tree under which Muslims pledged allegiance to the Prophet Mohammed to fight with Quraish in Mecca and has been called since then the allegiance of al-Redwan. I went to Saied bin al-Musaiab and told him all about it. He said ‘my father told me that he was one of those who pledged allegiance to the Prophet under the tree, but when we came back the next year we missed it among the other trees.’ Saied continued ‘how come you located the tree when the companions of the Prophet missed it among the other trees” (in Sahih al-Bukhari). The same tree was mentioned in Quran also where Allah says: ‘Allah’s good pleasure was on the believers when they swore fealty to thee under the tree: he knew what was in their hearts, and he sent down tranquillity to them; And he rewarded them with a speedy victory’ (the Holy Qoran, al-Fath : 18).

2In the old Arabic scripts, distance and sometimes sizes are measured in the scale of walk; Arabs say: ‘the distance between Mecca and Medina is a month of walk. ‘A hundred years walk as large tree’ means, it takes a hundred years of walk to cross the tree’s canopy.
The tree was named *Samur* (Acacia tortilis) in the Quran’s interpretation of al-Alousi, al-Qurtubi, and al-Tabari relying on the story of Umar bin al-Khattab. Al-Tabari said:

‘it has been argued that Umar passed by al-Hudaibiah (the place of al-Redwan allegiance, a very close area to Mecca along the way from Medina) and said: ‘where was the tree?’ some people said here, others said there, but when the people argued much Umar said: ‘neither here, nor there, the tree might has been uprooted by a flood or something i.e. he was convinced that the tree was not there any more. Al-shawkani said it was a cider tree (Ziziphus spina-christi) and people used to pray around it commemorating al-Redwan allegiance but Umar commanded his men to cut down the tree for the reason people might commit fidelity.

In another Hadith, Narrated Hudhayfah bin al-Yaman, the Prophet (pbuh) said: ‘there will be a time when strives would build up between people everywhere. It is more wisely to seek refuge to a trunk of a tree rather than following one of these parties’ (In Sunan abu-Dawood).

Another form of the presence of desert plants in Quran is presented within a particular historic context. Some of these desert plants are as follows:


Allah says:

‘There was, for Saba, aforetime, a Sign in their home-land-two Gardens to the right and the left. Eat of the sustenance (provided) by your Lord, and be grateful to Him: a territory fair and happy, and a Lord Oft-Forgiving. But they turned away (from Allah), and We sent against them the inexorable flood (released) from the dams and we converted their two garden (rows) into gardens producing bitter fruit, khamt and tamarisks, and some few stunted lote-trees’ (the Holy Quran, Saba: 16-17).

In this Quranic verse, Allah presents His punishment for Saba people by superseding the luscious fruit producing gardens by unproductive wild gardens. For many exegetes, this change from the state of productivity to sterility in the people of Saba’s gardens is not considered signs and results of the punishment but part of the punishment itself. On the other hand, this has not resulted in holding such plants with condemn. Khamt’s twigs and roots, for example, is the source of *siwak* (sticks cut out of plants and used as natural toothbrush), which is considered an asserted Sunnah by the Prophet Mohammed (pbuh). Athal trees were the major source of wood for Medina people from the Prophet time until recently. It has been reported, for example, the the Prophet (pbuh) accepted a pulpit in His mosque made out of athal’s wood. Cider tree, like wise is not a cursed tree in Islam and has no negative consideration in the Islamic culture, i.e. Quran mentioned that the largest tree in paradise is a lote tree,
which is the cidratu al-muhtaha. It has been cited in Quran; Allah mentioned Cider in Surat al-Najam under which the paradisic rivers originate from underneath it; Allah says:

‘Near the lote-tree of the utmost boundary. Near it is the garden of abode’ (the Holy Quran al-Najm: 14-15).

Thus, when Allah mentioned khamt, athal, and cider in this verse, they were used to portray the image of change in the landscape caused by the flood; from life supporting landscape that represent cultural designed landscape to wild landscape that represent natural uncultured landscape to symbolise the decline Allah plagued their civilisation with as a punishment.

1.1. Cider (Ziziphus spina-christi).

Cider tree is one of the most popularly known tree in Muslim culture for it has been mentioned in Quran as a tree of the Paradise. In the past, Cider fruit, nibeq, was used as traditional medication for constipation and many other diseases. The leaves of cider were well known in Sunnah for their use in funeral preparation of the diseased people. In old Medina, cider trees were about as much as palm trees. It was mostly found everywhere in the old urban part of the city. Ali (1999) asserted that there was no howsh (court) in Medina that had no cider trees. Al-Manakah, Souq al-Habbabah, and Souq al-Haradj al-Qadiem were districts in which Ali (1999) still remember how densely these areas were planted with cider trees. He added ‘I could not envisage Medina without cider trees’ for a time cider trees sprinkled almost every howsh (court yard), souq (market) and corner of the city.

1.2. Al-Arak (Salvadora persica)

al-Arak is a small tree from which roots and twigs are used as natural and Sunnah toothbrush. Narrated by Abu-Hurairah that the Prophet (pbuh) said ‘if it is not that I would make it hard on my nation, I would have ordered the Siwak (roots of arak bushes) prior to each prayer (as toothbrush)’ (Moslim 1992). The tree grows in the wild, yet possess a distinguished cultural value.

1.3. Al-Athl or Tarfah (Tamarix aphylla).

In most plant manuals on Saudi flora, ‘athl’ has been used as a common name for Tamarix aphylla, whereas tarfah for Tamarix arabica. It is interesting that Medina people use the name tarfah to mean Tamarix aphylla and athal for Tamarix arabica. Arabs call the tree athl when it grow large (al-Alousi not dated). The word tarfah came from the noun tarqf (threshold or boundary) which came from the use of the plant as a tool of walling that mark the boundary of palm gardens. Al-athl tree is one of the popular tree in Medina that grow in the wild and had been for long adapted around palm gardens as a
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sometimes broken by cider trees for aesthetic reasons. Although most plant manuals have

not considered remarkable fiuits for the tree, Daoud al-Entaki has reported in (al-Alousi not dated) that
he had used athal's fiuits (small nuts) in medication. The tree was culturally and economically valuable
for Medina people until recent history where they heavily relied on its wood in most carpentry and
2. Reihan (Ocimum basilicum).
Reihan has been mentioned in Quran as one of the common plants used in the plant structure ofthe
Quranic gardens.
Allah says 'It is He Who has spread out the earth for (His) creatures. Therein is fiuit and date
plams, producing spathes (enclosing dates). Also corn, with leaves and stalk for fodder, and
Reihan (sweet-smelling plants)' (the Holy Quran, ai-Rahman: 10-12). Narrated abi-Huraira that
the Prophet (Pbuh) said 'do not ever reject to be gifted by a Raihanah, it is an elegant to carry and
delicate to smell' (Moslim 1992).
Ibn al-Qaiem said 'al-Reihan is a luscious plant that bring delight and happiness to the heart.' In the
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the flowers were used to ornament the umamah (the traditional garb that Medina people wore on

head one of which is the famed ghaballl). In addition to ornamentation purposes, the flowers' nice
smell was believed in as a steriliser and a cure for diarrhoea. The leaves were used also in Arabic
traditional medication for Ru'aaf (migraine) if mixed with vinegar. In Medina, people used to use
Reihan not as cut twigs in vases, however they were kept in pots in roof diwan (indoor diwan), in
rowshan to fragrance the prevailing breezes through the rowshall, and move them indoor whenever
needed to decorate the majlis (guest room) with fragrance and beauty (al-Turki; Raffah 1998).
3. Khardal (Sinapis arvensis).
Khardal (mustard-seed) in Quran and Hadith was used to represent the smallest particle in size in
situations when comparison between two weights is undertaken. In Quran Allah says:
"0 my son!' (said Luqrnan) 'if there be (but) the weight of a khardal and it were hidden in a rock,
or (anywhere) in the heavens on earth, Allah will bring it forth: for Allah is subtle and aware' (the
Holy Quran, Luqrnan: 16). In the Hadith narrated by abd-Allah, the Prophet (Pbuh) said: 'no
body will enter the Hellfire with a weight of khardal in his heart of faith, and no one would enter
Paradise with a weight ofkhardal in his heart of arrogance' (Moslim 1992).
In Quran, khardal is used one more time revealing the same analogy of small in size. Allah says:

.'We shall set up scales of justice for the day ofjudgement, so that not a soul will be dealt with
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unjustly in the least. And if there be (no more than) the weight of a khardal, we will bring it (to account): and enough are we to take account’ (the Holy Quran, al-Anbia-a: 16).

Arabs considered khardal as one of the most useful plants that have versatile uses in curing many diseases (al-Alousi not dated).

2.2. Equality between man and other creatures

The ‘Unitarian’ (the unity of the Unique God: Allah) aspect Islam acquired for all metaphysical and worldly, religious and secular concepts is based on the Islamic perspective on the creation. The unity of Allah is the unity of His creation (Ali 1993), not only on the basis of an ontological justification, but also on the basis of theological-cosmological rational. Allah says:

‘If there were, in the heavens and the earth, other gods besides Allah, there would have been ruin in both! but glory to Allah, the Lord of the throne: (high is he) above what they attribute to him!’

(the Holy Quran, al-Anbia: 22).

The Islamic perspective on creatures, whether living or nonliving, emanate from the basic principle that says: everything in the universe is created in due proportion and with delicate mizan (balance) (Agwan 1993), to perform in an integrated manner within the complex array of the cosmos to sustain unity and integration. The Quran says:

‘Verily, all things have we created in balance, proportion and measure’ (Quran, al-Qamar: 49). It says also ‘Not for (idle) sport did we create the heavens and the earth and all that is between!’

(the Holy Quran, al-Anbia 16; al-Dukhan: 38).

Everything in the whole universe has its order, role, and wisdom of being. The Quran is replete of verses like ‘But Allah knoweth, and ye know not,’ which emphasise the fact that man with his limited knowledge can not cogitate the wisdom of the presence of every creature on earth. When we read a verse like the one of Surat Saba (3),

‘By him who knows the unseen, From whom is not hidden the least little atom in the heavens or on earth: nor is there anything less than that, or greater, but is in the record perspicuous.’

Such a verse reinforce the Islamic perspective that there is much we as humans do not understand with our ‘limited knowledge.’ Simultaneously, the Quran encourages believers to acquire knowledge to discover various natural phenomena as a step in learning about the creation. On the basis of such understanding, man would realise, for example, the significance of not eradicating other creatures even though they may sometimes seem to be worthless in human eye’s (Ali 1993). Allah warns against arrogance that leads to an exploitative attitude toward worldly life on Earth. Allah says:
‘And on the day that the unbelievers will be placed before the fire. (it will be said to them): Ye squandered your good things in the life of the world, and ye took your pleasure out of them: but to-Day shall ye be recompensed with a chastisement of humiliation: for that ye were arrogant on earth without just cause, and that ye (ever) transgressed’ (the Holy Quran, al-Ahqaf: 20).

According to al-Shawkani (1995), arrogance here refers to refusal of acquiring knowledge that yield to the maintaining of hududu Allah (the Divine limits). Lack of thorough knowledge makes one blind to avoiding destructive courses of behaviour towards for example, desert landscapes which superficially do not appear to support much life. To do otherwise is a serious transgression of the Islamic foundational principle of respecting of all Allah’s creatures.

In Islam, man is honoured by Allah’s will. Allah says:

‘We have honoured the sons of Adam; Provided them with transport on land and sea; Given them for sustenance things good and pure; And conferred on them special favours, above a great part of our creation’ (the Holy Quran al-Esra: 70).

In this verse man has not been honoured alone and other creatures are not disparaged. On the contrary and unlike other creatures, man can be condemned with disgrace. From the divine perspective, the possibility of being honoured or disgraced is a function of Muslims’ righteousness, sincerity, and devotion in tracing the right path.

‘Seest thou not that to Allah prostrate all things that are in the heavens and on earth,- The sun, the moon, the stars; The hills, the trees, the animals; And a great number among mankind but a great number are (also) such as unto whom the chastisement is justly due. And such as Allah shall disgrace; None can raise to honour: for Allah carries out all that he wills’ (the Holy Quran al-Haj: 18).

In Islam, man is created to have equal rank to other creatures (al-Hafiz 1992; Khalid 1992). Prophet Mohammed enhanced this notion of equity between man and other creatures by prohibiting killing animals and birds for play when he said:

‘who ever kill a bird for play would be encountered with the bird in the Day of Judgement and it would say: oh Allah he killed me for play not for his good, i.e. killing for fodder, and he would be punished in a due course’ (cited in Fahs 1999).

‘The Quran and Hadith remind us,’ as Fazlun Khalid (1992) said, ‘that they (other creatures) are communities like the human community; that they are loved by Allah in the same way a human beings are loved; that they were created the same way as we were; that they are as much a symbol of Allah’s power of creation as human beings are.’ Allah says:
'He is God who created you humans and other creatures to worship Him, but only Him, animals, birds, mountains and heavens, but you don't recognise their prayers' (the holy Quran al-Esra 44).

Allah says also:

'He who gave to each (created) thing its form then, Gave (it) guidance' (the Holy Quran, Taha 49-50).

In the interpretation of this verse Yousuf Ali (1938) said: 'it was from Him that each created thing derived its form and nature, including such free-will and power as man had got.' In the other half of the verse, Allah grants guidance for His creatures (man and other living creatures alike) to find their way and to claim the means of maintaining their life on earth. Arabs, for example, know that the camel is a well adapted desert animal, not only because it endures extremely harsh environment, but also because its eating behaviour suggest so. A camel when feeding on grass and other herbaceous plants, does not go over the whole bush, but moves between bushes eating a small piece of each bush (Macquitty 1990). This behaviour is a form of what the Quran call 'guidance,' the guidance to behave according to a given limited resources. Another example of guidance is the way desert plants adapt to desert landscape. Thus, according to the Quran, each creature conforms to the guidance Allah has provided for it.

In another Surah, the Quran make it clear that each ummah of creatures know its own mode of worship within the Divine Guidance.

'Seest thou not that it is Allah whose praises are celebrated by all beings in the heavens and on earth, and the birds (of the air) with wings outspread each one knows its own (mode of) prayer and praise. And Allah knows well all that they do. And yet, you understand not how they declare His Glory' (the Holy Quran al-Nour 41; al-Anbia 79; Szad 18; al-Jum’aah 1; al-Taghabun 1; al-Hashr 24).

In the Sunnah we find several examples that set beasts equal to man for the virtue of being a creation of Allah and for worshipping Allah as man does.

It has been narrated that the prophet (pbuh) saw a folk of men talking to each other whilst sitting on the back of their beasts as if they were on chairs. The prophet (pbuh) said: 'ride them in peace, leave them in peace, and do not use them as chairs for you sitting and chatting in the market, and know, a riding beast might be more worthy than its rider and might be a sincerer worshipper to Allah than him.'

In another Hadith the Prophet (pbuh) declared how in some cases, when man is troublesome to other creatures, he might be of less value compared with other creatures. In Moslim (1992), abi-Qatadah Rubei narrated that the Prophet (pbuh) said, when passed by a funeral service,
‘he (the deceased person) would get rest or others would get ease after his death.’ The companions bewildered upon the intention the Prophet meant by His words. The Prophet responded ‘if he was a sincere believer, he would get rest of the fatigue one find himself burdened with in this life on earth, however, if he was a dissolute person, people, trees, and beasts would find ease after him is passed away.’

During the early phases of Islam, there were numerous fundamental Islamic occasions in which animals had a crucial role. When the Prophet (pbuh), for example, arrived in Medina the numerous tribes of Ansar (auxiliaries) invited Him hospitably to build His mosque on their property. He, however, maintained saying ‘leave her, i.e. His naqah (she camel), on her own for she has the command, i.e. she will kneel at the point Allah commanded her to knelt in (al-Samhoudi 1945). In another occasion, when the Prophet (pbuh) was migrating from Makkah to Medina, he went into a cave to hide from pursuers who traced him out of Makkah. While He was in there, a collared-dove built its nest and a spider spun a complete web across the entrance of the cave in which the Prophet (pbuh) and His companion Abu-Bakr al-Sidid took refuge, i.e. the presence of the nest and the web gave a clear testimony that Mohammed could not be in the cave because otherwise they would be broken. Such examples and many others in the Islamic literature express that all creatures have their roles in life that come even in the form of charisma during Prophets times.

When the Quran sets man equal to other creatures of nature, It deals with both groups at community rather than individual scale. The Quran says:

‘there is not an animal (that lives) on the earth, nor a being that flies on its wings, but (forms part of) umam (communities) like you’ (the Holy Quran, al-Anaam: 38).

The Quranic use of the term umam (communities) instead of jama'aat (groups) indicate that the Quranic categorisation of creatures is based collectively on characteristics, circumstances (Saad 1980), as well as common ideologies (al-Hassan 1992). Thus the use of ummah here is meant to include not only common physiological characteristics or living circumstances, but also ideologies and beliefs among creatures other than man. Al-Hassan (1992) asserted that among all creatures, man is the only one who decisively chose to deviate off the Divine Guidance and diverge into diverse groups under distinct ideologies.

This principal of equality among all terrestrial creatures gives humans no extra right, i.e. superiority over other creatures. The only difference that might give humans power of control and freedom of
choice is the faculty of intellect (al-Hafiz 1992). On the other hand, these two extra values were not left merely to human discretion, Islam clearly states ordinance and placed in the hands of man as amanah to ensure survival for both human and non human worlds and living and non living creatures.

In the Quran, humans are recurrently categorised under the category of dawab (plural of dabbah, which literally means animal or beast; the name, according to Lisan al-Arab (Makram not dated), comes from the verb dabba, means ‘tramp on earth’) (see the Holy Quran, Hood: 6, 56; al-Jathiah: 4; al-An’aam 38, al-Naml: 83; al-Nahl: 49, 61, Luqman: 10; al-Baqarah: 164; Fatir: 45; al-Shourah: 49; Saba: 14; al-‘Aankaboot: 60). Mujahid in al-Shawkani’s (1995) exegesis said dabbah is every living organism that lives on earth, in air, or in water. The Quran alternatively declares various definitions of dabbah, which are as follows. In surat al-Nour, dabbah is defined as a general term for all living creatures and then the Quran categorise these living creatures in term of nature of movement. Quran says:

‘And Allah has created every (dabbah) animal from water: of them there are some that creep on their bellies (like lizards); Some that walk on two legs (like humans and apes): and some that walk on four (like the majority of beasts). Allah creates what he wills; For verily Allah has power over all things’ (the Holy Quran, al-Nour: 45. The elaborating examples within brackets in this quotation are not part of this particular verse).

In another place the Quran use dabbah to refer to insects: the Quran says:

‘Then, when we decreed (solomon’s) death, nothing showed them his death except (dabbah-tu al-ard) a little worm of the earth, which kept (slowly) gnawing away at his staff: . . .’ (the Holy Quran, Saba: 14).

The Quran uses dabbah again to mean beasts as in surat al-‘Aankaboot in which Allah says

‘How many are the (dabbah) creatures that carry not their own sustenance? it is Allah who feeds (both) them and you: for he hears and knows (all things)’ (the Holy Quran, al-‘Aankaboot: 60).

After all these definition of the term dabbah, Quran in surat al-Anfal: 55, however, refer to humans as dawab as Quran says:

‘For the worst of (al-dawab) beasts in the sight of Allah are those who reject Him: they will not believe’ (the Holy Quran, al-Anfal: 55).

The Quran says ‘for the worst of beasts,’ instead of, ‘for the worst of people,’ although the subsequent verse declares that those creatures whom Allah is talking about are people, as the Quran continues:

3 Mujahid bin Jabr al-Makki, (21-104 A.H.), is one of the most knowledgeable scholars in Quran’s exegesis and Hadith. Abd-al-Salam bin Harb, al-Thawri, and al-Fadl bin Maimoun said ‘Mujagid was the most knowledgeable of Quran’s exegesis.’
‘They are those with whom thou didst make a covenant, but they break their covenant every time, and they have not the fear (of Allah)’ (the Holy Quran, al-Anfal: 56, see also verses 21-23 of the same surah).

This general categorisation of living creatures including man can be reasoned in this particular verse to the fact that all creatures, living, or non-living, homosapiens or zoogenous, are according to the Quran alike in being placed under the category of worshippers of Allah. Allah says:

‘And to Allah doth prostrate all that is in the heavens and on earth, whether (dab/xzh) moving creatures (including man ‘not part of the verse’) or the angels: for none are arrogant (before their Lord)’ (the Holy Quran, al-Nahl: 49).

In Islam, Divine justice is the chief justification for justice on earth. Allah says:

‘We shall set up scales of justice for the day of judgement, so that not a soul will be dealt with unjustly in the least. And if there be (no more than) the weight of a mustard seed, we will bring it (to account): and enough are we to take account’ (the Holy Quran al-Anbia-a: 16).

Al-Alousi said ‘there is no doubt that this justice would cover all classifications of deeds, good or evil, human to human and human to other creatures, and this is how scholars interpreted mawazin ‘scales’ in the verse, which came in a plural form’ (al-Alousi not dated). Abu-Hurairah narrated that the Prophet Mohammed said ‘rights will be submitted to their holders, even the hornless goat will be accounted for it has butted the hornless goat’ (Musnad al-Imam Ahmed not dated). On the basis of the equality Allah bestowed between all sorts of dawab (animals including man) and the fact that man is delegated with the amanah (trust), man is commanded to maintain this justice on earth among all creatures. Ancient Islamic literatures provides various examples that regulated the relationship between man and other living creatures according to Islamic law. ‘Hayat al-haiawan al-kubra’ (the great life of animals) for al-Dmairi al-Shafi’ei, and ‘tahrir al-jawab ‘an masalat dharb al-dawab’ (the answer to the issue of beating beasts) for Mohammed abd-al-Rahman al-Sakhawi are examples of early Muslim’s writings on this subject.

2.3. Natural and manmade.

Islam holds one definition for man. He is the creation of God as all other creatures, however, he has been valued for being a vicegerent of Allah on earth. For this purpose, Allah supported him with knowledge, tools of learning and discovering, and intellect that enable him to bear the amanah ‘trust.’ To bear the amanah is to construct and develop on earth according to the clear path God drawn for man.
To follow Allah’s path is to worship Allah in the way prescribed by Him, which leads to successful bearing of the amanah, i.e. life on earth (Qutb 1984). In Islamic literature, ‘man was rather understood as a specimen of nature’ (Hitoshi 1987), however, he has been considered also as a rival to God in creating another world, within Allah’s world, which western literature called ‘manmade.’ This term was adapted from the rich western literature on ‘man and nature’ in cases when a decision needs to be made upon differentiating between entities. What is natural and what is unnatural (manmade) is another dilemma that Islamic research has been involved in. In Islam, the mere consideration of the term ‘manmade’ logically contradicts the basic Islamic belief that every thing in the universe is a creation and in possession of Allah.

In theory as in practice, the predominant concept that says everything other than God, the creator of all things, is God’s creation, gives all objects at their original or transformed state the epithet of ‘makhlouq.’ The dilemma that separates ‘manmade’ and ‘natural’ does not exist from an Islamic paradigm. This is due to: i) Allah created the Earth, and its constituent materials in their original state, and also the transformed materials used by man, ii) Allah gave man the intellect and knowledge that enabled him to shape the materials, reassemble his surrounding, and produce artefacts for his own benefit, and iii) man himself is a creation of Allah. Therefore, man and nature lie within the malakout (Divine realm) of their creator, Allah. Man produces objects that have passed through aggressive cultural transformation, which change their characteristics entirely, plus objects that man has not decided to change are khalq (creation) of Allah. From an Islamic perspective, any change or alteration man pursues in nature must be undertaken, directly or indirectly, for the sake of Allah. The creative intention should always be connected to the relationship between man and his God, worshipping, spiritual exhilaration, etc. This is in contrast to Simmons’s (1993) definition of technology in which he said, ‘the practical applications of the natural sciences via human-constructed machines is labelled ‘technology’ and so embraces professions like engineering.’ Seyyed Hossein Nasr (1976), however, highlighted that early Muslims called the field of mechanical engineering, ‘àilm al-aalat al-rawahnyiah’ (the science of spiritual instruments). The reason for this name is that a Muslim observing tasks executed by machines exhilarate their spirit by marvelling at the ultimate ability of Khaliq al-khalq (the only Creator of the whole universe).

When applying this Islamic perspective to the field of landscape, gardens and farms according to a western state of mind are ‘manmade’ landscape but people in an Islamic culture can see no difference in their naturalness. This paradigm can be explained by the way people perceive man’s role in these two
landscapes. The whole process of plantation, irrigation, maintenance, and even the thinking of techniques and technology in these two landscapes are products of man, but plants are another creation of Allah, just like man himself. Thus whatever and however man intervenes in these landscapes, his role would be considered very subsidiary in comparison to that caused by Allah. A farmer, for example, seeds the earth and irrigates his field and harvest the crops, yet plants have their own biological, physiological, and genetic mechanism, which is independent of man. The role man exerts in nature is based on the delegated authority from Allah, yet he does not have the power to create, but rather to sustain the creation by the will of Allah. Man in this case is only a vicegerent of Allah. He sustains the creation of life on Earth as commanded by Allah to pursue and realise his role as vicegerent. Both man and nature lie in the integrated *malakout* (Divine realm) of Allah.

This definition of nature suggests that any positive change in the landscape, i.e. planting, farming, etc., does not set this piece of landscape apart from nature. Also Islam does not segregate between utilitarian and non-utilitarian development of the landscape, although it shows more support for utilitarian development that benefits, not only man, but to all creatures of Allah. In addition, utilitarian landscape in this sense not only means the provision of scenery, fodder, material, or shelter whether to man or to other living creatures, but also metaphysical benefits that include *barakah* (blessings of Allah), initial *adjr* (Divine reward for the mere planting), and running *adjr* (Divine Reward for every time a creature gets benefits from what has been planted). Al-Hasan bin-Ali in al-Mu’ajam al-Kabier narrated the Prophet’s Hadith (pbuh) in which He said:

‘palms and trees are blessings for those who planted them and their descendents who will look after them if they were sincerely thankful to Allah.’

In another Hadith narrated by abu-Hurairah in Moslim (1992) in which it has been reported that:

‘the Prophet’s companions used to bring Him the first portion of their crop, and the Prophet (pbuh) used to pray to Allah saying: oh Allah place your blessings in our city, in our crops, in our ‘mud and šād’; oh Allah, double your blessings on Medina. He then used to give this punch of fruits to the first coming children.’

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4 *mud* and *šād* were volume-units of measure of grains and dates that have been used until recently.
2.4. Islamic perspective on life on Earth:
Islam's perspective of al-hayatu al-dunya (life of this world or life on earth) as compared to the heavenly life is evident in the Quran and Hadith. In all Islamic literature, life on earth is denounced as valueless, secular, and profane (Zaidi 1986; al-Faruqi 1981). Attributes that give this meaning are numerous in the Quran, and can be found under the following themes:

i. 'Play and amusement.' Allah says: 'the life of this world is but play and amusement' (al-Anam 32; al-Hadied 20; al-A'araf 51; al-'Aankabout 64; Ghafir 39) and in some other verses 'enjoyment' is the term used for 'play and amusement' as in (Younus 23; al-Zukhruf 35; al-'Umran 14, al-Kahf 28).

ii. 'Deceptive life.' Allah says: 'Such as took their religion to be mere amusement and play, and were deceived by the life of the world' (al-A'araf 51; al-Jathlah 35; al-Emran 185; al-an'aam 130; Luqman 33; Fatir 5; al-Qasas 79).

iii. 'Abode of trial.' Allah says: 'Let not their wealth dazzle thee: in reality Allah's wish is to punish them with these things in this life' (al-Tawbah 55; Taha 131; Houd 15-6, al-Baqarah 212).

iv. 'False preference.' Allah says: 'do ye prefer the life of this world to the hereafter but little is the comfort of this life, as compared with the hereafter' (al-Tawbah 38; al-Ra'aad 26; al-Naze'aat 37-9; Ibraheem 3; al-A'ala 16; al-Qasas 60, al-Ahzab 28, al-Shoura 36; al-Nahl 106-7; al-Najm 29; al-Baqarah 86).

Disdain for the life on earth is rooted in the heart of all Muslims. The reason for this unique perspective is that life on earth is considered profane, whilst in Heaven is eternal life awaits Muslims (al-Faruqi 1981). Thus, life on earth is merely a means to win eternal life in the Hereafter. The early history of Islam and its rapid spread as a religion, and its political power was a function of an extraordinary belief in the Hereafter more than anything else (al-Takriti 1994). What brought all Muslims of various social and economic classes together under one belief to behave and act in secular and religious matters according to the rules of this belief is the desire and fear they possessed toward the judgement of the Hereafter. This explains Muslims' attitude toward life that shuns extravagant forms of luxury and self-indulgent in pleasure. The Quran says:

'But seek, with the (wealth) which Allah has bestowed on thee, the home of the hereafter, nor forget thy portion in this world: but do thou good, as Allah has been good to thee, and seek not (occasions for) mischief in the Earth: for Allah loves not those who do mischief' (the Holy Quran, al-Qaṣaṣ: 77).
Islam established a connection between life on earth and in heaven, i.e. secular and metaphysical. Muslims are advised that without pursuing this connection in all fields of life, they would lose the quality of life on earth, but also and more importantly the life of heaven. In other words, Muslims ought to work on earth in affirm accordance to shari’ah (Islamic doctrine), which is designed to win quality life on earth’s secular life and in heaven’s metaphysical life (Izzi Dien 1992). This justifies why life on earth has not been left to man with his changing mode, values, bias, and decisions, but rather, prescribed by Allah who created this life. Maintaining balance in exploitation of resources, for example, is an Islamic law that prevails from Quran and Hadith (Dutton 1992). The application of this law would continue to avoiding future social and economic disasters, which is a valuable secular reward. In addition, the application of this Divine law conforms with the basic and comprehensive Islamic concept of *ta’aat Allah wa Rasouluh* ‘compliance to the rules of Allah and His Messenger,’ which pertain into divine acceptance of deeds. On the other hand, Islam warns forcefully against not establishing this connection firmly between lives on earth and heaven. Allah asked rhetorically the Prophet:

"Say: Shall we tell you of those who lose most in respect of their deeds. Those whose efforts have been wasted in this life, while they thought that they were acquiring good by their works’ (the Holy Quran al-Kahf : 105). This is because ‘They know but the outer (things) in the life of this world’ rather than the deep values and wisdom placed in this life and this owes to ‘of the hereafter they are heedless’ (the Holy Quran al-Room : 7).

Thus for Muslims, life by itself is not an objective per se, but rather, good deeds that bequeaths quality Hereafter is more important. Muslims possess a sense of life which is always connected to the life in the Hereafter. This connection causes Muslims to refer all secular actions to two integrated, external and internal, forms of control (al-Bassam 1997). The external control is the whole gamut of religious rules, regulations, and laws that govern the various religious and secular, verbal and physical affairs, actions, and performances. The 6000 verses of Quran contains 500 judicial legislative verses. The comprehensive field of knowledge that cover this complex judicial system is called ‘fiqh’ (jurisprudence). Each part of a Muslim’s life has its own section of fiqh, (e.g. *fiqh al-mirath, fiqh al-sunnah, fiqh al-muqāmāt*, etc). What makes Muslims keen to obtain the correct Islamic hukm (law) in any particular religious or secular situation is to avoid the transgression of an Islamic rule that might yield to the possession of *ṣīm* (sin) and culmination of *ṣīm* might yield to the loss of the reward of the Hereafter (al-Bassam 1997).
The internal control is what is known as *al-amanah* (self conscience). In Islam, there is no interceding medium between a Muslim and his Lord. Each Muslim is thoroughly responsible for his deeds and has to perform such deeds bearing in mind that he will have to account for all his deeds. This substantial principle in Islam is called *al-Ihsan*, which is 'to worship Allah as if you see him, and to believe that if you do not see Him, He sees you.' In other words, Islam requires Muslims to be in possession of a loyal presence of conscience and self-control in conducting both secular and religious deeds at all times.

The degree of applying these two basic tools of control play a significant role in shaping Muslims' behaviour toward everything around them including the environment. The Quran clearly states this relationship between Muslim's behaviour, which is governed by external and internal controls, and the heavenly reward. Allah says:

‘They will say: Praise be to Allah, who has truly fulfilled his promise to us, and has given us (this) land in heritage: we can dwell in the garden (the heavenly paradise) as we will: how excellent a reward for those who work (righteousness)!’ (the Holy Quran, al-Zumar: 74).

In his exegesis Abu-Bakr Al-Razi clarified that the reward Muslims deserved in the Hereafter, i.e. the paradise in which they could dwell wherever they desire, is a correspondence to what they have done, as vicegerents, in what they have inherited, i.e. the Earth. Because, as it has been cited before, that all deeds that correspond with rules stated in Quran and Sunnah are rewardable. Allah says:

‘even the thorn you remove it from the way is a charity, (charity is one of the noblest and most rewardable deeds in Islam)’ as the Prophet (pbuh) says in His Hadith.

In particular cases, certain subjects in fiqh are rarely applied to modern Muslims' life despite the fact that they are an intrinsic part of fiqh. Othman al-Safi (1993) referred this as a discontinuation of particular lines of research in Islamic literature. For example, beating animals is one of the most frequently reviewed subjects in various sections of fiqh such as *al-sid* (hunting), *harams* (sanctuaries), *al-rifq bil-haiwan* (fair treatment of beasts), etc., and books that cover this subject are numerous. On the other hand, this field of knowledge was the subject of research when people were in more immediate contact with the natural environment. In modern life, the relationship between man and the natural surrounding might be considered more detached than it was half a century ago. Modern Muslims might know that it is unlawful to beat an animal, but are unlikely to know where and when, for example, they can and can not hunt or what is the difference between *haram* (sanctuary) and a *HEMA* (preserved area).
Muslim scholars agree that the Quranic purpose of advising how to contemplating nature, is to attain the ultimate and absolute reality, the almighty Allah.

Allah says:

‘Verily in the heavens and the earth, are signs for those who believe. And in the creation of yourselves and the fact that animals are scattered (through the earth), are signs for those of assured faith). And in the alternation of night and day, and the fact that Allah sends down sustenance from the sky, and revives therewith the earth after its death, and in the change of the winds,- Are signs for those that are wise’ (the Holy Quran al-Jathiah : 3-5).

How does contemplation of nature translate into a rational acknowledgement of Allah? Ibn-Rushd (cited in al-Mat'aani 1986) rationalised the answer of this question through two major logics he inferred from the Quran and called them, dalalat al-'enaiah (evidence of care) and dalalat al-ekhtera’a (evidence of creation). Man through his contemplation of nature must have thought of a God that pledged him with a duty of extreme care exemplified in infinite bounties and forces brought for man’s benefit and this is what ibn-Rushd called dalalat al-'enaiah (see al-Baqarah 29; al-Naba 6-16). And this God must be a Unique Creator who has the capability of creating the whole universe in balance and homogeneity, i.e. otherwise it would collapse (Allah says: ‘If there were, in the heavens and the earth, other gods besides Allah, there would have been ruin in both!’ the Holy Quran, al-Anbia-a: 22). This is what ibn-Rushd called dalalat al-ekhtera’a (see al-Tariq 5-7). On the basis of these two arguments, man would conclude the presence of the Unique God by contemplating His creation, nature. This conclusion would encourage believers to worship God which in Islam means to follow His (Allah) instructions and work according to His rules (al-Qattan 1983), of which nature is a major subject. Qutb (1993) came to the conclusion, as he explained the absolute reality of which he said, ‘there will be no well on earth, . . . . neither harmony with laws of nature and norms of life without humans’ behaviour and actions conforming with the laws of the Almighty Allah which He prescribed in Quran.’

2.5. Islamic laws in protecting desert such as found for example in Saudi Arabia.

Islam has flourished in desert environments. Desert, on one hand, with its limited natural resources can be extremely sensitive to human use in the absence of appropriate management. On the other hand, the fact that this region is the centre of attraction for the whole Islamic world results in a constant increase in human population. As a religion, Islam gave nature a high priority by constituting a comprehensive set of principles and laws by which the relationship between man and nature can be managed. This Islamic legal system is centred around the application of value oriented goals within the Divine norms.
Allah defined for His creation (Lewellyn 1980). The objective is to attain Divine justice among the diverse creation which according to an Islamic doctrine, would maintain continuity of life on Earth. This legal system was placed in the hand of man as amanah (trust) and man was commanded to maintain this amanah for the good of his worldly and Heavenly life. Islam through this legislative system made it clear that when man needed natural resources to realise the khilafah (vicegerence) on Earth, other creatures (nature and natural resources) became incumbent on man’s wisdom in maintaining this amanah. In other words, Islam declares a symbiotic relationship between man and nature and has attempted to regulate this relationship by a comprehensive sharâ (law) that are constituted of both hudoiid sharâ’ah (Islamic limits and rules) and mabadie wa ahkam fiquiah (juristic laws and principles). In summery, the following are the major examples of the Islamic sharâ (law) that regulates the man-nature relationship:

i) The law of khilafah (vicegrence).

As previously discussed, the Islamic perspective of the role of man on Earth flows from the belief that man is appointed as khalifah (vicegerent) of Allah on earth to sustain the terrestrial welfare of all creatures (Lewellyn 1992). The Quran informs man that he was created to be the khalifah (in the first following verse) but also warned him of the amanah (the trust) vested in him. Allah says:

‘Behold, thy Lord said to the angels; I will create a vicegerent on earth'. They said: Wilt thou place therein one who will make mischief therein and shed blood- Whilst we do celebrate thy praises and glorify thy holy (name)" he said: I know what ye know not’ (the Holy Quran, al-Baqarah: 4). See also (the Holy Quran, al-Ahzab: 72).

In most literature on Islam and the natural environment, ‘trust,’ in this verse has been mistakenly interpreted as ‘nature.’ Mohammed Al-Shawkani (1995), a well known Islamic scholar in Quranic interpretation, asserted that the interpretation of the term ‘trust’ in this verse has been a controversial issue among Muslim scholars. On the other hand, most modern interpretations have been argued on the basis of no sound reference to Sunnah, early scholars’ writings, and critical knowledge of Arabic philology. On the basis of these premises, he explained the term ‘trust’ as ‘accountability’ for duties

3 Hudoir in Quran came in two meanings, limits and verdicts. Allah says in surat al-Nissa, verse 13, after had declared the law of heritance says: ‘Those are limits set by Allah; those who obey Allah and his messenger will be admitted to gardens with rivers flowing beneath, to abide therein (for ever) and that will be the supreme achievement.’ In surat al-Baqrarah verse
and responsibilities man committed with during worldly life. One of these responsibilities is for the natural environment man inhabited and the natural resources he made use of. As has been discussed before, whilst man does not have the right to subjugate nature nor is nature sacred. 'Islam’s theory of nature,' as Ismail al-Farouqi (1981) highlighted ‘stands in a golden mean between these two extremes.’

On the basis of this premises, man has the right to use nature and natural resources in the way that correspond with al-mabadi wa al-ahkam al-fiqiah (juristic rules and principles) and without transgressing al-hudoiid al-shariliah (Islamic limits). Allah says:

‘... those are limits set by Allah: and any who transgress the limits of Allah, does verily wrong his (own) soul: thou knowest not if perchance Allah will being about thereafter some new situation’ (the Holy Quran, al-Talaq: 1). He says also: Section (7) ‘... therefore fear not men, but fear me, and sell not my signs for a miserable price. If any do fail to judge by what Allah hath revealed (of rules and laws), they are the unbelievers’ (the Holy Quran, al-Maediah: 44).

Islam, on the other hand, restricts man’s use of nature on the basis of ‘usufruct’ which give man the right of using natural resources without causing or being involved in the cause of damage, destruction, or waste of elements of nature (Khalid 1992). This refers also to the lawful use of nature that lead into an unlawful action. To create a plantation of grapes in origin is a lawful activity, but when grapes are planted to make wine (unlawful action), then the use of the natural resources according to fiqh al-maqsid (doctrine of intention) in this case become unlawful.

Another well established argument in this area of research is the debatable notions enacted around the definition of the term khalifah in Islam. Allah says:

‘Behold, thy Lord said to the angels; I will create khalifah (a vicegerent) on earth. They said: Wilt thou place therein one who will make mischief therein and shed blood- Whilst we do celebrate thy praises and glorify thy holy (name)? he said: I know what ye know not’ (the Holy Quran, al-Baqarah: 30).

Much of contemporary Islamic literature suggest that it is axiomatically justifiable to argue that the position Allah designated for man on Earth is khilafah. According to this literature, the purpose of this khilafah is for man to construct, and develop Earth (see, for example, Nasr 1990; al-Farouqi 1981; Zaidi 1986). On the other hand, Muslim scholars and interpreters of Quran like al-Qurtubi (1960), al-Shawkani (1995), ibn-Kathier (not dated), al-tabari (not dated), had made it clear that the interpretation of the term khalifah from a linguistic and doctrinal point of view is the vicegerent of Allah in applying

229, Allah says after had detailed the law of divorce, ‘... these are the rules ordained by Allah; So do not transgress them if any do transgress the rules ordained by Allah, such persons wrong (themselves as well as others).’
His rules and laws among His creatures including man. Jaafar Idris (1990), who did not come to a clear conclusion in his search for an Islamic doctrinal intention of khilafah, supports this interpretation. In contrast to many Muslim scholars, he argued that khilafah meant to be what an individual or a nation inherits of culture and believes from precedent individuals or nations. Saied Qutb, on the other hand, asserts that whether the Muslim is khalifah for Allah or khalifah for precedent nations, he by the possession of khilafah would apply the Divine doctrine in which nature is a remarkable component. Allah says:

‘He it is that who has made you inheritors in the earth’ (the Holy Quran Fatir: 39).

Al-Razi (not dated) explained that the implicit meaning of the use of the plural form of the word “inheritor” in this verse is Allah created humans as vicegerents on earth to bequeath their knowledge and role in Earth from generation to generation. The reason the Quran overstated such socio-cultural phenomenon in many verses is to alert Muslims against bequeathing inferior models of ideologies to future generations. According to Al-Alousi (not dated) this is part of the amanah ‘trust’ that Muslim commanded to maintain.

Khilafah has not been also granted to all sons of Adam (the one who symbolised human race in the verse of al-Baqarah: 30, but is associated with two primary conditions: sincere faith and righteousness. Allah declares that when these two conditions are not fulfilled, khilafah would not be granted. When a Muslim abandons sincerity in faith and righteousness in work, he would lose khilafah, and by losing khilafah, he would lose the ruling of Allah, (i.e. another secular doctrine would be put in practice), which is designed chiefly to maintain balance and justice in Earth (in both man-man and man-nature relationship). And when this happens man would lose in both lives: the worldly and Heavenly life.

‘Allah has promised, to those among you who believe and work righteous deeds, that he will, of a surety, grant them in the earth, inheritance as he granted it to those before them; That he will establish in authority their religion-The one which he has chosen for them’ (the Holy Quran al-Nour: 55; Younus: 14; Fatir: 39; al-An’aam: 165; al-Naml: 62).

Else where in the Quran, images of the deplorable end of those who refused the ruling of Allah and how their knowledge and power has not prevented the collapse of their civilisation caused by rejecting Allah’s rules. Allah says:

‘Do they not travel through the earth, and see what was the end of those before them they were superior to them in strength and knowledge: they tilled the soil and constructed it more extravagant than these have done: there came to them their messengers with clear (signs), (which they rejected, to their own destruction): Allah it was not who wronged them, but they wronged
their own souls' (the Holy Quran al-Roum: 9).

Qutb (1982) declared that knowledge in the Quran does not merely gesture to forms of secular epistemology a Muslim as a khalifah ought to possess, but more critically to the knowledge that follow the Divine path which lead into happiness in both abode: the one on earth and one in Heaven.

Thus, it might be concluded that khilafah is a task Allah destined for man on the terms of bringing the Divine ruling in practice. The role of man being Allah’s khalifah (vicegerent or steward) on earth does not grant him the privileged standing of superiority. This should not also grant him the right to subjugate nature to the extent of destroying its natural system (Idris 1990). On the contrary, he, man would be accounted for this position as a khalifah, not only on earth, but also on himself and his ummah (nation). The sincere and concise execution of this khilafah would warrant prosperity in both terrestrial and celestial lives and for both, man and nature.

ii) The law of prohibiting ifsad (corruption).

A very relative subject to khilafah is the principal Islamic law that prohibits ifsad in all its various forms. Not only in human-human relationship, but also in human-nature relationship ifsad is prohibited. Large bodies of law nowadays are invented and regularly reviewed to maintain minimum negative impact on nature (Simmons, 1993). In Islam, the prohibition of involvement in ifsad is considered as a comprehensive law that includes all negative practice towards the environment. Allah says:

‘Do not mischief on the earth, after it hath been set in order, but call on him with fear and longing (in your hearts): for the mercy of Allah is (always) near to those who do good’ (the Holy Quran al-A’araf: 56; al-A’araf: 85; Mohammed: 22; al-Baqarah: 11-12; al-Baqarah: 104-105; al-Naml: 62).

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6 Qutb (1982) declared that the illiteracy that the Quran fought in many locations in the Quran is not of science or other forms of secular knowledge, otherwise the Quran would have logically specialised in such themes. If this assumption, on the other hand is true, the Quran might not have called other ancient civilisations, such as Egyptian as ignorant despite its obvious advancement in various fields of knowledge as opposed to the Arabs at that time. The Quran, on the other hand, ranked both, Egyptian and Arabs, as illiterates and ignorant (see al-Roum 9-10). Thus, illiteracy according to Islam is not a measure of realising success or failure in possessing secular knowledge, however and according to Qutb (1982), illiteracy is defined by a nation’s commitment to the divine path, the precise following of the heavenly acute doctrine, and the sincere embrace of the Islamic principles in both secular and religious affairs. Allah says:

‘O ye who believe! obey Allah, and obey the messenger, and those charged with authority among you. If ye differ in anything among yourselves, refer it to Allah and his messenger, if ye do believe in Allah and the last day: that is best, and most suitable
Quran is full of parables that depict how those people who committed *ifsad* in Earth had received the due punishment. The story of the king Qaroun who mischief in earth and Allah eventually gave him what he deserved of punishment: the Quran says:

‘... then we caused the earth to swallow up him and his house and had not the least little party to help him against Allah, nor could he defend himself’ (the Holy Quran al-Qassas: 76-81).

The Sunnah additionally is replete of examples that show forms of *ifsad* in earth and demonstrate how Muslims should avoid such actions. The Prophet said:

‘do not cut trees or Allah would spell His banishment on you’ (cited in Fahs 1999).

The Prophet (pbuh), for example, forbade Muslims to waste water even in washing for prayer on a bank of an abundantly flowing river’ (Musnad al-Imam Ahmed). Cutting trees in battles was also considered as one of the prohibited forms of *ifsad* (a law extracted form the breach of abu-Bakr al-Sedieq, the second Wise Caliph). ‘Muslims are taught to eat the fruits of trees without breaking their branches, to avoid polluting standing water with impure things, and are encouraged to grow a plant even if the day of Judgement were to come tomorrow’ (Agwan 1993). Allah says:

‘Those who, when they spend, are not extravaganat and not niggardly, but hold a just (balance) between those (extremes)’ (the Holy Quran al-Furqan: 67; al-An’aam: 141).

iii) The general principle of Adjar (Reward) for producing sound landscape.

In the Prophetic Sunnah it is evident that, for Muslims, the authentic aim of planting and gardening is not only production, creating profits, and pleasure, but rather, the profound objective had always been attached to the desire of winning divine reward. The story of abi-Addahdah in Moslim (1992) gives an example of how Muslim’s belief in the reward of the Hereafter had played a significant role in the shaping of nature’s culture in Medina.

‘a boy came to the Prophet (pbuh) complaining against his neighbour abu-Lubabah. The boy said, ‘my garden would not have a straight wall except by enclosing a palm tree located in the flank between mine and my neighbour’s garden. The prophet pointed to abu-Lubabah and said: ‘would you like to abandon this secular palm for a palm in the Heavenly garden. The neighbour, for he was in an intense state of anger, refused the Prophet’s deal. Abi-al-Dahdah, was sitting near by and heard the whole story, said to the abu-Lubabah: ‘would you trade your palm for the whole palms of my garden, (it was said that abu-al-Dahdah’s garden walled 600 palm trees.’ Abu-Lubaba’s response came with acceptance. The Prophet said ‘the best *raddh* (cluster of

dates) in paradise is the one of abi-al-Dahdah. Abu-al-Dahdah went home and shouted at his wife, 'oh um-al-Dahdah pack our stuff and gather our children for we have sold our haqit for a palm tree in paradise. Um-al-Dahdah shouted 'this is the profited trade' (cited in Moslim 1992).

In Medina gardens, such seeking of reward had found different forms of applications. Farmers, for example, used to allow people passing by to come in and eat from their gardens for free (al-Turki 1998). It was a tradition that can be traced back to the Prophetic time (pbuh). In Jam'a al-Fawaeid (the collection of avails), ibn-al-Qaiem al-Jawziah (not dated) cited the story of Rafi'a bin a'amru in which he said:

'I used to steal dates of al-Ansar (ancillaries, people of Medina who gave support to the Prophet who later, pbuh, immigrated to their land), and it happened that they caught me and took me to Allah's Apostle. The Prophet (pbuh) said 'what force you to do that oh Rafi'a,' he said 'oh Allah’s Apostle, it is the hanger.' The Prophet (pbuh) said 'do not steal but eat of what fall from trees, Allah will satisfy your hanger and thirst.'

iv) Laws attached to religious performances.

In Islam, there are several Islamic rituals that postulate particular restrictions on use of natural resources. One of these examples is the Hadj (pilgrimage) during which Muslims refrain from hunting, cutting tress, etc., not only in Maccah but at all the time they are in the costume of the Hadj. As narrated by ibn-Abbas, the Prophet said (pbuh):

'any one of you who would perform Umrah (a religious journey to Maccal or Hadj (pilgrimage to Maccal and assumed Ihram (the white special loincloth of Hadj and Umrah) should refrain from hunting, and should not cut plants' (bin-Hajar 1986).

The same meaning is found in the Quran as the Quran says:

'But forbidden is the pursuit of land-Game: -As long as ye are in the sacred precincts or in the state of pilgrimage and fear Allah, to whom ye shall be gathered back' (the Holy Quran, al-Maeidah 96).

Another Islamic season during which Muslims exercise less intense exploitation of nature is the month of Ramadan. During this month, Muslims are advised not only to refrain from indulging in forms of pleasure like eating, drinking, mating, etc., but also to disregard the material life, to substantiate peaceful behaviour toward all his surrounding. Ibn-al-Qaim al-Jawziah says 'Ramadan is a month that assists clearing the mind and purifying the soul of the monotony of everyday routine and life affairs. Such situations fit perfectly instances in which a Muslim should exploit by spending time in meditating signs
Allah placed in His creation.' Agwan (1993) highlighted that 'the whole universe is a book in which the phenomena of nature are written in the form of ayat (Divine signs)’. Allah says:

‘Behold in the creation of the heavens and the earth... (here) indeed are signs for a people that are wise’ (the Holy Quran: 164).

Another approach Islam follows in controlling Muslims' interaction with nature is attained by bringing Muslims close to nature during religious seasons and performances. During these events, souls are spiritually saturated and associated with special behaviour involving humbleness, devotion in practising good deeds, and renouncing worldly pleasures (Qutb 1993). Most Islamic religious performances are required to be performed in the midst of nature to get man out of his cultural world and make him equal to other creatures. The three days pilgrimage to Maccah, the performance of salat al-estisqa (a prayer to induce rain), and salat al- ā'yād (festive prayer) are all prescribed to take place in the natural environment. The wisdom of such practice involves experiencing the natural phenomena and beauty of nature in the natural setting that Allah created.

During the rainy season, for example, when rain has been delayed, salat al-estisqa (a rain inducing prayer) would be the feverish appeal to the Divine munificence to send the blessed water that would water gardens and bring life to earth (Agwan 1993). In Fiqh, salat al-estisqa is an assured Sunnah not only on gardeners and farmers, but on each Muslim individual as a part of social solidarity amongst Muslims. The arrival of the rain after salat al-estisqa is a relief, not only to gardens and cattle, but also for Muslims’ relationship with Allah as it would be a sign of an appeal has been accepted by Allah. For this reason, Muslims in Medina call the rain ‘rhamt Rabie’ (the blessing of my Lord: Allah) (al-Turki 1998).

v) The law of haram.

Haram (sanctuary) in Islam is a designated region within a specific easement in which no hunting, cutting trees, etc., is allowed in order to protect the natural environment against human exploitation. The objective of haram is the protection of particular areas for the public good. Ibn-Abbas narrated that

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7 In Islam, there are two Eids (festive): Eid al-Fitr (festive of breakfast) which is the first day of the month of Shawal (the tenth month of the Islamic Hijrah calendar) that follows the month of Ramadan (the ninth month) in which Muslims are required to fast from eating, drinking, mating, engaging idol talk, hunting between sunrise and sunset. The second Eid is Eid al-Hadj which is the tenth day of dhu-al-Hidjah month (the twelfth month) in which the Islamic nation celebrate the day in which Muslims who are performing Hadj (pilgrimage to Maccah) has finished their stay in Arafat mountain in Maccah the day before.
the Prophet Mohammed (pbuh) said: 'it is the haram’s thorny bushes are not allowed to be cut off,' (Khan 3, no date). Khan elaborated that 'it is not permissible to cut, not only trees and shrubs, but even thorny bushes that grow naturally in the wilderness within a haram' (Khan 3, not dated). The application of this law was first introduced in Maccah as the Quran says:

‘And remember Abraham said: My Lord make this a city of peace, and feed its people with fruits’ (al-Baqarah 126). And says: ‘O our Lord! I have made some of my offspring to dwell in a valley without cultivation, by thy sacred house’ (the Holy Quran, Ibrahim: 37). And says also: ‘we have not established for them a secure sanctuary, to which are brought as tribute fruits of all kinds’ (the Holy Quran, al-Qasas: 57).

Narrated Sa’ied bin abu Sa’ied al-Maqburi: Abu-Shraih al-Adawi said that he had said to Amr bin Sa’ied when he was sending the troops to Mecca (to fight Abdullah bin Azzubair): ‘Oh chief, allow me to tell you what Allah’s Apostle (pbuh) said on the day following the Conquest of Maccab. My ears heard that and my heart understood it thoroughly and I saw it with my own eyes. The Prophet (pbuh), after glorifying and praising Allah, said: ‘Allah not the people made Maccab a sanctuary, so any body who has belief in Allah and the Last Day should not shed blood in it, neither should he hunt animals, nor should he cut down its trees’ (Khan 3, not dated).

Medina was the second city designated as a haram by the Prophet (pbuh). As narrated by Anas the Prophet Mohammed (pbuh) said:

‘Medina is a sanctuary from that place to that one (pointing to Auhud and Eir mountains). Its trees should not be cut and game should not be chased and no heresy should be innovated, nor any sin should be committed in it. Whoever innovates in it a heresy or commits sin; then he will incur the curse of Allah, the angels, and all people’ (Khan 3, not dated).

Abu-Huraira also narrated that the Prophet Mohammed (pbuh) said:

‘I have made Medina a sanctuary between its two harrat (the volcanic lava area on the east and the west of the city) and its two mountains (Eir in the south and Auhud in the north of the city). He went to the tribe of Bani Haritha and said to them: ‘I see that you have gone out of the sanctuary’ (he meant outside Medina). But then he used to look around and said: ‘no you are inside the sanctuary’” (Khan 3 not dated).

In Musnad al-Imam Ahmed (not dated), Ali bin-abi-Talib added ‘who ever innovates in it a heresy or commits sins (bad deeds) then he will incur the curse of Allah, the angels and all the people. Medina is a sanctuary between its two harrat, so its trees should not be cut, no games can be chased, and no one is allowed to occupy animal’s territories.’
A Madani poet, Saied Amien Kutbi wrote expressing the value of the Medina as a sanctuary:
Its visitor would find refuge, and likewise is its games,
And its trees are the most cohesive in Allah’s wise creations.
If one learned about its sacredness,
Thee would stick to the behavioural norms, righteousness, and extol its status.
Scholars have wrote the most precious volumes,
How much victory one would gain by only tracing these writings and learning from them.

The designation of *haram* on an area does not restrain the use of the landscape for pasture and fodder production. This is evident in Hadiths narrated by Audai bin-Zaid:

‘the Prophet Mohammed (pbuh) designated all parts of Medina as Haram (sanctuary), so it is unlawful to cut its trees neither in parts, nor as a whole except for what the cattle graze.’

Jabir bin-abd-Allah narrated that he heard the Prophet Mohammed (pbuh) to have said:

Medina and Mecca are alike, i.e. *haram*, nobody is allowed to cut trees except for fodder, but hunting is absolutely prohibited within the boundaries of the sanctuary’ (in Musnad al-Imam Ahmed not dated). In al-Muata’a of Malik, it has been elaborated that ‘even in the case when the game is chased initially beyond the boundaries of the easement, once it enters the boundaries of the *haram*, the chase must be ceased.

Another scale of *haram* relates to biologically sensitive areas around significant natural resources like streams, forests, wadi courses, etc (Lewellyn 1992). In such areas the level of human’s development and exploitation of material is zoned according to the sensitivity of various patches in the landscape, i.e. development could vary between prohibited, restricted, allowed according to the sensitivity of areas within the landscape.

vi) The law of *hima*.

Hima is an Islamic tradition established by the prophet Mohammed (pbuh) for the purpose of conserving biologically sensitive landscapes against exploitative activities of man. Its chief objective is to provide protected diverse natural habitats for particular fauna and flora to grow and reproduce freely without humans’ interference (Lewellin 1992; Grainger and Ganadilly 1986). Early examples of *himas* were of different sizes and served various purposes like seed stocks, honey production, offering secure zones for wild animals to breed, and feed. The selection of a Hima is a function of three factors. Firstly, *hima* can only be applied to a public land. Secondly, it must be located in a reasonably rich
environment that can naturally support the intended wild animals or birds of the hima. Thirdly, all humanistic exploitation and use of hima are restricted (Dutton 1992). Historically the way forebearers used to determine the boundary of a hima was by letting a dog bark on the highest point in the middle of a landscape. The farthest point one can hear the dog’s bark would be the far this boundary could go (ibn-Hajar, 5 1994). As narrated by Assa’b bin-Jatham said that Allah’s Apostle (pbuh) said: ‘no hima except by Allah and His Apostle.’ Assa’b reported that the Prophet (pbuh) made a place called Annaqie as hima, and Umar made Asharraf and Arrabtha as hima’ (Khan 3, not dated). This Hadith established the rule that gave the Imam (the ruler) the right to assign stretches of landscapes for hima, when the public does not possess this right except, as ibn-Abbas noted, by a landlord in his own private land. This kind of private hima was very common in Medina from the time of the Prophet’s time to the middle of the last century. In the near past (early twentieth century) in Medina, Aàican (wealthy groups of the citizens) of Medina used to buy fertile pastures and turn them into hima such as the ‘hima of retired beasts of burden’ (al-Turki 1998; Sairafi 1998). In some other cases private palm orchards are turned into hima such as the hima of Wild Birds (al-Enizi 1998). Sheikh al-Enizi says ‘it is a bequeathed tradition in Medina where people seek the divine reward with these helpless creatures. Some families made the decision in the past to create hima for beasts, others offered it for wild animals and some others arranged it for birds like our farm’ (al-Enizi, 1998).

vii) The law of developing the land: ihyā‘ al-mawat, iqta‘.

One of the unique Islamic principles that may yield Divine ādir (reward) in its two forms, initial and continuous, that has become inoperative today, is ihyā‘ al-mawat (revival of and giving life to earth). Al-Imam ibn-Hajar al-'Aasqalani (1994) defined ihyā‘ al-mawat as a parcel of a public land for which Muslims voluntarily take full responsibility for the complete or partial revival to the land by facilitating particular kinds of development such as managing, irrigating, planting, and/or farming with the permission of the local wāli (governor). As narrated by Aisha, the Prophet Mohammed said:

‘who ever cultivates a derelict parcel of land that does not belong to anybody and bring it to the state of life, he will possess it.’ Urwa said: ‘Umar gave the same verdict in his Caliphate.’ Ali had the same opinion concerning such land in Kufa (a city in Iraq). Umar and ibn-Awfnarrated similar Hadiths’ (Khan 3, not dated). Jabir added ‘who ever revive a parcel of land, he will receive a reward and the reward of al-āawāfi (living creatures like animals and birds) who ever get benefit out of it’ (cited in ibn-Hībban; asserted by the Hadith of umu-Salamah; Hadith Anas is of the same meaning in al-Bukhari 1991). Ibn-Hajar (1994) declared ‘this reward, which comes under the category of charity, would continue even in the case when ownership move to
another person and when the original owner pass away.’ Some scholars have come to the conclusion that ḥyāa al-mawat can be applied at various scales; from the size of a garden to a plantation of a single tree. Anas bin-Malik narrated that the Prophet Mohammed said: ‘there is none amongst the Muslims who plants a tree or sows seeds and then a bird, or a person or an animal eats from it, but is regarded as a charitable gift for him’ (Khan not dated).

viii) The principle of charity: waqf, sabyil.

Waqf is one of the widest fields of charity that include various kinds of endowments. In relation to nature, waqf has historically been facilitated in diverse ways to benefit wild fauna and flora. The Prophet Mohammed (pbuh) is the first who established this tradition in Islam. Omar bin-al-Khattab narrated that the Prophet Mohammed (pbuh) said: ‘give those trees as a whole in waqf (endowment) so that those might not be sold but their fruits can be spent and given in charity’ (Khan 3 not dated). Many gardens and pastures in Medina were dedicated as waqf to wild birds and retired beasts. Drinking ponds were built as sabyil around gardens for wild birds and animals. These waqfs and sabyils aimed Divine reward and created life examples within humans domain, which remind Muslims of their responsibility toward other creatures. In addition, these waqfs and sabyils created nodes around which wild fauna and flora reproduced and prospered in the desert landscape (figure 2.1).

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Figure: 2.1, top, ruins of ancient garden-waqf in the desert around Medina in which rain water dams and channels were built to enhance plants life on which insects, birds, and animals inhabited as sanctuaries. On the bottom left, ruins of humans-drinking-water-sabyil; on the bottom right, birds and animals-drinking-water-sabyil built in the early 1900s.
ix) The law of treating animals.

In contrast to the modern ruthless treatment of wild and domestic animals whether in the name of food production, sport, pleasure, or scientific experiments (Khalid 1992), Islam established a comprehensive judicial layout that regulates the relationship between man and other living creatures. The Quran and Hadith are replete of parables that teach Muslims how to treat living creatures, the Divine reward for doing so, and the fair punishment for those who do otherwise. Islam only allows the killing of a living creature for a lawful reasons sanctioned by Allah. This is true even for living creatures, e.g. lizards and snakes, considered to be of no value to humans; there is no one Hadith or verse in Quran that command Muslims to eradicate lives of such creatures. Aishah narrated:

‘Allah’s Apostle called the salamander a slicker but I have never heard him ordering it to be killed’ (Khan 3, not dated).

Even in cases when man exercise a lawful use of animals like killing for food for example, Islam highlights in detail how can such inevitable human needs be attained by causing as little anxiety and pain to the animal as possible. The major reason is that man has no authority on other living creatures, but by the permission of their creator, Allah. He is the one who granted man the right of benefiting from these creatures as food, therefore and according to the Islamic doctrine He must be asked for permission for using this right or other wise man should not be allowed to use this right. Slaughtering an animal in Islam, for example, must be initiated by mentioning the name of Allah, e.g. the butcher must utter ‘Bismi Allah (By the name of Allah), the most Gracious, the most Merciful,’ i.e. only by permission of its creator. Izz-al-Dien ibn abd-al-Salam (cited in Lewellin 1992) formulated this relationship between man and other living creatures on the basis of Prophetic Hadith (pbuh):

‘The rights of livestock and animals upon man:
These are that he spend on them the provision that their kinds require, even if they have aged or sickened such that no benefit comes for them; that he not burden them beyond what they can bear, that he not put them together with anything by which they would be injured, whether of their own kind or other species, whether by breaking their bones or butting or wounding; that he slaughter them with kindness; that when he slaughters them he neither flay their skins nor break

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8 It has been widely believed among the public that the killing of the gecko or salamander is a deed of charity for it directed the people of Quraish to the cave in which the Prophet (pbuh) and His fellow took refuge at the time they were chased by Quraish, who were trying to kill them before immigrating to Medina. The raven has been also detested by the public for being believed to has played a similar role in the same event. The parable has been obviously faked for the voice these two creatures utter coincided meaning in Arabic like ‘suh’ for the gecko means ‘a sound released by the mouth to gesture no, i.e. no, not this way,’ and ‘ghar’ for the raven which means ‘cave, i.e. they are in the cave.’ These two stories have no genuine background as neither have been supported in the Quran, neither in Sunnah, nor in the literature of early scholars.
their bones until their bodies have become cold and their lives have passed away; the he not
slaughter their young within their sight but that he isolate them; that he make comfortable their
resting places and watering places; that he put their males and females together during their
mating seasons; that he not discard those which he takes as game; and neither shoot them with
anything that breaks their bones nor bring about their destruction by any means that renders their
meat unlawful to eat.'

These statutes against the physical abuse and torture of animals, also include the harm one might
impose on animals' natural habitat. Irresponsible cutting of trees on which wild bees, for example, feed
on is considered as a harm, a sin that will incur punishment. The following Prophetic Hadiths are few
examples that exemplify early Muslims' lessons on human-non human living creatures relationship:

Ibn-‘Asakir in his writing on the biography of abu-Bakr al-Shibri, recited the story that took place with
his fellows after his death. He said:

‘when al-Shibri died, one of his fellows saw him in a dream smiling, he asked him, ‘what have you
found from your Lord that positioned you in such happiness. He said ‘forgiveness.’ He said ‘what was
it that Allah forgave all of your sins.’ He said ‘my Lord asked this same question and I responded, ‘was
it my Lord because of my sincere worshipping and total submission to your Almighty destine;’ He said
no. I said ‘was it my Lord because of my unremitting seek of knowledge and search for science;’ and
He said no. I said ‘was it my Lord because of my late prayers performed when others were at night
sleep;’ and He said no. Then Allah said ‘I offered you my total forgiveness for a cat you found in one
of those cold winter’s nights of Baghdad and you voluntarily took her back home and offered her warm,
food, and shelter.’

ibn Abbas narrated the Prophet Mohammed (pbuh) said: “‘Allah has made Macca a sanctuary. It is not
permissible to uproot its shrubs or to cut its trees, or to chase (or disturb) its game or to pick up its
luqata (lost and found objects) except by a person who would announce what he has found publicly.’
Ikrima said ‘do you know what ‘chasing or disturbing the game means? He continued: It goes in
meaning as far as driving an animal out of its shade to occupy its place’” (Khan 3, not dated).

As narrated by bin Yosuf, abu-Huraira said: ‘if I saw a deer grazing in Medina I would not chase them,
for Allah’s Apostle (pbuh) said ‘Medina is a sanctuary between its two mountains’” (Khan 3, not dated).
The Prophet is reported to have said: ‘all creatures are Allah’s dependants and the most beloved to
Allah among them is he who does good to Allah’s dependants’ (cited in Izzi Dien 1992).
Abu-Huraira narrated of the Prophet (pbuh) (in Sahih Moslim 1992) that ‘a prostitute had received an entire forgiveness from her Lord for she found a thirsty dog in her way licking the earth of the extreme thirst it was in, and she went down a well and pored some water for it to drink.’ In another Hadith Narrated by Abdullah bin-Umar, the Prophet (pbuh) said: ‘a woman was tortured and was put in Hell because of a cat which she had kept locked until it died of hunger.’ Allah’s Apostle further said: ‘she did not feed nor water it when she locked it up, nor did she set it free to eat by its own’ (Khan 3 not dated).

It has been reported of the prophet to have said: ‘a thirst to death man descended down a water hole to drink. When he ascended up he found a dog licking earth of thirst, he said this dog has reached the same level of thirst I had, he went down the well, filled his shoe with water and let the dog drank, then companions asked, are we to be rewarded for beasts, the prophet said, reward is due to deeds done against all living creatures.’ It has been said in ‘Mishkat al-Masabih’ that ‘a good deed done to a beast is as good as doing good to a human being; while an act of cruelty to a beast is as bad as an act of cruelty to a human being’ (cited in Khalid 1992).

As narrated by Abdullah ibn-Jafar ‘the Prophet (pbuh) asked whose camel is this? One of al-Ansar said ‘oh Allah’s Apostle, it is mine.’ The Prophet said ‘don’t you fear Allah in this beast as you do not feed it enough, and work it all day and night. . . .’ (in Musnad al-Imam Ahmed).

‘Some of the companions of the Prophet (pbuh) snatched at the young ones in the nest of a bird called in Arabic hammarah. When the Prophet (pbuh) saw the mother bird hovering above in grief he asked who has hurt the feelings of this bird by taking her young and ordered them to return the fledglings to the nest’ (cited in Khalid 1992).

‘The Prophet said ‘if you passed by a green pasture, enable the teeth of your beasts (i.e. let your beast free to feed on the pasture)’ (Musand al-Imam Ahmed).

abu-Huraira narrated that Allah’s Apostle said: ‘keeping horses might be a source of reward to some (man), a shelter to another, i.e. a means of earning one’s livelihood, or a burden to a third. He to whom the horse will be a source of divine reward is the one who keeps it in Allah’s sake. When he ties it by a rope in a pasture or a garden, he will get a reward equal to what its long rope allows it to eat from the pasture or the garden. If the horse broke its rope and crossed over the hills, then all its footsteps and its
dung will be counted as good deeds for its owner. If it passes by a river and drinks from it, then that well also be regarded as a good deed for its owner even if he has had no intention of watering it.’ Then the Prophet (pbuh) was asked ‘is this special for horses only but not other animals i.e. horses are nice looking beasts compared with donkeys, for example.’ He replied reciting from Quran saying ‘this is the most comprehensive verse that would declare the answer to you: ‘on that Day (the day of judgement) will men proceed in groups sorted out, To be shown the deeds that they had done. Then shall anyone who has done an atom’s weight of good, see it! And anyone who has done an atom’s weight of evil, shall see it’ (the holy Quran, Khan 3, not dated).

Abu-Huraira narrated that the Prophet Mohammed said: ‘one of the she camels’ rights is, she should be milked at places of water,’ (i.e. it can drink at time of milking).

Abdullah bin Maghaffal narrated that he saw a man throwing stones with two fingers (at something) and said to him: ‘Do not throw stones, for Allah’s Apostle (pbuh) has forbidden throwing stones. Throwing stones will neither hunt the game nor kill it, but it may break a tooth or gouge out an eye’ (Khan 7, no date: 283).

ibn-Umar narrated that he entered upon Yahya bin-Sa’ied while one of Yahya’s sons was aiming at a tied hen. Ibn-Umar walked to it and untied it. Then he brought it and the boy and said: ‘would you teach your boys not to tie birds as targets of shooting, for I have heard the Prophet (pbuh) forbidding the killing of an animal or other living beings after tying them’ (Khan 7, not dated).

Khan (not dated) said: “the Prophet (pbuh) forbade restrictedly al-Muthla, al-Masbura, al-Nakh’ a, and al-Mujaththama.” He added ‘al-Muthla is the amputation of all or part of the limbs of an animal while it is alive. Al-masbura is the animal that is shot by an arrow or something else after it has been caged or tied. Al-Mujathama is the tied animal that is used as a target. Al-Nakh’a is cutting the spinal cord when slaughtering an animal. He, however, insisted: ‘when you slaughter your animal, sharpen and hide your blade and relax the animal i.e. lay it in the right position.’

Abdullah narrated that ‘once we were with the Prophet Mohammed when he camped in a place and went for a while looking around. When He came back, he found a fellow making a fire on an ant colony. The Prophet’s face showed signs of anger and said (pbuh): ‘who did that,’ we pointed out the person who did it. He said ‘extinguish your fire, be acquainted that by the will of Allah, those you are
hurting are living creatures just like yourself; they worship Allah as you do’ (in Musnad al-Imam Ahmed). Aishah narrated: ‘once I cursed a camel while riding it, when the prophet heard me said: ‘do not ride it’” (Musnad al-Imam Ahmed)).

x) The law of husbah (control).

Islam entitles the wāli (governor) to inspect the Islamic code of control (extracted from the Islamic jurisprudence) among the individual Muslims in all fields of life in any Islamic state. Allah says:

‘O ye who believe! obey Allah, and obey the messenger, and those charged with authority among you. If ye differ in anything among yourselves, refer it to Allah and his messenger, if ye do believe in Allah and the last day: that is best, and most suitable for final determination’(the Holy quran, al-Nisa 59;).

Husbah was established in the past to inspect the application of the Islamic laws related to public affairs such as street and market unethical business practices, building construction, neighbours’ conflicts, animal abuse, etc., (Izzi Dien 1992). This Islamic institutional device of control has not been developed for the systems of the modern state. Othman Lewellin (1992) suggested that if the office of husbah was restored in the modern Islamic states in general and in desert reclamation in particular abuse of nature would be more efficiently controlled. In Islam, laws that maintain natural balance are clearly formulated even against human activities like farming. In a Hadith narrated by Jabir ibn abd-Allah in Moslim (1992), as an example, the Prophet forbade keeping excessive water in gardens after rain and preventing this from flowing to kalāa (a ground cover of herbaceous plants that grow naturally in the desert). Al-Imam al-Nawawi (not dated) commented in his interpretation of this Hadith saying ‘even in the case when there is no other source of water to irrigate such kalāa in the desert on which the wildlife might need to range on, the Prophet (pbuh) prohibited garden landlords restraining this excessive water from flowing to the surrounding wild landscape or to sell it for money.’

Inb-Hajar al-‘Aasqalani (1944) in his explanation of ‘Sahih al-Bukhari’ declared that in the Hadith narrated by Urwah who narrated of abd-Allah ibn al-Zubair that the Prophet regulated the share of water between neighbours in Medina Gardens. He (pbuh) clarified this regulation as three points:

1. The highest garden should irrigate first until its beds are full and then the lowers would follow respectively.
2. Gardeners should not restrain water from flowing to other lower gardens by restricting water behind dams or in cisterns until all lower gardens are fully irrigated.
3. The storage of water should not deprive wildlife from benefiting from this water by making full use of water or by damming water to the benefit of gardens only.
This Hadith gives an example as to how, on one hand, Islamic judicial sources are full of laws that can be formed in a way that restrict the abuse of desert natural environment, and on the other hand how vital is the restoration of the husbah system in the Islamic states to apply vitally needed Islamic standards in protecting the natural desert landscape.
The garden in Muslim culture with particular reference to Medina, Saudi Arabia.

Attitudes towards designed landscapes in two desert cities: Medina, Saudi Arabia and Tucson, Arizona.
3. The garden in Muslim culture with particular reference to Medina, Saudi Arabia.

Desert is the prominent landscape of most areas of the Middle-East, the home of Islam. In this environment, there is a unique garden tradition. The phenomenon of the desert oasis was translated into garden form in most Muslim cities, to provide for pleasure and meditation. The chief objective was the provision of a lush green oasis like refuge from the harsh desert surrounding. Although surviving Muslim gardens were built between the twelfth and the nineteenth century, their historic roots go back to the eighth century AD, and the beginning of Muslim garden-design during the Aumayyad and then Abbasid dynasty. Muslim gardens from this time on have been of a great interest to western historians and landscape architects. On the other hand, not all Muslim desert gardens attracted equal attention from academics. The most investigated gardens are those that possessed grand beauty with monumental architectural complexes that formed models that were covered in most Muslim urban landscapes. Gardens that were more vernacular in nature have not been so thoroughly researched, nevertheless, these types of gardens were developed in response to particular social, cultural, and environmental contexts. One type of these gardens, are those in Medina that although responding to an Islamic paradigm, developed unique character not seen in other Muslim gardens in Syria, Iraq, and al-Andalus. This part of the thesis deals with the history of the Muslim garden in a way that enables a fundamental understanding of the difference between the response to religion and desert amongst the people of Medina compared to people of other cultures in the Muslim world.

Muslim gardens have become a genre of art, which is considered as one of the outstanding arts of gardening produced by ancient civilisations. This garden tradition was developed as the unified Muslim nation had spread over the three continents: the whole of the North African coast, Asia, and Southern Europe. Within a list of the world’s heritage of gardens, "Muslim garden" is the only genre with a religious adjective in its title. The basic principle of Muslim design was the provision of shade, obstruction of hot, sand laden winds, and creation of the sense of pleasure that introduce the spirit into َalam al-khayal (air of unreality). The principle of four rivers, four sectioned gardens is perceived as a Muslim metaphor of the promised Jannat Adn (Paradise of Eden) Allah mentioned in the Quran. In most garden history literature, Mogul, Persian, and Moorish gardens are considered the only homes of this concept (Jellicoe, et al 1991). In the designed landscape of the Arabian Peninsula, this concept was never used until the early 1970s. The lack of documentation on the history of gardening in Saudi Arabia reflects a lack of critical investigation of remnants of these gardens, which might have exposed a quite different garden tradition. One of the profound considerations in the study of Muslim gardens is the appreciation of the fact that categorisation of
Muslim gardens is not only ‘a response to the ecological condition’ of various areas of the Muslim world (Ettinghausen 1976). However, a variety of factors have been involved to produce one of the most diverse, yet to some extent homogeneous genre of garden art. The crucial question that raise itself here is, Why did the “Muslim garden” tradition not develop in the Arabian Peninsula in the way that happened in other parts of the Muslim world? The answer to this question is summarised in the following points:

i) The diverse cultural definition of what constitutes a garden. Institutional gardens like in madarlis (schools like madrasat al-Firdwos in Aleppo and Mader-i Shah in Isfahan), in takiah (social housing like the Egyptian takiah in Medina), in mosques like in Patio de los Naranjos in Cordoba, suggest that gardens were not restricted to Royal personages and palaces as it was the case, for example, in the west when the aristocratic class had monopolised the creation and use of garden (Francis and Hester 1990). This type demonstrates that Islam allowed a diversity of garden types to develop. When such institutions were not numerous enough to establish a trend in the city, agrarian type of gardens filled the gab and were developed to fulfil two major objectives: create an economic resource and provide a place for pleasure.

ii) The varying intensity of natural limitations. Although most Muslim gardens are designed to resembling a green oasis that offer relief and refuge from the surrounding desert environment, gardens differed from region to region in term of lushness due to the diverse environments within the Muslim world. Umayyad1 hunting lodges in the Syrian desert, for example, were mainly utilitarian-productive gardens while inner cities gardens, palaces’ gardens, were more of ornamental nature.

iii) The Historic background to a specific garden culture. In areas that had a long history of gardening as in Persia and India, Muslim gardens adapted some of the basic elements of these cultures such as the chahar bagh (the four gardens) which dates from 2000 BC., and chadar (water flows down a stone slab) from the ancient Mogul garden.

iv) Distinctiveness in the expression of political power. The Abbasyd2 period, for example, witnessed one of the most powerful eras of political dominance in the early Muslim world. During

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1The Umayyad dynasty (661 AD.) is the second Muslim ruling Caliphate after the Wise Caliphate that followed the death of the Prophet Mohammed (pbuh).
2The Abbasyd dynasty (750 AD.) is the third Muslim ruling Caliphate that followed the collapse of the Umayyad Caliphate.
this political dynasty, many cities were built like Baghdad\(^3\), Samarra\(^4\), etc., in which elaborate gardens were developed. Historians considered this tendency of city and garden construction as one of the ways Abbasyd Caliphs used to express their political power. Muslim caliphs who possessed the political power and wealth, became enraptured by monumental and luxurious architecture. Because ‘architecture is kings’ chemistry’ as Es-haq al-Ma’asabi said (Fakhouri 1907), Muslim capitals have elaborate architecture and gardens are not found in provincial Muslim cities. Remnants of archaic palaces in Medina like al-Zubair palace in Aurwa area (west of Medina), evidence beautiful, yet simple architecture that did not possess the palatial forms found in palaces of the early capitals of Islam (figure 3-1).

![Figure 3-1, remnants of Erwah bin-al-Zubair Palace overlooked wadi al-Aqiq in the west of Medina. The palace, as well as other palaces erected during the first century of the Hijrah have set early models of suburbia that adopted wild desert landscape as prospect.](image)

v) Varying degrees of commitment to Islamic laws. This factor is found to has created variant forms and degree of luxury of Muslim gardens (Tabbaa 1988). Birkat (the fountain of) al-Mutawakil (the tenth Abbasyd caliph 822-861) in Haier al-Wuhush (wild animal park) in Samerra in which water seeps from the mouths of animals and birds, and the Lion court in the Alhambra palace are examples of Muslims’ abandonment of Islamic laws that advise against figurative art. Shrine based gardens as in Sikandara, Itimad-ud-Daula in Lahore, Taj Mahal mausoleums in Agra are examples of violation of the egalitarian rules and principles of Islam.

It has been established that Arabs were adept at adjusting and developing ideas to suit their Islamic believes, traditions, and rules in early conquered lands (al-Nasan 1992; Moynihan 1979). Al-Ghoutah (in Syria) for example, was, according to al-Qazwini (1324), crossed by several rivers and ravines, amended by variety of trees and birds, sprinkled with colourful flowers and herbs, and

\(^3\)Baghdad: or (garden of Allah) the first capital of Abbasid dynasty was built by Abu Jafar Al-Mansour (712-775), planned in circles of urban uses and gardens centered by the head mosque.)
surrounded by ever green mountains (cited in al-Nasan 1992). Moving from a landscape dominated by few colours (i.e. Arabia) into one with a greater variety of colours (i.e. Syria, Iraq, Turkey, and al-Andalus (southern Spain) had evoked Arabs’ curiosity in searching for beauty in nature. Water was a feature that greatly captured Muslims’ imagination and stimulated their art of water fountains.

Although water can be considered as a substitute means of depicting intellectual forms of art, which replace the painting and sculpturing that transgress Islamic law, water is ironically found as a major stimuli that encouraged the use of figural sculptures like lions and birds in Muslim gardens. This was especially true during the Abbasid dynasty when Muslim civilisation, characterised by spirituality, met the Persian civilisation, characterised by advanced art of painting and sculpturing. Tracing the history of water in the Muslim world would reveal how Arabs in Syria were more concerned in water as a tool of irrigation rather than a tool of art as it became the case in Iraq and later on in al-Andalus. The Western and Eastern al-Ha-ier palace, al-Rasafah, and Ghoutat Demashq were examples of Muslim gardens in Syria in which no figural sculptures were incorporated in fountains’ design. In these gardens, waterways, canals, cisterns, and dams were greatly developed as an advanced art of irrigation.

In Iraq, the al-Dhabah palace, Haroun al-Rashied palace, al-Qahir palace, and Dar-al-Shajarah palace, water fountains, marble water ponds, ostrich operating waterwheels and other forms of water jets were developed as an advanced art of fountain engineering and fine art as well. In al-Andalus, this art of water was mingled with art of sculpture and formed fountains like the one in the Lions Court in the Alhambra. Gradually Islamic rules had been abandoned and water was demonstrated in conjunction with other arts like sculpture. Nevertheless, the art of sculpture served Muslims in paying attention to three dimensional details of material. The elongated black stones, for example, were patterned in a way that embodied the movement of the water in the Patio de la Reja in the Alhabra, Granada, al-Andalus (Spirn 1988).

vi) Interpretation of Quranic verses. In sixty-one verses disposed over 114 Quranic Surahs, the Quran warns Muslims against over seeking excessive pleasure in the life of this world. It alternatively and insistently stimulates good deeds that lead to quality Heavenly life in the eternal paradise. In one of these verses Quran says:

‘Nothing is the life of this world but play and amusement. But best is the home in the hereafter, for those who are righteous. Will ye not then understand?’ (the Holy Quran al-

\textit{Samerra: Surra Man Ra-aa} or (pleases-who-observes) built by Al-Mu’atasim bi-llah (794-842), the eighth Abbasid Caliph.
With sixty-one similar verses in the Quran that carry the same message, and one verse that describes the morphology of the heavenly garden (see the Holy Quran Mohammed: 15) one might expect two distinctive situations that led into two conceptions of Muslim garden in the Muslim world: a) a rhetoric interpretation of the Quran that created elaborate terrestrial gardens that symbolise Heavenly garden, b) a literal interpretation of Quran that created what can be called ‘simple, but intimately religious garden.’ However, the garden history focus has always been on gardens that chose the rhetoric interpretation of the only verse in Quran that dealt tangibly with the morphology of Heavenly garden, e.g. the Taj Mahal. The availability of different forms of documentation on these gardens has encouraged academic studies. The countless miniatures and meticulous floral carpets of Persia, for example, generated voluminous documentation of Persian gardens which allowed historians and landscape architects an easy trace of garden history in Persia.

vii) Generalisation of design concepts all across the Muslim world. Although the Quran does not give extensive detail of jannah (the Paradise), the brief description of jannah in the Quran has always been argued as a source of inspiration for ‘Muslim gardens’ across the Muslim world (Hanaway 1976). On the other hand, the major idea of ‘Muslim gardens’ i.e. four rivers-four gardens, that is repeatedly mentioned as inspired by the Quran, is found only once in this text. Allah says:

‘(here is) the description of the garden which the righteous are promised: in it are rivers of water un-staling; Rivers of milk of which the taste never changes, Rivers of wine, a joy to those who drink; And rivers of honey pure and clear. In it there are for them all kinds of fruits; And forgiveness from their Lord.’

(The Holy Quran, Mohammed:15)

The Quran does not describe the physical layout, nor the morphology of jannah in any single verse. As explained before, the four mentioned rivers in most texts that explain the conceptual framework of the chahar bagh (four rivers-four gardens) is cited just once in the whole Quran. This account not only appears in the Quran, but it also appears in the “Bible (Genesis 2:10:14), and in the ancient Indian Vedas as chahar sur” (Ogrin 1993). A motif of the four rivers was also found inscribed on an old vase aged 4,000 year old, appeared in the ancient Indian sepulchral layouts called chahar bagh and was the setting of the early Persian gardens of the 6th century BC that encompassed the palaces of Cyrus the Great, Darius I and their successors (Ogrin 1993; Stierlin 1996). This gives a clear testimony that this layout is culturally of multiple origin. It has its roots in Persian and Indian cultures and can not be generalised all across the Muslim world as usually suggested; for example as Ogrin (1993) who said: ‘The chahar bagh formula is the fundamental aesthetic basis of Muslim
landscape architecture. It was the indispensable guideline directing the layout of gardens throughout the wide world of Islam, proclaiming the universal character of Muslim art and culture.

When Islam was established in Persia and India, this concept of four-sectioned garden design was already in their land. The Islamic rules and regulations of conquering lands, that strictly prohibited demolishing properties and natural features allowed the continuity of this garden design pattern. It is then continued in both nations as the concept, according to the Persian and Mogul cultures, was ratified by the Quran that alluded to the river-fringed gardens (Moynihan 1979). In Persian gardens, "according to Sufist comprehension, the four gardens stand for the four esoteric states, and are called Garden of the Soul, Garden of the Heart, Garden of the Mind, and Garden of the Essence" (Ogrin 1993). This spiritual attitude would had found no advocacy in Arabia that is dominated by Sunnah, which disapproves such mis-interpretation of the Quran. From a Sunah perspective, Moslem graves were prescribed to be very simple, not raised from the ground and not topped by structures. These rules apply not only to the public, but also on noble personages. These two major ideological conflicts, diminished any appropriation of this concept in the design of Arabian gardens.

For most writers on this subject, one verse of the Quran has never been referred to in regard to the metaphoric representation of the Quranic description of jannah (Paradise) in 'Muslim garden.' This verse reads as follows:

"For indeed he saw him at a second descent. Near the lote-tree of the utmost boundary, 
Near it is the garden of abode."

(the Holy Quran, al-Najm: 15)

In al-Tabary, al-Kurtubi, Ibn-Kathir, and al-Shawkani, Abu-Jaafar al-Razi said:

‘when the prophet Mohammed (pbuh) ascended to the heaven, he came to the Sidratu al-Muntaha (the lote-tree of the utmost boundary); Jabrael told him, this lote-tree is around which all of your people who follow your path would gather in the day of judgement. The prophet (pbuh) saw ‘a very large tree through which four rivers of water, milk, wine, and honey flows.‘

According to all Quranic popular interpreters like al-Tabary, al-Kurtubi, Ibn-Kathir, al-Shawkani, al-Razi, al-Alousi, Qutb, and abi-al-Saoud, Sidratu al-Muntaha is not part of jannah as it seems clear in the previous verse: "Near it is the garden of abode,“ which is the eternal jannah. Thereby, this evidently declares that the argued symbolic interpretation of Quranic jannah is, to a great extent, a function of local cultures rather than an Islamic doctrine.
viii) The Quranic genuine advice to Muslims concerns a way of life on earth more than inspiring design concepts. The Quran concentrates on the description of Jannah as a reward rather than its morphology. In many Surahs, the Quran repeated that Jannah is beyond human imagination. Allah in the Quran promised the faithful the blessings of eternal life in an eternal garden. For Arabs who inhabited desert, this garden would be the most valuable reward. In paradise the Quran says that every thing is entirely the opposite of what is in this life. Lack of water will be compensated with overflowing rivers, the glaring extremely hot sunshine will be replaced by shadow, the limited greenery will be substituted with colourful trees and tasteful fruits. A Prophetic Hadith says: 'in Jannah, there lies what have never been seen and what have never been settled in the imagination of human beings.' Following Quranic descriptions demonstrate also that what Allah mentioned in the Quran of mây'im have their counterparts on earth in name only but not in quality or entity.

Allah expresses His willing to reward the most righteous of believers, who follow His and His Messenger's path, in countless number of verses in the Quran. More important than the form and morphology of jannah of the metaphysical life is the path of this life on earth that ultimately conveys the reward i.e. the eternal Paradise. This is what all Fuqaha (scholars) says including Sheiâah's and Sofie's scholars in response to what Allah says as in the following script:

"The parable of the garden which the righteous are promised! Beneath it flow rivers: perpetual is the fruits thereof and the shade therein: such is the end of the righteous; and the end of unbelievers is the fire."

(al-Raad: 35; al-Haj: 14; Al-Furkan: 15)

Muslim gardens, in contrast to the Quranic instructions, took precedence over the life of the Hereafter. Muslim gardens were to some extent unrepresentative of basic Islamic values. In general a great deal of concern was given to forge an ideal paradise like environment to gardens of Earth. The luxurious life early Moslem rulers sought outside Arabia seduced them into mimicking portions of the luxury jannah possesses, which are found in many Surahs in the Quran (Schimmel 1976). In particular, the seeking of secular pleasure in gardens as it is the case in Persian gardens, the aim of demonstrating power like the ones of Moorish gardens, and the apparent embrace of mysticism as in the Mogul gardens created a imaginary approach in the representation of Islamic principals. This happened when Al-Razi (not dated) explains that what makes Muslims different from non Muslims is the way Muslims look, behave, and value the life of this world as a step to win the life in the hereafter. All Islamic principles, derived from both Quran and Sunnah, stress the inferior status of secular life in earth and comparatively expound the value of winning the life of the Hereafter in Paradise.
When one of the companions, for example, asked the Prophet Mohammed pbuh. "When is the day of judgement, the prophet said: what have you prepared for it.' It is apparently clear that the Prophet's intention was to emphasise the fact that, the day of judgement is part of the metaphysical world (less important as an idea and event, but more important as an objective), but what lead to this world of good deeds is part of the earthly world (which is important as an idea and a collection of events, but less as an objective). He meant, what a Muslim needs is to believe in the day of judgement, of which jannah is a central part, but does not necessarily need to be concerned about its meticulous details. It is more important to concern the deeds in order to win it as an objective. This concept like wise applies to jannah, which is part of that unknown world. All scholars agree that the Quranic descriptions of jannah aim solely to stimulate Muslims to practice good deeds and, in the opposite, description of Hell was to warn Muslims against committing sins (al-Shawkani 1995). This created a huge gap between earth and Heaven in the Arabs' imagination of the desert. Thus, the rational of producing earthly miniatures of heavenly jannah did not find any form of acceptance in the historic gardens in Arabia. The Quran for Arabs of the desert did not state a framework for garden design on earth as it did with Moslems of other cultures; however, it merely defined gardens as a space of beauty, a source of life (Jellicoe et al 1991; Stirlin 1996), and a place that provided for meditation and discovery (al-Mawaldi 1995).

ix) Some Islamic laws restricted particular forms of garden development. The foundational Islamic principle of bidâyah hasanah and bidâyah sa-ye-aaah (positive and negative heresy) has largely contributed in the incorporation of non-elaborate monumental garden design in historical Arabia. Islam prohibits within the Muslim nation innovation that is not authentically cited in the Quran and Sunnah. Such practices are restricted not only to avoid negatively influencing the present ummah (the Muslim nation), but also to avoid future problems i.e. a figural imagery or a shrine might not involve idolatry at a particular point in time, but might develop into a form of polytheism in the future). The later is considered a significant sin that expels the practitioner from Islam. Allah says:

‘And say: Work soon will Allah observe your work, and his messenger, and the believers: soon will ye be brought back to the knower of what is hidden and what is open: then will he show you of all that ye did’ (the Holy Quran al-Tawbah : 105).

Al-`mufasiroun (the exegetes of the Holy Quran) like Ibn-Kathier, al-Razi, al-Tabari, and al-Alousi explained that Allah is the all Knowing and He, by His will conveys His knowledge to His messenger via revelation. Believers are not like messengers who are knowledgeable by Allah's will, as al-Emamiahhs argued, but they will be acquainted of others' works by the impact of this work
on others, humans and non-human creatures. Al-Qurtubi (not dated) added that every good work that can be brought to the use of others will be known by its usefulness to others and the number of beneficiaries. As a result any work that Muslims undertake in the life of this world is evaluated as either good or bad in quality, useful or un-useful in its consequences, and the number of creatures who would benefit from it, with its originator having to account for both phases of work.

x) Islamic rules allowed pre-Muslim arts to survive time, yet had little influence on Muslims of Arabia as the Islamic army proceeded from one conquest to another or settled down in conquered land to teach Islamic religion and construct an Islamic community rather than returning to Arabia.

xi) The successive movement of the political centre throughout the Muslim world.

At the time of the Umayyad Caliphate, in the late seventh century, Medina and Mekka became the homes of religious and educational institutions. Political power moved from the Arab Peninsula to the north in Syria, toward the east in Iraq and finally toward the west in Spain. This move was accompanied by a trend of constructing new capitals for each arriving caliph. In these cities Arabs developed new planning and design concepts that went beyond the physical functional disposition of land uses to include aspects of natural beauty. Baghdad\(^5\) for example which means ‘\textit{Allah’s Garden}’ in the Persian language, was built on the western bank of Tigris, by Abu Jafar Al-Mansour (762 AD). The city was designed in concentric rings of administrative and residential areas encompassing huge circular gardens centred around the \textit{Jamie} mosque, (figure 3-2). This trend was carried on by other caliphs until the collapse of the Muslim dynasty of al-Andalus in Spain in the fourteenth century. Over this period of time, Muslim planning and design concepts focused on the new Muslim territories, other parts of the Muslim world were afforded minimal attention. The more temperate environments of the new conquered lands encouraged Muslims to exercise their love of producing gardens, a trend which could not have been developed to such richness in Arabia due to its limited natural resources. In the desert of Arabia where the major area is considered the driest

\textbf{Figure: 3-2, Baghdad, ‘\textit{Allah’s Garden}’ or the circular city, was built by Abu Jafar Al-Mansour (145 AH – 762 AD) in Iraq. Each ring represents one land-use and the mosque surrounded by a vast garden occupied the centre.}

\(^5\)During Abbasid Caliphate, Diwan al-Abniah (sub-bureau of building construction was established. Among the builders who built Baghdad, astronomers like Nawbakht al-Munajjim were appointed to work on the design and planning of the city.
environment in the Middle East, the disappearance of this model is understandable.

xii) Local availability of water. Water, the ultimate luxury to desert dwellers, was the major feature that captured the attention of the Arabs who settled outside of Arabia. The move from dry environments to places where rivers overflowed perpetually nurtured their intrinsic fascination by water. Not only because it is necessary for plant growth, but also because they used it to cool the air and gratify the ear with its musical sound. This was expressed in the luxurious engagement of water features in Muslim garden design and the advancement they showed in fountain engineering. Examples of this tradition were found in all early Muslim gardens in regions in which water was in abundance (al-Mawaldi 1995).

xiii) 'Muslim garden' tradition and the religious conceptual framework that underlie its morphology. From an ideological perspective, it is questionable to always apply the title "Muslim" to all gardens that appeared within Muslim territory. What are these qualities that make these gardens uniquely and distinctively 'Muslim'?

The definition of the term 'Muslim' is heavily based on two points. The first one is that, Islam is a religion that strictly complies to what has been cited in the Quran and documented in Sunnah. According to the consensus of world wide Muslim scholars, to oppose this principle must lead into complete Kufr (expatriation from Islam) (al-Jama'ah al-Eslamiah 1988). The second point is that what is argued as being "Islamic" must fulfil the criteria that have been declared in one or both, Quran and Sunnah. The failure to comply with such criteria would force rejection and exclusion from the possession of an Islamic identity. In Muslim architecture for example, the unique indoor spatial structure along with the two separate circulation system are very particular to Muslims' lifestyle that are inspired by Islamic instructions upon social traditions and can therefore be considered "Islamic." However, a mausoleum could not be considered "Islamic" for the clear conflict between Islamic instructions and the architectural function of these shrines. It is vital to address the point that not all pieces of art produced in some Muslim countries in history are necessarily "Islamic." Thus, from a cultural point of view, such artefacts might be acknowledged as a wonderful collection of art that are aesthetically appealing and historically valuable, but from an Islamic doctrinal view could not be accepted as Islamic. When an artefact realises no Islamic objectives, follows no Islamic specifications, and does not function according to Islamic traditions, then there will be no point in ascribing an Islamic adjective to it. Despite its obvious religious title i.e. "Muslim garden," this tradition has not always been evaluated against basic Islamic principles.
Western writers in the subject of 'Muslim art' are not generally aware of, this difference between the title 'Islamic' and 'Muslim' that prefix various subjects and artefacts in different fields of Muslim studies. The term Islamic does not necessarily apply to secular artefacts, even when produced by Muslims, as they may not be based on Islamic rules and laws. Therefore, titles attached to such artefacts could not be annexed by the term Islamic, which should only prefix subjects that are of pure Islamic nature, (i.e. derived its rules and laws from Islam only: Quran and Hadith). Thus, it might be permissible to say 'Islamic desert reclamation' for Islam has a clear rules and laws in this field (e.g. *ihia al-mawat*, desert reclamation). On the other hand, it is improper to call a 'shrine' an example of Islamic architecture, when it violates one of the basic and foundational Islamic rule. However it can be called 'Muslim architecture.'

xiv) Misinterpretation of the Islamic garden in garden history. In the modern study of gardens, a considerable proportion of literature on Muslim garden has been written by authors with little critical understanding of Islamic doctrine, for example Schimmel (1976). His paper titled 'The Celestial Garden' is full of mis-interpretation of Quranic verses which led into a complete change in the Quranic meaning. Instead of using Muslim accredited and popular *tafsier* (interpretation of Quran like Ibn-Kathir's, al-Shawkani's, Qutb's, etc.) he supports his interpretation by poems and prose of other non-Quran related specialities. An example of his mistakes include his mix-up between *Ridwan*, the angle doorkeeper of *Jannah* and *ridwan*, the state of Allah being pleased with his faithful believers in *Jannah*. He personified God's ridwan in the angle doorkeeper, Ridwan, which means an absolute destruction of what Allah says in Surat Al-Eikhlas (a similar meaning can be found also in Surat Al-Zumar, 67):

'He is Allah, the one; Allah, the eternal, absolute; He begetteth, nor is he begotten; and there is none like unto him.'

Macdougall and Ettinghausen (1976), provide another example: 'In Islam there exists both a sacred visionary, and a secular hedonistic tradition, each centred around a special garden of the highest beauty.' From an Islamic doctrinal perspective, these two proposed traditions are contradictory and unlawful encroachment. Sacredness, is not a doctrine by itself as it is the case in Sufism. Islam is a modest regime that does not approve *rahbanah* (monasticism), but nor does it encourage *etibaa alhawa* (excessive seeking of pleasure) that might lead into transgression of basic Islamic laws. The quality of sacredness in Islam has no spatial limitation, nor special to liturgical personalities. A space sufficient to allow a person to bow on the ground at any where on earth may be considered sacred for the simple act of prayer (Bianca and Anqawi 1989).
The Western historians, architects, landscape architects, travellers, artists, and anthropologists were the early pioneers in writing about Muslim art in Muslim countries (Blair and Bloom 1994). When this field of study was undertaken in Muslim countries, western literature was the basic references for the discipline of landscape architecture. What this literature has ignored is the fact that westerners were illiterate in Islamic *Fiqh* (law). This therefore gives incomplete picture of Islam in relation to design. This also explains why these studies are unable to differentiate between what can be considered as Muslim and what can not be.

**xv) Stereotyping of Muslim gardens.** This has led to a lack of consideration of the diversity of gardens developed within the Muslim world. The Medina palm garden, for example, is one of these gardens that have not been considered as a garden but seen merely as an agricultural system. Richard Stiles (1991) in ‘The Oxford Companion to Gardens’ does not, for example, consider the history of garden design in Saudi Arabia for the reason most gardens in Saudi Arabia are of agrarian nature (Jellicoe, et al 1991). However, Abd-al-Wahid al-Wakil explained that each traditional community has produced its landscapes and developed its own favourite environments and compositions, as peculiar to that community as its language to an external (cited in Steele 1988). In addition, without studying various historic forms of art of a particular culture, no one could understand, neither taste, nor criticise any form of art of this culture (Mitchon 1984). Sally Schauman (1998) noted that ‘more than any other landscape type, the countryside is a clear audit of our environmental ethics.’ It has been concluded that productive gardens, are the most harmonious deal with nature that depict human care for land and plants. Even in the English literature and during the time in which the idea of ‘picturesque’ was delivered, we find examples that express admiration toward productive landscapes. Edmund Burke (1729-1797), for example, said ‘what by general consent is allowed to be a more beautiful object than an orange tree, flourishing at once with its leaves, its blossoms, and its fruit?’ He in another place marvelled at beauty of two different plants: productive and unproductive. He said, ‘... the rose is a large flower, yet it grows upon a small shrub; the flower of the apple is very small, and it grows upon a large tree; yet the rose and the apple blossom are both beautiful, and the plants that bear them are most engagingly attired notwithstanding this disproportion’

Thus, the alliance of two different but complementary concepts which are human search for natural beauty and the ancient cultural model of relying on the earth for sustenance can generate a pragmatic justification for agrarian types of gardens (Schauman 1998), like the one of Medina. In most historic literature, agrarian landscapes have often been categorised as ‘gardens.’ Utilitarian
gardening was first known in medieval English gardens. At that time physicians were the most among gardens' lovers who named herbs and flowering plants credited for physical virtues. This attitude gave rise to gardens completely devoted to medicinal herbary. The other form of utilitarian gardens was in urban English kitchen gardens. Although archaeological research is unable to provide a complete picture, kitchen gardens at Southampton, Hull and York provide evidence for the use of kitchen plants in urban areas (Harvey 1991). The fragmented royal accounts of that period additionally gave clues about the continuity of utilitarian gardening. Herbs for medical purposes, kitchen produce and fruits, and flowers for pleasant scents around altars was the common purposes of planting. In the American literature we find a similar accounts that consider agrarian landscape as another form of art. Tappan, cited in Lowenthal (1968) said 'No farmer merely farms but is an artist in landscape architecture as well. . . . [They] consider how the field will look when [plants] first come up through the earth, and when they are full grown. . . . and when they are dead and when they are stubble. . . . What interested them was the effect upon a certain view . . . They looked upon their whole farm as a great living canvas.'

The Islamic Encyclopaedia (1972) has documented ancient western historians who proposed that a key measure of the sophistication of Arab culture was their intelligence in cultivation that depicted their 'love of gardens.' It says also 'erecting mosques and spreading fields,' (without distinguishing between fields as gardens and fields as farms), 'had been the two major concerns of Muslim conquerors post their conquest of the lands.' Nasir Kharo (1088) quoted an ancient western geographer who said 'Arabs were men of cultivation and men of intelligence.' Yet he continued, 'they were intelligent in irrigating gardens and they were creative in inventing sorts of water fountains' (cited in al-Nasan 1992). Geoffrey and Susan Jellicoe (1991) defined Muslim garden as 'a rich green oasis, patterned solely according to the science of agriculture. . . . All gardens were an idealisation of this scene. They were laid out geometrically within protecting walls and their primary contents were channels of irrigation and trees beneath which to recline.' The tradition of agricultural garden centred on a small palace is dated as early as the seventh century during the Umayyad period such as Qasr Kharana and Qusayr Amra in the Syrian and Jordanian desert (Stierlin 1996). Thus the long history of diwan that resemble pavilions in other gardens, the appropriation of native desert perfumed herbs and flowers, the voluminous poetry that describe the beauty of Medina garden, and the rich history of social and cultural formations do collectively express a form of 'garden' rather than mere agricultural fields. The recognition of Medina gardens in history is found in an ancient poem in which the poet expressed the beauty of Medina 'gardens' where he said:
If it had been said to the Mad⁶: is Laila lovelier to you or

Gardens in which Houris⁷ (palms) are standing conspicuous to the eye in grand beauty.

He would say, dust of earth stuck on their footwear (the palms),

Is lovelier to my heart and more seductive than eternity.

In itself, borrowing ideas and layouts from what is called "Muslim garden design" or referring conceptually to their symbolic meanings and values has no direct negative impact on contemporary Medina garden design. In modern practice in Saudi Arabia, for example, designers substantially consider this imported stereotype as an ideal 'Muslim' design model from which modern Saudi garden design could be inspired. However, a problem can occur when over-dependence on such an idealised scheme allows no investigation of the local model leading to the creation of garden with no relationship with place. Throughout its history, Medina has witnessed no application of Muslim Persian, Mogul or Moorish garden design in its urban or rural, indoor or outdoor landscape. A brief glance at the historic part of Medina is evident that institutional buildings are the only parts of the city that adapted global-Muslim architectural styles (figure 3-3). This owes to the fact that religious places in Medina are visited frequently by pilgrims from all around the Muslim world. The courtyard of the of al-Takkiah al-Masriah (the Egyptian Institution of Pilgrims) in Medina is one of the examples that depict different design approach in comparison with historic Medina architecture. On the other hand, this building was entirely designed, built and owned by the Egyptian government in late 19th century and demolished in 1994⁸. Nor had other cities in the Kingdom, where the environment is less harsh, for example, as in the south, (i.e. province of Asier), allowed such influence. The harsh local environmental and rich cultural aspects of Medina excluded 'foreign' schemes from neighbouring and remote Muslim cities.

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⁶The Mad of Leilla is what is known in Arab's literature as Medjenoun Leilla who was celebrated for the love he devoted to Leila and caused his people to call him Medjenoun or (mad). His story has been since then a subject of many romances and he himself became a figure that symbolise extreme level of love in poetry.

⁷Houris are the Quranic described as extremely beautiful females who will be the Muslims' hosts in paradise. In this poem Houris are rhetorically used to mean Medina palm trees.

⁸Al-Takkiah al-Masriah (the Egyptian Institution of Pilgrims) was one of the unique pieces of historic architecture of Medina which was demolished within the re-development project of central Medina in 1994. The institution ceased its activities as pilgrimage center during the Saudi period and had been used since then to house the Egyptian Health Expedition that accompanies the annual Egyptian pilgrimage to Medina.
Figure: 3-3, top left, the mihrab (prayer niche) of a Mosque and top right al-Anbariah mosque built in the Ottoman style. Bottom right, sabyl of bi'ar Haa (public water fountain on the historic well of Haa in Medina) is designed in a way that does not represent Medina local architecture. Bottom left, a page from the Quran with floral and geometric decorated borders which are not necessarily of Medina style. It can be noticed that Islamic features usually embrace a universal Islamic styles produced by Muslim craftsmen from all around the Islamic world.

source: left and bottom right (Gordon 1979).
4 The garden in Medina.

Attitudes towards designed landscapes in two desert cities: Medina, Saudi Arabia and Tucson, Arizona.
4. The garden in Medina

4.1. Introduction
Kaplan and Kaplan (1989) concluded that people sometimes need to escape the built environment. It has also been concluded that the search for a garden has biological, psychological, and social dimensions (Schauman 1998). Mostyn (1979) concluded that humans’ need of natural setting within the urban realm include emotional, intellectual, social, and physical benefits. Among these emotional benefits are substantially highlighted in most writings. Gertrude Jekyll (1904), for example, said ‘the best purpose of a garden is to give delight and to give refreshment of mind, to soothe, to refine and lift up the heart.’ Each culture searches for gardens in its unique way. Gardens, like architecture and other forms of art, express the cultural values of its society and provide narratives of its history. Navigating through any city in the world at any time of human history would demonstrate distinct ideologies underlying diverse forms, sizes, and styles of garden design. From the ancient Mesopotamian and Egyptian civilisations (who were the first to apply control on natural resources circa 5000 BC) (Simmons 1993) to contemporary societies, the garden is the second monumental space that celebrates human inhabitation of earth. It is the richest space in cities in that it assembles natural elements to echo the spirit of nature’s beauty. Even in desert, where natural resources to support life are restricted and at best transient, people develop techniques to enhance their external spaces. Scenes, scents and sounds are in the background, but at certain spots they are surprisingly intense and can dramatically change the experience of desert. These areas were sought as settlements, moister, more fertile patches of lands developed for crops or walled to separate them from the general barrenness of desert. They perfected these places as “gardens” according to their cultural values, and desire to entertain in relation to the available resources, inherited techniques, and most important of all the local definition of the landscape aesthetic. Perhaps in this landscape, more than in any other, life in its austere forms means grand beauty at the eye of its inhabitants. This justifies why Medina desert garden is different from the general formal use of the term.

In the recent history of Saudi Arabia, exotic garden design borrowed from the west is idealised as a model for contemporary local garden design. The complete reliance on the west and ignorance of the local heritage of garden design has reduced chances of creating a local tradition of garden design that fits the local environmental and cultural context.

With the exception of a few successful examples in Riyadh, the new trend in garden design is clumsy and has no concrete conceptual framework. The definition of ‘garden’ in Saudi Arabia is still vague and rarely goes beyond the mere creation of “green open space” that fulfils minimum social and entertainment activities through the provision of sitting areas and children playgrounds.
The design layout does not belong to any formally known design patterns, although arguably inspired by geometric Muslim morphology (see figure 4-1). The spatial structure never matches the local social behaviour, and whenever this important criterion is realised the treatment is mostly incompetent.

Understanding garden culture of a particular society is almost like the understanding of a ‘house’ in that examining a house, as Vishvajit Pandya (1998) indicated, means to share the living of the house in order to experience the values that are embodied and meanings that are conveyed in the house and to find out how these meanings and values are culturally constituted. In the case of Medina, the palm garden was a vibrant place that housed its people during the work of harvesting, entertaining and relaxing in the evening, and at night. In order to better understand the complex structure of values and meanings in relation to its culture, direct living experience and repeated visits to several pre-selected palm gardens was undertaken by the author over two subsequent summers. Interviewing elderly people who had created these gardens was also undertaken as this oral history is the only source of history for Medina gardens. These interviews were conducted at times by walking through the actual spaces of these gardens as cultural events were taking place, and at other times by visiting elderly people who could not go out any more.

In this part of the research, the author argues that; there is a rich undocumented heritage of "garden" design in Saudi Arabia, specifically in Medina where religion, culture, and the desert environment come together to configure a unique conceptual and physical garden framework. He argues also that the importation of garden styles from the greater Muslim world and Western countries does not fit the natural and cultural context of the city. The recent history of Medina evidences this trend has failed to resolve the modern need of recreational places in the city. The result has been a city that has lost its distinct character as landscapes have developed in ways that contradict the local social and cultural expectations of the public. In order to substantiate these arguments, it is necessary to investigate the history of Medina garden in order to answer the following inquiries:

1) How did Medina people perceive and respond to the desert environment in the past?

2) What were the major forces that shaped their definition of gardens?

3) What are the significant constituents that underlie the cultural shift in Medina toward desert and therefore pertained into ‘change’ in societal perception of desert garden?
4.2. History of Medina Garden.

Sheikh al-Turki (1998) said in his definition of Medina garden:

The Madani traditional costume consists of *thoub* (white garment), *'umamah* (white turban on the head), *sedairi* (white vest), *camar* (leather belt embody different sizes of wallets). The Madani traditional house consisted of *rowshan* (window), *diwan* or *kharjah* (roof garden), *jila* (inner courtyard centring staircase). The historic Madani garden was as unique as Madanies' dresses and houses. The uniqueness of Medina gardens does not lie only in the way they looked or how beautiful they were, but more importantly in the way they were developed to fit the desert harsh environment of Medina.

In Medina, farming and agricultural activities were not like those in other cities even within the borders of the Kingdom of Saudi Arabia. One of the reasons for this is that people of Medina had developed a significant relationship with their date palm gardens; they dedicated their poetry to praise their natural beauty (Sairafi 1998). Date palm gardens were their summer recreational places as well as their source of livelihood. They housed their cultural celebrations, as they reflected upon their cultural traditions, values and ethics. They enshrined, locally formulated, emblems of the aesthetic as they contained the finest varieties of fruits and vegetables in the region. Under the canopies of palms, lived theatres of life that portrayed, for generations, a unique, yet little known genre of gardening.
While historic architecture of Medina has been extensively studied, Medina historic gardens have not received similar attention. The only exceptions to this are the brief explorations found in the writings of early travellers like Sir Richard Burton, or of local historians like Mohammed Husain al-Kabriti. These studies were however rather superficial and do not provide a complete understanding of the subject. In addition, some of these writings were written from a western perspective that often misinterpreted or skipped important issues or features.

Western travellers who visited Medina during the 19th century were less numerous than after the discovery of oil in the Eastern province in the early twentieth century. The earliest known trip was of Ludovico di Varthema who accompanied Syrian pilgrims in 1503. Although his writing has not been published, it has been described as a complete legend that described his travel that covered everything he encountered in his travel. He was then followed in the 17th century by Johann Wild, an Austrian soldier, and later on by the British Joseph Pitts. Toward the end of the 18th century, a Spaniard, Domingo Badiay Leblich made his pilgrimage to Macca and wrote about his travel to Hidjaz. At the early 19th century, an Italian soldier, Giovanni Finati travelled to Makkah and recorded the wonders of the city in sketches. Ulrich Jaspar Seetzen, a German botanist visited the area but again, his diaries are not available and most probably have not been published. The first traveller whose work became public and available for researchers is the work of Johann Ludwig Burckhardt, however, his work predominantly dealt with Maccah. In 1853, Sir Richard Burton made his first travel to Hidjaz followed by another trip in 1877. In his book, 'Personal Narrative of a Pilgrimage to Al-Madinah and Meccah,' Sir Richard Burton was the first who described the beauty of Medina gardens. In the same year, an English traveller named John Keane entered Medina as a pilgrim with an Indian caravan coming from Macca. He dedicated the thirteenth and fourteenth chapters of his book, 'Six Months in Hidjz,' to Medina. He described the beauty of Medina gardens and their fine produce of dates and other fruits. In 1861 and later in 1880, Mohammed Sadiq, the Egyption military engineer travelled to Hidjaz in and for the first time produced the first panoramic photographs of the two holy cities. On the other hand, Sadiq’s major interest, as it was the case with Western travellers, was in the holy mosques, architecture and to a lesser extent, the local culture. He was the best known traveller of his time, and his meticulous writings titled ‘the Personal Narrative of a Pilgrimage to al-Madinah and Makka,’ which became the first published and distributed and most available work in libraries until now. Spiro Socrates Bey in 1868 wrote his book ‘The Muslim Pilgrimage; an Authentic Account of the Journey from Egypt to the Holy Land of Islam.’ In this book Spiro Socrates gave a detailed description of Mecca and Medina and all the religious ceremonies and practices that are performed by pilgrims but little was found on the Medina landscape. In 1898 Abd-al-Aziz Doltchine, a Russian soldier, visited the area
in his pilgrimage to Medina (Naser 1995). He described in profusion the architecture of Medina, and wrote briefly about Medina gardens, alluding to the love people of Medina possessed toward their gardens. By the end of the 19th century, D.G. Hogarth wrote ‘The Penetration of Arabia’ based on his trip to the area, however, his work is out of print. In most travels to Hijaz prior to the 20th century little attention was paid to the natural landscape. Even gardens of Medina were overlooked and occasionally mentioned without enough detail that give clues that these travellers had ever entered these gardens. In 1903 Mohammed Labib al-Batnoumi made his trip to Hijaz and wrote his book ‘al-Rihlah al-Hijazah,’ in which he wrote about the beauty of Medina gardens; he was however very negative about the desert landscape around Medina.

Western travellers who described Medina did not give a complete account of its gardens and culture associated in that landscape. The presence of the Prophet mosque as a major religious and historic site deprived other sites of chances of detailed investigation. Johann Ludwig Burckhardt (1968) dedicated no more than half a page in his book titled ‘Travels in Arabia,’ to describe the architectural form of Medina garden. In his description of the diwan, for example said, ‘Medina gardens consist principally of date-groves and wheat and barley fields; the latter usually enclosed with mud walls, and containing small habitations for the cultivators. Their houses in the immediate neighbourhood of the town are well built, often with a vestibule supported by columns, and a vaulted sitting-room adjoining, and a tank cased with stone in front of them.’

With the exception of few travellers, Medina gardens were inconspicuous to western travellers. Neither their writings, nor paintings showed a remarkable interest triggered by what they have encountered of local gardens. One of the explanation might repose on the assumption that those travellers were overwhelmed by desert landscape to the extent they ignored their presence in the city (figure 4-2 & 3). Most old paintings give false information regarding the urban and rural landscape of Medina. They were either abstract diagrammatic drawings (figure 4-4) or paintings that most probably were drawn from memories, which give no informative clues about the holistic urban and rural landscape of the city in the past (figure 4-5).

Shihab al-Dien al-Hamawi (1977), an early geographer, indicated that the first who cultivated date palms in Medina were al-Amaliek (Amelek) of banu-ImaIk, a tribe which was established by Arfakhshdh son of Sam son of the Prophet Noah (p.b.u.h). Historically, Medina gardens were dispersed along the east of a north-south spine that run from Quba mosque in the south to Au hud mountain up to al-Khlail in the north. The major valleys of Medina which run from south to north like sail abu-Jieda and its attributeries and wadi al-Aqiq, wadi Hammad, and from the east to the
Figure 3-5: left, an old map for the walled Medina show the presence of gardens on both western and southern sides of the city from which an old painting for the city was made, middle left. The contradiction between the map and the painting is ratified by images taken for the same corner as in the bottom left. Other old images of Medina, top and bottom right, reflect upon the fact that gardens in Medina were not like in other Saudi cities in which gardens circle the periphery of the city, but penetrate through the city urban fabric, yet Medina gardens were inconspicuous to western travellers. Source: (Gordon 1979)

Figure: 4-3, the urban part of al-Ahsa city in the Eastern province is encompassed by vast areas of palm groves, on the left. The urban part of Medina is penetrated by vast areas of palm groves (now diminishing), on the right. Source: left, al-Thaqafiah (1999), right, Municipality of Medina (1991).
Figure: 4-4, ancient images of Medina drawn by early travellers are very abstract and do not give much detail about the landscape of the city. On the contrary, most of the information such images yield are misleading, like the distance between the mosque and the houses, the mountains in the background, the bareness around the city. Although the left image seems to be older than the one on the right, for the mosque had one courtyard was older than the mosque had two courtyards, both images dealt with the landscape as if they were drawn from memories rather than life painting. Source: 'taken from ancient manuscripts' - Paris- greeting cards.

Figure: 4-5, most Arabian, on the left, and western, on the right, travellers who visited Medina drew the city, in a disproportional manner depicting the walled dense fabric enclosed by desert, mountains, and some camps. However, and according to all interviewees in Medina, there were many corners for the city from which one can see forests of palms, cider, acacia, and tamarix trees embracing the wall and penetrating through the city as well. Source: (Gordon 1979).
north like wadi al-Aqoul contained the agricultural zone of Medina. The southern part of Medina is higher than the northern part and that make the drainage deficiency lower in the north compared with the south. This might be one of the reasons that made the southern area preferred by Medina wealthy people for establishing their gardens. On the other hand and according to senior Medina farmers, the north had better quality soil than the south. In addition flood damage was more pervasive in the south. The north was also valued for its cooler winds. Nevertheless the south was chosen for wealthy palm gardens. Proximity to the Quba mosque in the south (the second important historic site in the city) outweighed the practical attractions of the northern agricultural spine.

4.3. Linguistic Definition of Medina Gardens:
al-Fairouz-Abady (1978); al-Razi (1985); Makram, (not dated) defined ‘al- hadnīqah’ (garden) (al-Balabaki, 1993) in Arabic as ‘a walled patch of cultivated land with productive plants like vines and palms.’ al-Fairouz-Abady (1978); Makram, (not dated) added that if this piece of land is walled then it is ‘hādīqah,’ however, if it is not then Arabs called it ‘Bustan or Rawda,’ which also means garden. Abi-Mansour al-Tha‘alibi (1972) said ‘every walled bustan (garden) is a hādīqah, which is a plural of hadeqq. They reasoned this slight difference in the meaning to the original verb ‘haddaqa’ of the word ‘hādīqah’ which means to surround as exemplified by haddīqat al-Rahman and haddīqat Johaina of the prophet time (pbuh). Al-Fairouz-Abady (1978) explained that Haddaqa in the word haddīqah implies the peripheral walling of a land for the purpose of protecting, maintaining, developing, and raising. Thus, the correct English translation for haddīqah is ‘paradise’ that came from the Persian word pairidaeza which is composed of pairi (around) and daeza (wall) to mean (walled garden) (Moynihan 1979). What made the word used only to mean garden in the Arabic language, i.e. it can not be used to name other walled developed lands other than gardens, is that haddīqah also means a water body or areas of water that collects in water courses of valleys (Makram, not dated). This connection between water as a natural resource necessary for plants to grow and walled patches of lands assigned for cultivation produced the word ‘haddīqah.’ Although haddīqah does not mean a ‘farm,’ the three most popular Arabic dictionaries, Lisan al-Arab, al-Qamous al-Muhiet and Mukhtar al-Sihah cite palms, vines, trees, and grasses as indications of agricultural use of land. They also describe farms like the ones of banu-Johaina and Musailamah al-Kathab as ‘haddīqah.’

In the Quran, ‘haddīqah’ is used to mean both: productive farm and ornamental garden as expressed in the following two verses respectively:

‘Then let man look at his food, (and how we provide it). For that we pour forth water in abundance, And we split the earth in fragments, And produce therein grain, And grapes and
the fresh vegetation, And olives and dates, And hadaqiq (plural of hadiyqa enclosed gardens), dense with lofty trees, And fruits and fodder, A provision for you and your cattle’ (the holy Quran ‘Abas : 24-32).

‘On who has created the heavens and the earth, and who sends you down rain from the sky yea, with it we cause to grow hadaqiq full of beauty and delight: it is not in your power to cause the growth of the trees in them (can there be another) God besides Allah? Nay, they are a people who swerve from justice’(the Holy Quran al-Naml : 60).

4.4. Gardens of Medina Houses.
In response to the desert environment of Medina, historic houses were arranged in a compact pattern around courtyards and along labyrinths of narrow alleys as means to avoiding the heat in the indoor and outdoor spaces. This pattern allowed no space for private gardens around houses. Although Medina houses were to a great extent similar to houses of other Hidjazi cities like Yanbu, Jeddah, and Makkah (figure 4-6a), they contrasted in many ways. Even if we eliminated all the architectural details of different Hidjazi houses there remains a significant difference in the main structure of the house, which in Medina involved replacing house roofs with gardens. Medina people called these roof gardens diwan. Roof diwan were designed to function as an indoor-miniature replica of bilad’s diwan (figure 4-6b). This replication in traditional Medina houses is based on an architectural scheme in which indoor spaces were, to a great extent, independent from the outdoor spaces (Bianca and Anqawi 1989). With the exception of birkah (water pond), the morphology of roof diwan was typical to bilad’s diwan. Due to the reduced space of roof diwan, zier (a traditional large water vat made out of pottery used to cool drinking water) replaced the birkah in cooling the space. In the area around the sitting corner of the roof diwan, 3 to 5 ziers were lined next to the wall to alleviate the dryness and high air temperature in the evening through evapotranspiration. Water from the zeirs was emptied in a regular basis to irrigate the plants of the roof diwan and sprinkling the floor to cool it in the morning.

Niches that were the most representative architectural decorative element of Medina traditional house (Anqawi and Bianka 1989) also played a significant role in decorating roof diwan walls. In addition to decoration, niches have contributed in shaping the spatial structure of the roof diwan. The limitation of space on the roof diwan, was compensated by the addition of these engraved wall spaces, to house flower pots and sharbat (plural of sharbah, traditional water ewer made out of

9For the purpose of not confusing the large diwan of Medina gardens and the small diwan of Medina houses, in this research the small diwan lied in Medina houses will be called ‘roof diwan’
Figure: 4-6a, historic architecture of Jeddah on the left, Yanbu on the middle, Medina on the right, which are mostly similar, but significantly different in many respect.

Figure: 4-6b, House-diwan or kharjah occupied the third floor of Medina historic houses and was overlooked from the living room (‘bait’ house of Sheikh Ibrahim Darandari in al-Saih). Common plants included grapes, agave, narcusus, sharah, liem, ward baladi ‘rose.’ Birds were commonly raised in this kind of garden in Medina including: collared doves, pigeons, and naghari, (by the author).
pottery). In addition to the climatic benefits generated by the action of evapotranspiration of plants and sharbat, these niches with their flowerpots worked as decorative features. The roof diwan was furnished during the afternoon with cushions and mats placed around the walls, which were usually removed indoor in early morning to avoid the scorching sun. In the covered part of the roof diwan, Persian and Afghani rugs, which pilgrims bring as gifts to Medina people were used to decorate the walls. These rugs hanging on the walls worked as an extension of the garden into the indoor space by virtue of their floral ornamentation.

In Medina historic houses, windows or rowshans did not merely function as openings in the wall to the outdoors, but rather possessed environmental, social, cultural, and ornamental functions. The rowshan was a projection of the house-indoor-space into the community-outdoor-space. In other words, rowshan, connected the house private space with the community public space by inserting part of the indoor into the outdoor. Medina people used to place pots of herbaceous, flowering and kitchen plants in rowshans not only to embellish indoor spaces but also to support the integrated passive-cooling-system of traditional Medina houses (i.e. to bring air temperature into humans' acceptable comfort zone by the action of evapotranspiration from plants and pottery pots). The ornamented rowshan and roof diwan with the planted ahwash (plural of howsh, courtyard usually planted by palm or cider trees on which houses overlooked) worked together to cool indoor and outdoor spaces. This integrated cooling system has been diminished by the aggressive intrusion of cars through the historic urban fabric (figure 4-7).

4.5. Architecture of Medina Garden.
In Medina garden there was no distinct division between architecture and landscape. Both are inseparable, each being a product of one another. The architecture imposed scale, forms, pattern, and structure on the landscape and landscape dictated the architectural design module, program, configuration, and building materials. In an integrated way both contributed to the creation of a unique environment of Medina garden. Mohammed Kibrit al-Madani in his book ‘the Fine Jewels in Stating the Virtues of Medina’ (1710), frequently described its architecture. He says for example, ‘to the east of the mountain of Salā lies a group of delicate gardens, the finest of which is the garden of Zaki which possess a glowing appearance and fine architecture’ (Silim 1997). In another place he said ‘to the east of Quba mosque there is a lush, beautiful and elegant garden, al-Husniyah (the most beautiful) is its name. It gorgeously combines architecture with blooms; its flowers charm in radiant colours, its beds allure in extravagant happiness, its spring's water is ever sweet, its quarters are gleamed (by dancing branches breaking light beams), and its breeze is replete of all scents of
The intrusion of automobiles into Medina had followed no tactful strategies that could have upgraded the old city in a consistent manner. Cars were pulled as deep as alleys' sizes allowed deteriorating the basic functions zugags for long history has supported.

The zugag as part of a passive-cooling-system and potential social medium was damaged by opening through it. Interior spaces, as a result sought high-consumption-cooling system, i.e. air conditioning. The initial social environment zugag possessed was also worn by pedestrian and vehicular through traffic.

One of the major aspects that set Medina architecture uniquely different from any other gardens in Saudi Arabia is the use of its local granite stones in most of its building structures. The stone has been shaped and adapted in many forms and for versatile purposes in Medina gardens. In contrast to other stone-building-techniques, stone walls in all Medina gardens had joints with no mounts caused by mortar between the stones (figure 4-8). On the other hand, there were also cases where stones were not used in building structure in gardens. The remnants of walls of Medina gardens along two routes, Quba and al-Eioun, which radiate from the centre of the city to the south and the north were photographically surveyed by the author. Analysis of the photographs along with the fruits. He wrote also ‘the well of Hāa,’ one of the most early historic sites in Medina, ‘was built in a marvellous structure and in an admirable way. Its stones were laid as coherent as precious stones of a necklace.’
interviews with senior *Mualemien* (traditional chief builders) make it clear that the design and material of walls of palm gardens differ in response to three factors:

1) Proximity to the urban area. The closer the palm garden to the city, the more the wall possess of formality in design and construction and vice versa. Stone walls were more common in areas like Quba and al-Awali most (close to the city), whereas areas like al-Eioun and Saiedna Hamza, bit (remote from the city), walls took the form of earth mounds topped by *tarfah* trees (*Tamarix aphylla*). Although Quba and al-Awali areas in the south and al-Eioun and Saiedna Hamza areas in the north were beyond the city wall, they were subject to high pedestrian traffic. This is because most historic sites of Medina are sprinkled along the previously referred to north-south spines.

2) Availability of local building material. In Medina gardens, building material were usually derived from the existing landscape. In areas where stones, for example, is the abundant material, gardens of that area are found to be walled by stones. This has not only camouflaged the wall as an obtrusive element in the landscape (figure 4-9), but also caused no degradation to other landscapes far from the developed one. It has been found that gardens developed around mountains and harrat are walled by granite stone walls like in the south, whilst gardens of the north are walled by sun-dry-mud brick walls for the area is crossed by many wadi courses rich in alluvial soil ideal for brick making. In suburb gardens where walls are not a big concern, walls are made of palm fronds. In areas of the south-west where harrat stones are the only materials, gardens are walled by dry stone walls cropped from the vast areas of harrat.

3) The nature of the site. In rural gardens as in the south of Medina, remnants of natural looking garden's walls were found. They are composed of low dry-stone walls located at right angle across drainage lines and the prominent wind direction. The purpose of these low walls was to trap alluvial soil carried by floodwater down the drainage lines and fine sands carried by wind, and rainwater (figure 3-1). Within 2-5 years, these 'dams' create new landscape topography, morphology, and ecology shaped predominantly by water, wind, and soil. The most substantial value of this technique is that the transformation the walls cause in the landscape is significantly emanating from within rather than from beyond the landscape which give a positive value of locality. The other positive point is the slow pace of change in the landscape, which causes less destruction to the natural setting. Additional benefits of this technique includes soil stabilisation, saving naturally occurring plant cover from being swept away by flood flow, recharging the aquifer, and the creation of natural looking barriers. The area behind the walls were planted by seasonal-rain-dependent plants like grapes, water, dew and honey melons.
4) Economic status. Rich landlords could afford the use of shaped stones, whilst less wealthy landlords used crude stones. Both types of gardens coexisted next to one another as Islamic social principles advise against any form of social or economic segregation (figure 4-10). These images show walls of two gardens in the Quba area in Medina. The different level of finishing of stones used in the walls tell that the one on the right is more expensive than the one on the left. Just like the case in Medina houses, rich and poor people were not segregated in gardens. This shows that gardens were not a monopoly of the elite group of the city, however, the social solidarity prescribed by Islamic induction made neighbourhoods function independently of any economic or racial segregation.

Most Medina’s urban gardens were buffered from the surrounding urban landscape by stone or mud brick walls or thick hedges of tall trees and shrubs (figure 4-11). When walling was not desired in suburban locations, Medina gardens were left open to the surrounding landscape composed of native and agrarian landscapes. The absence of the wall and the openness to the desert landscape is one of the major characters that set suburban gardens aside from other Medina gardens. Al-Lwati (1984) referred such openness to the surrounding environment to Muslims’ understanding of the spiritual nature of space that stretches to include the whole earth. This obviously contradicts the stereotype of Islamic gardens being walled to shield them from the surrounding desert landscape. In Medina, as al-Sairafi (1999) explains, people were on one hand realistic in they knew that it is illogic to deny their desert nature, and on the other hand romantic in pursuing an aesthetic in the visual integration between their designed garden and surrounding uncultured landscape. A review of the Medina historic urban fabric, leads to the conclusion that private and public spaces are always integrated. Even physical boundaries of indoor spaces did not function as limits to utilisation of outdoor spaces. The mosque during peak times, for example, extends over the labyrinth public open spaces by lines of prayers (Alturki and al-Bar 1993; al-Lwati 1984; Bianca 1984). Houses are extended for special occasions, like weddings, over alleys and courtyards. Rowshan project from the house as a private space of the house toward the public space. Palm gardens penetrate through the urban fabric where ever it is environmentally and socially possible to create integration between green and urban landscape that is unique to Medina (Farahat and Alturki 1991) (figure 4-12). All these examples confirm that there was various visual and/or physical integration between private and public, indoor and outdoor spaces in Medina urban and rural landscapes.

Passing between palm orchards was as pleasant as passing through the palm orchards it self (Alturki, 1998). One of the reasons is that the fallah (farmer) considered his garden’s wall as an important feature of his garden from outside as well as from inside. Despite the various forms and
shapes of these walls, each wall had its own rules of aesthetics. Stone or mud brick walls backed by palm trees, or earth berms topped by *tamarix* trees or *akagoul* were common treatments (figure 4-13). Planting on top of walls was a popular tradition of Medina gardens found near entrances and *diwans*.

Architecture in Medina gardens was as unique to the city of Medina as the one inside the city. Sheikh al-Turki (1998) explained:

‘*Mu'allimin al-bina* who built Medina houses were the same who built diwans, garden walls, but not wells for wells have their specialised guild. Each *sa'ah* had its guild who worked ‘*hasab al-ausoul*’ (according to the common rules of the profession) and each *sa'ah* had its own *garari* who was responsible of his profession.

Figure: 4-8, in most Medina institutional buildings, jointing material was mounted between stones, top images al-Anbaria historic mosque on the left, the Sabiel on the middle, and the train station on the right, however in Medina houses and gardens, such technique was not embraced.

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10. *‘Hasab al-ausoul’* is the comprehensive statement that conclude all specifications of any profession like farming, building construction, and carpenter. These *ausoul* govern *fallowiens* (farmers of Medina gardens) works and control quality of production. The reason these *ausoul al-sanaah* is the common rather than the standard rules of the profession is that they were inherited from precedent generations, which make them vulnerable to changes and development. Thus *ausoul al-sanaah* were flexible to changes that would come up from time to time, but needed to be approved by a *garari* (an expert). According to his long experience and ample knowledge in the profession, a *garari* has the talent to judge whether changes or additions to the *sanaah* (profession) are possible or not (al-Turki 1998).

11. *Garary* in Medina language means the one who gained a good deal of knowledge and practice in his profession to the extent he became an expert. The opposite to this term is *ghoshiem* (a person who possess scant knowledge in a particular field or a profession). In Medina garden this term is commonly used when a *fallah* is new to the profession or when his work according to his little knowledge and short experience in the profession does not conform with ‘*ausoul al-san’ah’.
Figure: 4-9, the harmony between the existing landscape and the erected landscape around Medina gardens.

Figure: 4-10, two walls of Medina gardens in Quba area.

Figure: 4-11, in the south walls were constructed of granite stones as unshaped stones in dry walls (1), shaped stones (2), partially shaped mounted by mud mortar. In the north walls were of mud bricks (4), mounds of wild climbing plants and bushes and tarafah trees, this technique was also found in many gardens in the south as well (5), or dry palm fronds (6).
Figure: 4-12, Al-safiah garden as it looked during the seventies (1), as one of many gardens that penetrated through the urban fabric of the city centre until the early 1980s when replaced by high rise commercial-residential buildings. In this particular example, al-Safiah was replaced by modern exotic green landscape.

Source: (Gordon 1979).
The major elements of Medina gardens included the following:

i) **Al-sawani (water mill) and al-Birkah (water pond) in Medina Garden.**

The ambience of Medina garden was shaped by diverse scenery, scents, and sounds of natural and man made features. *Al-sawani* (plural of *saniyah*) is a traditional water lifting system operated by mules and donkeys. The sound generated by *al-sawani* at that time contributed to creating a distinctive landscape for Medina garden (figure 4-14). This 'musical song,' as Sir Burton (1964) liked to call it, used to provoke *fallahyīn*’s (farmers) chants that praise the beauty of their gardens as a bounty of Allah (al-Jurfi 1998; Marzouq 1998). Sheikh al-Turki (1998) said:

‘I still remember the sound of *al-sawani* when I was a youth helping my father in our garden in Quba. We used to hear the sound of *al-sawani* in the morning. It was not only of ours, but the sound was a composition of many ones that merge together expressing the energetic state of Medina *fallahyīn* in their gardens.’ Sheikh Al-Turki (1998) adds ‘the sound was a sign we had multitude meanings for. For example, when the sound is present in our neighbours garden, we realise that they were busy and we should not interrupt by visiting. The longer the sound came from a garden, the larger is the garden. In drought times, we rarely hear this sound, which causes feelings of depression and remind us to insistently pray to Allah for His grace for we were in a total reliance on Allah’s benevolence and graciousness in provoking rain.’ Abd-al-Rahman Marzouq (1998) adds that ‘during normal seasons at a time when we do not hear the sound of a neighbour’s we should investigate the situation in case he might need help. Al-Saied Mohammed Kibrit al-Madani said on one of Medina’s *sawāni* fitted on the well of Haa it has

The well of Haa is one of Medina historic wells that date back as early as the Prophet’s (pbuh) time. The well, which was located in a small garden on the north border of the prophet mosque was owned by abu-Talhah who...
been well fitted, the song of its nightingale\textsuperscript{13} is a relief for any sorrow, and is a magnet for all emotions. When its water run, it forces us to shed tears, and when it sings, it refreshes our souls by its charming songs. It is the source of amours and romance, and it is the gathering place of passion and desires' (Silim 1997). Sir Richard Burton (1964) described the sound of the water wheels of Medina and how 'their sound was delightful to the veteran wanderer, from association, reminding him of fields and water-courses, and hospitable villages, and plentiful crops.'

At the early 1950s, al-sawani of Medina gardens were replaced by diesel operated water pumps. Although this technology saved farmers' time and effort in lifting water from wells, they caused a remarkable drop in water table. This is especially true from the 1970s on when the city population had doubled many times and the need for domestic water led to the use of gardens' water. Farmers traded their garden's water for cash. As a result, numerous gardens dried out. On the other hand, pumps were incorporated in the design of the diwans as it was the case with al-Sawani. Diwans, like al-Khairijah garden, were designed to fit the pumping complex within the structure of the diwan (the room was called ghurfat al-makyinah or the room of the pumping machine). The sound of the pump was as beloved to Medina people as the sound of al-sawani. Many interviewees agreed that the sound of the water-lifting pumps gave a distinctive atmosphere for Medina gardens. They also agreed that they enjoyed being in the garden more when these machines were on.

Water fountains in Medina appeared only in institutional gardens, which were built in Ottoman or Egyptian-Mamlouk architectural styles of the late 19\textsuperscript{th} century. Mohammed al-Baitouni in 1903 (Kamal not dated) reported that there was a fountain in Kutubkhanah (library) of Arif Hikmat and another one in al-Tikiah al-Masrichah (the Egyptian Endowment) on al-Aanbaria street. On the other hand, the desert environment has not deprived people of Medina from the pleasure of celebrating the recreational use of water in addition to its practical use for irrigation. In Medina gardens, water was not only the symbol of paradise or the reminder of the sacred origins of creation, but rather, was one of the means through which Islamic principles can be realised. One of these Islamic principles is the warning against wasting, i.e. decorative water fountains were not used in Medina gardens, neither in houses, nor in public spaces. In Medina gardens water was used for many uses before it can be rinsed from the birkah (water pond) into the fields. The water in the birkah was designed to be a

\textsuperscript{13} later on dispersed it among his family members as the Prophet advised him to do so after he offered it as charity to the benefit of Muslims responding to the Quranic verse that read 'By no means shall ye attain righteousness unless ye give (freely) of that which ye love: and whatever ye give, Allah knoweth it well' (the Holy Quran, al-Ainman : 92).

\textsuperscript{13} rhetorically gesturing to the sound of the mill that he considered similar to the sound of the nightingale
prospect for the diwan, a swimming pool, a cistern for the garden irrigation water, in addition to the cooling effect it offered to the diwan.

ii) The Diwan.

Paintings of gardens in Persian, Mughal and Turkish art have depicted how people behave in gardens. In most of these paintings, people situated their entertaining places in locations that overlook the gardens. In contrast to the Western way of celebrating being in a garden (where walking was principal means of enjoyment), people in those paintings enjoyed gardens by sitting with a prospect (Tittley 1979). Being separated from heat and dust of desert, contained within gardens' greenery, observing the view, breathing fresh perfumed air could be attained without walking in Muslim gardens. In Medina garden, the central pavilion in which the family sits to enjoy the garden was known as diwan.

The term diwan came originally from the Persian language. In 558 AD, the Caliph Omar bin-al-Khattab (550-561) approved nižam al-dwjāyīn (council system where all Muslim affairs had been categorised under a separate diwan, e.g. diwan al-‘Aadl (Council of Justice), diwan Bait al-Mal (Council of Treasure) (al-Wakiel 1987). Although the term has lost this institutional meaning, the other Persian-cultural meaning of the term has been adopted in Arabic as ‘diwan’ and ‘divan’ in the Ottoman, which means ‘a congregational place in which people gather.’ In Medina the term used to mean madjlīs (an indoor sitting area) in houses and madjlīs before birkah in the middle of palm garden. House diwan and garden diwan are different in their architectural forms. Although, all Medina historic buildings are razed nowadays as well as most Medina gardens, the term diwan is used only in gardens but not in houses anymore.

Diwan was an important architectural feature in Medina gardens that contributed greatly to the identity of each garden (figure 4-15, 16, 30). In contrast to Medina houses, diwans were always raised 3-4m from the ground level of the garden. Elevating diwan as centre of bilad (garden in the Madani language) has technical and aesthetic implications. From technical point of view, diwans were raised so the birkah (water pond) can be used to irrigate the garden through its qanāṭ‘ir (canals) which are connected to the birkah. For Medina people, the running water in the qanāṭ‘ir was one of the aesthetic features of Medina gardens that echo the natural running water in the masiēl (wadi course) (figure 4-17). The water speed in these qanāṭ‘ir was an important aspect in the aesthetic characteristics of the qanāṭ‘ir. Water speed, as sheikh al-Turki (1998) asserted, was a function of the elevation of the birkah and the way the qanāṭ‘ir is connected with the birkah. The
Figure 4-14, *al-saniyah* (singular of *al-sawani*) is a traditional beast-driven device used in Medina gardens to pull water out of wells.
Figure: 4-15, top, al-Abbaryah Garden, one of Medina early gardens that was developed around the Prophet mosque, the diwan in this garden is attached into a mzu (farm house), both overlooking the birkah (water pond) in the foreground of the image. Bottom, one of Medina’s surviving gardens in which lies one of the rarest repaired historic diwans. The diwan can be noticed on the top right corner of the image overlooking the birkah Source: al-Khiari.
Figure: 4-16, Cross section through the diwan of bilad al-Khraijiah in Medina, which followed the typical morphology of Medina diwans of the early 1960s. The section shows the integration between the well, the arcade, the water pond, and the rest of the garden, while the two photographs show how the well, for example, typically in Tucson-Arizona, lacked the integration with any architectural unit in the landscape as was the case in Medina garden. Source of images (photographed by the author from the Sonora Deser Museum-Tucson).
Figure: 4-17, *al-masyīl*, a confined wadi course through which rain water run penetrating different landscapes in the desert collecting, water and/or irrigating even areas that have not witnessed the rain.

*al-qanfarah*, is a miniature of *al-masyīl* inside gardens used to convey water to the furthest point in the garden.

*al-ahwadh*, or planting beds are flooded with water fed by *qanat‘ir*. In addition to the irrigation purposes, 'watered *ahwadh* had their own contribution to the experience of beauty in Medina gardens' (al-Turki 1998).

*shiāb*, or drainage line dug on the outside periphery of gardens to drain extra water. Along this drainage line, which is analogous to wadies' attributeries, diverse masses of wild plants would grow creating a natural wall for gardens adding to the beauty of gardens' walls.
beauty Medina people saw in the running water was in both: the sound of the running water and in the renewing water that gesture to the purity and cleanness which contradicts the 'lake'\textsuperscript{14} in which water is mostly stagnant. This idea of running water has its background in the Quran in which all verses on rivers of the paradise of Eden are depicted in a state of movement. Quran says:

‘Their reward is with Allah: gardens of eternity beneath which rivers flow’ (the Holy Quran: al-Baqarah 25, 266, al-Baienah 8; al-Ghashiah 12; al-Tawbah 100; al-Emran 136, 195, 198;).

From an aesthetic point of view, diwans were raised to have a different view to the garden where the view of the garden from the diwan was different from the view from within the garden, and from the view from the top of the diwan (figure 4-18). From within the garden, the view is composed of a forest of palm tree trunks and a grid of various under-storey plantations. At the diwan level, the green canopy of the palm trees is more viewable and dense enough to provide privacy for the sitting area in the diwan. At the top of the diwan level, the view is a birdseye-idyllic-view across the canopies of palms, not only of the viewer's bilad, but of the area as a whole with the remote rocky mountains on the horizon. The use of the three levels of diwan was consistent with the three times of the day. At day time (from Fajr to Dhuhur prayer), the bilad was a working place for cultivating and cropping, and a promenade for a pleasure stroll. The dense palms create a hospitable environment for an under planting of crops, for farmers to cultivate the land, for entertainers to enjoy a wondering stroll, and a quiet world for enjoyment and meditation (Raffah 1998). There is a marked contrast between the dense shade of the bilad and the glare of the surroundings. During the afternoon (from Zuhur, noon to Aasr, afternoon prayer) farmers would leave fields for the lunch break to escape the heat. During the evening (from Aasr, afternoon to Maghrib, evening prayer), the family would sit to drink tea in the diwan or swim in the birkah. Sometimes the top of the diwan would be an alternative sitting area to enjoy the evening breeze and to admire the green canopies of palms in the shadow of the twilight extending into the distance. The primary use of the top of diwans, which is called satouh is a place sleep out at night.

In large gardens, mizul (farm house) was attached to the diwan. These mizul were also designed in a way that complement the garden. In the second floor of the mizul of bilad Shakir (one of the popular historic gardens in Medina), the openings were not always covered by windows (figure 4-19). Openings that overlook the deepest dimension of the garden had no window, allowing the widest view of the garden. The majalis (plural of majlis, sitting room) were at the level of palms’ foliage, at which the view of the garden was dramatically different from the view at the

\textsuperscript{14} the lake, that have been adopted from the English parks culture, has become a common water feature in

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Figure: 4-18, top left, the view from within the garden, top right, the view from the diwan level, bottom right, the view from inside the diwan, bottom left, the view from the top of the garden. As views to the garden differed from different places in the diwan and the garden, these views differed also from garden to garden.

Figure: 4-19, left, windows open to the larger side of the garden were left with no screen, while the vice versa is true, on the right.

modern parks in Saudi cities used as a prospect around which sitting areas are allocated.
ground floor. The dense foliage of palm trees at this level substituted for windows in providing privacy for the room. In addition, the depth of these rooms with the natural dark colour of the wall stones and the bright day light outside prevent outsiders from being to see the inside. This setting worked perfectly also in framing the view of the garden from inside the majlis. This room was used as an upper majlis in which the family used to sit in the afternoon time when the sun is on the other side of the building. On the other sides, where the diwan overlooks the shallower side of the garden or the public alley, privacy becomes a consideration and thus windows were used to cover the openings. Large openings windows always faced east to enjoy the morning sun and west to enjoy the twilight of the dusk. The south side of diwans are always solid without openings of either type (figure 4-20).

Figure: 4-20, south wall of the diwan, on the left, is solid with no openings of any kind, when northern and eastern sides are wide open to the morning sunrise and northern nice breeze.

Diwan did not exist in palm gardens in all cases. One of the reasons is the presence of a historic site like a mosque as it is the case in al-Mabroukah palm garden in the Quba area. In this bilad, the owner opted not to erect another structure, which could, have subordinated the role of the mosque as a historic place to which visitors used to come to visit and pray in the religious season (al-Turki 1998). Other examples are two anonymous bilads, which were developed around Salman al-Farsi (figure 4-21), and al-Shraibat historic mosques in al-Àawali and al-Shraibat areas respectively. In these two bilads diwan were not built for the same reason (al-Turki 1998).
In *diwans* built during the 1950s, the interior of the *diwan* unfolds on a single floor topping the well house that sits on a deck 5-7m below. The ground floor of the *diwan* was rarely designed to accommodate any rooms, but was elevated to have the *birkah* (water pond) high enough to provide a head of water for irrigation. Each part of the *diwan* was modelled to fit a particular function that in total formed a distinct architectural and landscape style. The proportion of different parts of *diwans* was determined by the capacity of the local building material. The *diwan*, for example, took rectangular forms for two reasons. Structurally, the short span of the rectangle allowed local roofing material (wood of palm, cider, or *taifah* trunks) to be used (figure 4-22). Visually, the long side of the rectangle would provide a larger area of contact between people in the *diwan* and the prospect composed of the *birkah* (water pond) and the garden in the background (figure 4-23). Opening between the roofed part of the *diwan* and the *birkah* rests, in most cases, on two pointed arches. All Medina *diwans*, with no exception, face north to avoid direct contact with the sun and to receive the northern breeze in the evening.

The architectural module developed for the *diwan* is inspired, as will be discussed later, by the size of the palm tree’s canopy (4-4.5 m). Most *diwans* surveyed by the author show the roofed part of the *diwan* measure two modules and *birkah* (water pond) is about four modules (figure 4-24). The garden is designed in a grid pattern using the same module to form the *ahwadh* (planting beds). When two modules are used, the planting bed is called *washyā*ā. Decorative architectural features, as in all Medina architecture, were not used in the *diwan*, nor in the *nuzul*. Each architectural unit has its function and was shaped and placed to perform perfectly, yet create integrative form and structure. *Al-*masāb (the spout from which the water come from the well spell into the *birkah*) was carved out of granite stone embracing an elegant from.
Diameter of palm tree canopy = 4 - 4.5m
Developed architectural module = 4 - 4.5m
Diwan in rectangular form composed of two modules = 2 (4.5 x 4.5 m).
Birkah in square form composed of four modules = 4 (4.5 x 4.5 m).

Figure: 4-24, The adaptation of palm's dimension for an architectural module in the design and construction of diwan and birkah.

iii) The Birza.

Birza (the raised slab used for outdoor sitting) is always located at a high point and as close to the diwan as possible (figure 4-25). The birza is positioned to offer visitors the best view over all parts of the garden. It is also to show the order and neatness and therefore the beauty of the garden. Such enjoyment is commonly expected to stimulate the visitor to admire the beauty of the garden by uttering some religious statements like:

'ma-sha-Allah'
(literally means 'it is all by the will of Allah,' which culturally means 'how beautiful')
followed by prayers like:

'Allah yi-barik-lak fi-ha we yijāallak khairaha fi t'aāatu'
(I pray to God He might bless your garden and give you the best of it in the way it pleases Him).

These prayers are considered the best way of complementing the host who considers such prayers as the ultimate reward from the guest. The birza was surrounded by ahwadh (plural of houdh, planting bed) of flowers and scented herbs. In most gardens, birza is always shaded by a large cider tree or grape àaryishah (trellis) (Figure 4-26). The landlord with relatives and visitors used to sit in the evening in the birza during which scented tea and Arabian coffee is served. It was considered as a men’s sitting area when the diwan is most of the time occupied by the rest of the family (women and children) at times when no maharim (male visitors or far-relatives) are visiting. Birza is sometimes found located around the well, surrounded by the major qanāṭ'ir (irrigation canals) which help cool the atmosphere during summer days.
v) al-Qanat'ir.

Al-qanat'ir (plural of qan'arah) means irrigation canals. In Medina gardens were patterned by a grid of qanat'ir, which divided the garden into a net of square planting beds (ahwad) and sometimes they take rectangular forms and called washyiā. The size of these ahwad, as explained before, was proportional to the size of the foliage of the palm tree. The net of Al-qanat'ir was categorised into two categories, which are one or two major qanat'ir connected with the birkah (water pond), and many lateral qanat'ir connected to the major ones to convey water to al-ahwad (figure 4-27). The lateral qanat'ir were connected with al-ahwad through manamah (a hollow cylindrical craved piece of granite stone, external radius =40cm, internal radius =30, height =40-50cm) placed at the same level of al-qanat'ir in al-aqum (earth mounds that border al-qanat'ir and al-ahwad. A piece of palm lief (bark fabric) was used to block the whole of the manamah to stop the flow of water toward one of al-ahwad, and remove it to allow the water to flow to one of al-ahwad. In all Medina gardens, there is no connection found between the major qanat'ir and al-ahwad, i.e. water flow in major qanat'ir is stronger than it is in lateral qanat'ir so it might not erode the top soil of al-ahwad (a mulch of gravel was placed around manamah to decrease soil erosion). Al-qanat'ir worked also as footpaths in Medina gardens. In the past, people used to ramble through the garden during irrigation time where the water in al-qanat'ir change the whole atmosphere of the garden (al-Turki 1998). Al-Turki continued, to describe how at that time people, not only farmers but also
visitors, were knowledgeable that they should restrict their movement to al-qanat‘ir, otherwise valuable parts of the gardens would be damaged. Visitors were encouraged to pick fruits, but not flowers, as they walk along the qanat‘ir, i.e. walking only along al-qanat‘ir created to form a restriction that allowed management of the amount of fruits visitors would consume during their stay without spoiling the produce. Al-Turki (1998) said: ‘at that time, if you asked any one about the best fruit he would pick, he would gesture to the one he would pick from the running water in al-qanat‘ir.’ Unfortunately, people today lost these virtues, as traditional Medina gardens became no part of urban life. In the 1970s, when some Medina gardens were opened to the public, they incurred a great deal of destruction from visitors. Fenced footpaths were awkwardly added to Medina gardens distorting one of the most beautiful aspects of Medina gardens, which is expressed in sharing and charity (figure 4-28). In addition, footpaths and qanat‘ir are not one architectural unit as it was the caste in historic gardens. This separation denied another design aspect that was unique to Medina garden and deprived walkers the beauty of running water in the qanat‘ir.

iv) Palm trees.

Historically, Medina is popular for its date palm gardens. From the time of the Prophet (pbuh) until date, Medina is known for its finest varieties of date palms in Arabia. Sir Richard Burton (1964) was the first traveller who entered Medina and expressed his impression of Medina gardens. He said in his way to Quba area in Medina,
'presently the Nakhl, or palm plantations, began. Nothing lovelier to the eye, weary with hot red glare, than the rich green waving crops and the cool shade, the 'food of vision,' as the Arabs call it, and 'pure water to the parched throat. For hours I could have sat and looked at it. The air was soft and balmy, a perfumed breeze, strange luxury in al-Hijaz, wandered amongst the date fronds; there were fresh flowers and bright foliage; in fact, at Midsummer, every beautiful feature of Spring. Nothing more delightful to the ear than the warbling of the small birds, that sweet familiar sound; the splashing of tiny cascades from the wells into the wooden troughs, and the musical song of the water-wheels.'

Mustafa Nabiel (1979) in his explorative trip to Medina described his first moments of arrival to Medina saying '... it was a moment of meditation in which the long history prevailed to the imagination in profusion as you find yourself surrounded by grand mountains, valleys, and verdant gardens...' The orientalist Johan Keane in 1877 described how distinctive are the date palms of Medina in comparison with other cities of the Muslim world. He described palm gardens of Medina as a wide green belt that shield the city off from the dreadful sterility of the stretching desert. He continued, the city looks like a jewel embraced by mosaic of pearls engrafted on a glossy base of turquoise.

One of the most still remembered and famed plantation of palms in Medina is the one that was in the Prophet mosque (al-Turki, Raffah, Sairafi; Shahhat 1998) (figure 4-29). The sahn (court) of the Prophet mosque in Medina, as al-Batnouni mentioned in his book (the Journey to Hidjaz) was planted with palm trees. He added, 'it has been said that the large palm tree is placing a palm tree of Fatimah al-Zahra (the youngest daughter of the prophet Mohammed).’ Another garden in the Prophet mosque was of Omar bin al-Khattab (the second Wise Caliphate 586-644 AD) which was walling on the southern side of the mosque as al-Batnouni (Kamal not dated) mentioned in his description of the prophet mosque in 1903. In Medina gardens, date palms were the most prominent trees in the gardens. The tree possessed religious and cultural value that gave a distinctive status not only in Medina but all around the Muslim world as well. The Prophet (pbuh) had been asked: 'which among all goods is the righteous’ he said, ‘those are the ones that are anchored in earth but foddering in the house (Fahs 1999), (i.e. palm tree). The versatile uses of its different parts, in addition, made it an important
component of natural resources for Medina people. ‘From the time of the prophet, who Himself’ (pbuh) extolled the tree, until three to four decades ago, everything in Medina homes, tools, furniture, and building material were made out of palms: we ate its dates at the four different stages of ripeness, we ate male-palm-pith, we used its trunks in roofing our houses, its fronds in roofs and in many other wood making crafts, we used its leaves in making rugs, carriers, boxes, robes, decorative objects, brooms, fans, etc., we used its year-around shade in gardens, we used the stones of its dates as forage for our cattle, and most important of all we used its fine types of dates as gifts and charity’ (al-Turki 1999). Al-Bukhari cited a Hadith of the Prophet (pbuh) in which He said ‘there is nothing like rutab (ripe dates) for a woman gave delivery, honey for the sick person, and no tree like the palm for it is the most favourite to Allah under which Mary lie, i.e. to give birth of Jesus’ (al-'Aasqalani 1994; see the Holy Quran, Mariam: 23-25). It has been also reported that the Prophet (pbuh) declared to His companions on many different occasions how much He liked dates, especially dajwah of Medina. The Prophet (pbuh) said in a Hadith, ‘if one among yourselves witnessed the Day of Judgement while having an offset of palm tree in hand, plant it, i.e. do not spoil it.’ Scholars of Quranic exegesis like al-Shawkani (1995) said ‘the reason the Prophet advised toward plantation of the offset is not only based on the hope of seeking reward even during the havoc of that day, for He knows that in that day nothing counts; however, it is the reverential status the palm tree holds in the Islamic culture.

In the past, palm trees were associated with a distinctive culture in Medina. Among Medina people it was known that ‘in contrast to all other trees, palm trees are very sensitive to, and can be killed by cutting off the head. The first lesson a joiner gardener learns from his màalim (master gardener) is to know that the head of the palm is the heart of the tree and if he pulled the central fronds strongly enough he would kill the tree right away’ (al-Turki 1999). This tradition has its historic background as Al-Samhoudi narrated in his ‘Wafa al-Wafa’ that Omar bin al-Khat'ab said to his companions when visited Quba mosque and found it unclean, ‘get me a sawafah (palm’s frond), but avoid al-àawahin (the most fresh part of the fronds located at the center of the palm’s head), ... ‘ i.e. he wanted to broom the mosque by the fronds.

Planting of palm trees in Medina was not only a matter of technical knowledge, however, aesthetic and design aspects were of equal importance. In addition to supervising garden market and gardening business, sheikh al-fallahien (the chief farmer like Salih Shaqlibha) was the one who was consulted upon technical knowledge of planting (al-Turki 1998). Some of the most popular rituals of planting the offset of the palm trees were as follows: i) to utter bismi-Allah, Allah yitrah al-barakah (by the name of Allah, may Allah place His blessings upon it) at the time of placing the
offset in the hole, ii) to orient the tilting side of the offset toward *al-Qiblah* (Makkah, where Muslims orient their faces in prayers), in hope its trunk would straighten up (al-Turki 1998).

### 4.6. Morphology of Medina Garden.

Ideas and practical knowledge of traditional builders, as Hasan Fathy has constantly recognised, is 'a genuine and yet untapped source of inspiration' (Steele 1988). The most significant aspect in the construction of Medina palm gardens was the utilisation of the existing landscape rather than transporting material like soil and water from other places\(^\text{15}\). In contrast to modern gardens, *fallahiyn* (farmers) of historic Medina gardens situated their gardens to fit the local nature of sites and without degrading other landscapes. In a sense, Medina gardens were responsive visually and physically to their immediate surrounding landscape. as explained before, in the al-Eioun area, for example, diwans and garden walls were built out of clay bricks whereas in the Quba area, granite stones were the commonest material. The ruins of some diwans in the al-Jummah mountains (south west of Medina) show that, in contrast to the black granite diwans of Quba, these diwans were built using red stones from the local mountains. To the west of this location, a group of palm gardens were walled using dry stone wall techniques by volcanic stones collected from the surrounding *harrat* landscape. In areas to the south of Medina and where stone was not available as a building material, the wall was built out of *safaf* (dry fronds of palm trees).

The simple spatial layout of Medina garden (figure 4-30) was surrogated by, to some extent, with diverse plantings of species to stimulate the senses. Flowering plants were used along the pathway between the entrance and the *diwan* as a welcoming sign for visitors. Fast growing flowering herbs like *jarjis*, *labbab*, *asil*, *reish al-deib*, etc., were planted along the *auqwiim* (edges of planting beds) to enhance the grid form of the *ahwadh* (planting beds) of the garden visually. Although colour was the design effect Medina people most liked in their gardens, it was not the only aspect in the process of creating different landscapes in the garden. Scent, size, and use of the plants also played a significant role in defining different landscapes in the garden. Around the *birza*, for example, scented plants were used which worked well with the time the *birza* is usually used (in the after noon to the evening, when northern cool breezes prevail and evoke the scents of the plants) (al-Turki 1999). Tuan Yu-Fu (1990) apprehended that 'the more chances a place allows of simultaneous use of senses, the more fascination humans find in such a place.' In Medina garden, the visual experience is consolidated simultaneously by diverse forms of experiences that involve

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\(^{15}\text{In contrast to this traditional value in garden construction, most garden material in modern practice depend on negative businesses like soil stripping of wadi, diversion of valley’s water flow, which cause serious deterioration to other landscapes.}\)
Figure: 4-30, plan of the nuzul (diwan attached to a farm house) of Bilad Shakir or (al-Eihin) in al-Awali area.
sound, smell, and taste in a way that cast a complete picture of the entire garden (al-Turki 1999). These scenes, scents, taste, and natural and manmade sounds created an ambience that is not found in modern Medina gardens.

In historic Medina gardens, the location of the well was the centre around which the garden would develop within the vicinity of a property. The qarn (the well structure) was high enough to make a focal point that indicates the location of the well within the garden (figure 4-30). Although wells were not always centres of gardens in term of space, they were centres of gardens in term of services (i.e. gate to the garden, diwan (pabilion), birkah (water pond), mahiet (sleeping rooms for farmers and labour), birzah (sitting terrace), mirbad (date storing place), muzul (farm house) and khazien (storages) have all been found located around wells). Medina palm gardens, in most cases, follow the general Muslim scheme of garden layout in which the centre and the peripheral walls are the most important part in the garden. Tonna (1980) attributed this morphology to ‘Arab-Muslims being more concerned with the concepts of centre and periphery and so tended to reinforce the integrity of the enclosed space.’ Diwans are found to have always been located toward the northern end of gardens. This was most probably intended to allow a sufficient distance to allow palms to break down, filter, and cool the southern sandy winds before reaching diwans. Nevertheless, there are several exceptional cases in which diwans are not even in the middle of the palm garden. In these cases, diwan form an integral part of the periphery wall of the garden as in the al-Jurfi palm garden in the Quba area. Another situation in which diwans have shifted from its conventional location is when an area of high land occurs within a garden. In such cases the diwan is located at the highest point to overlook the rest of the garden and also allowed the birkah to naturally irrigate the garden without raising its base.

Figure: 4-31, ruins of saniah of bilad al-Jurf on the left and bilad al-Sarrani on the right, the qarn of the well-saniah was a major structure in Medina gardens around which other facilities develop.
The most popular example was an anonymous palm garden located on Sayedna Hamza area to the south of al-Rumah mountain. Medina palm gardens utilise a grid system for fields, which were bordered by nets of irrigation canals called qanāṭir (plural of qanāṭarah, irrigation canal). Despite the organic structure palm gardens possess in sectional view (due to the fluctuating heights of palm trees), the upper view of any clump of palm trees display a formal grid of canopies. The symmetrical form of palm trees and the way they were planted in rows created a modular framework composed of square units, which were proportional to palm trees’ diameter (4-6m). Āquom (plural of āaqum, edges of planting beds) were the four edges of square planting beds called houdh that divided gardens into typical squares. This grid method allowed extension of the garden where the original part of the garden remains as a stable core and new squares could be added on sides or parts of the sides of the garden. Despite its formal grid pattern, the peripheral layout of Medina garden had rarely taken a formal geometric form. In almost all Medina gardens, walls were independent of the rest of the garden in term of morphology. This owes to the fact that the garden was always established before any buildings’ construction could take place. The logic behind this order is the fact that people of Medina had always wanted to assure that the garden is successfully established before they spend on building construction. Over this time period, farmers used to dispose of the pruned palms’ fronds on the peripheral edges of the garden. The fallah (farmer) used to let diverse desert species like āaqoul, riešh al-dieb, mussaia, etc. (figure 4-32), to develop over these heaps of dry fronds. These heaps of dry branches covered by native desert plants worked as natural barrier to keep

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16 The garden was demolished in 1991 although it was reported to has possessed the most delicate engravings and colouring techniques on its mud walls in Medina. The garden was visited by the author and four other architects of Medina municipality (namely Ghassan Zahid, Khalid al-Hazmi, Nasr Khashuqgi and Talat al-Bar) in the spring of 1990.

17 This design character has not been recognised in the field of contemporary garden design in which palm trees are used. In these designs, palm trees are brought from nurseries in which palm trees were grown in equal heights. The ignorance of this historic design dimension has a vital contribution in creating less effective landscape and historically irrelevant scheme.
trespassers out of property. At the time when the gardener decide to build the wall, the heaps would have shaped a new circumference for the garden and in most cases becomes the new territory of the palm garden. The Mua-alim in his construction of the wall would then follow the new curved circumference of the garden fringe producing an organic boundary for a geometrically shaped space of the garden (al-Turki 1998) (figure 4-33).

Another justification for the incompatibility between the geometrically designed space and the organic encompassing wall of Medina garden is due to climatic concerns. The zigzag labyrinth that ran through urban areas was functionally effective in breaking down summer winds and minimising heat gain. Palm gardens followed the same principle in protecting palm gardens against the hot desert wind Medina people called samoum (figure 16-left image).

Figure: 4-33, traditional wall structure of Swala historic garden in al-Awali-Medina. Dry fronds are heaped, allowing desert native plants to develop creating an additional wall even after the construction of the stone wall. This natural looking barrier would be retained as a place under which wild life would find an appropriate place to develop. The wall from the outside is surrounded by drainage channels to divert rain water to the garden’s well rather than flood the garden and to collect excessive irrigation water. Diverse desert plants colonise these channels adding to the beauty of the garden’s walls and stabilising soil during rain seasons. The diversity of the wild plants allow different seasonal ambience as they dry out in summer, greyish green in winter, and bloom in various colours in spring.
The traditional culture of gardening in Medina—Saudi Arabia.

Attitudes towards designed landscapes in two desert cities: Medina, Saudi Arabia and Tucson, Arizona.
5. The traditional culture of gardening in Medina, Saudi Arabia.

The agricultural prosperity in the history of Medina that was sustained by love of gardens and the successful adaptation of crop production to desert environment produced a pragmatic acceptance of a dry desert landscape with green oasis like landscapes. In areas where the natural landscape afforded agricultural development, gardens were established in a form that was shaped by both: the available natural resources and cultural considerations. Other areas that were valued for their natural resources or for being an important component of the natural ecosystem, i.e. wadies and ravines, were left as part of public property in which wild landscape was protected by the application of Islamic laws and traditional cultural norms. In such areas, the wild desert landscape was appropriated as public open spaces that accommodated various social and cultural activities. The northern part of wadi Bathan is one such example of a landscape accommodating versatile social, recreational, and cultural activities, yet maintaining its natural desert character dominated by cider and acacias trees (figure 5.1). The only exception to this was the Abu-Jiedah garden which encompassed part of wadi Abu-Jiedah within its property. The name of the wadi came from Sheikh Abu-Jiedah whose garden was large enough to accommodate a large proportion of the wadi (al-Turki 1998). In the part of the wadi which was within sheikh Abu-Jiedah’s garden, the wadi was turned into a green lush landscape and was one of the finest parts of the garden in which people were welcomed by the owner to picnic freely. In return for part of the wadi (public property) passing through his private garden, sheikh Abu-Jiedah used to give crops that grow within the easement of the wadi to charity.

Figure: 5.1: Wadi Abu-Jiedah prevails from Wadi Bathan in the south, penetrates through the city (submerged now), and continues toward the north to form, with other two wadies, Wadi Hammad. Wadi courses, like Wadi Abu-Jiedah, were bordered by trees of ciders and acacias, while the floors were forested with wild herbs and desert shrubs. In addition to wadies being natural corridors protected by the Islamic law for wildlife to prosper, they functioned also as promenades connecting walking trails between suburbs of Medina and as recreational places for diverse passive and active recreational activities.
One of the imperative acts that a gardener had to do towards a visitor (even if the visitor was one of the neighbours) was to serve some of the finest dates to the guest to eat while visiting the family in the garden. Dates in their *rutab* (partly ripe) or *tamur* (dried ripe) form the two most significant ways of representing the quality of the whole garden. This act was not only part of the hospitality of host to guest, (a crucial part of Saudi code of ethics), but also offered the guest a chance to examine the tenderness and fineness of the host’s garden. Demonstrating skills and competence can be socially explained as a form of self expression, but for Medina people it was a chance to show and share the blessing of Allah (al-Turki 1998).

For Medina people, tasting dates enables guests to grasp the complete picture of the whole garden. In other words, Medina people had the faculty of interpreting the tastes of dates and correlate tastes with the quality of gardening, water, and soil, and appropriate timing of pruning, fertilising, and harvesting. A visitor, for example, might consume one of the dates during a visit and in rare situations his negative impression comes like:

‘*ya Latyif hada ghamaq ma-hu rutab*’

(oh ‘Allah’ the Most Kind, these dates are artificially, not naturally, ripened).

or

‘*ya Saatir, ummaha ma kanat rawianah*’

(‘oh (Allah) who Disguise negative aspects,’ the mother of the dates (the palm tree) was not well irrigated)

or

‘*aizuzu bi-Allah, al-tamur misharif, mahu majmu'a fi waqtuhi*’

(I seek refuge from Allah, the dates are with textured-dry skin, they might have not been collected on time).

On the other hand, the guest might have a positive impression and he might say something like:

‘*ma-sha-Allah, wa-Allhi tamrat-ha fakhrah ummaha makhduima t'aieb*’

(it is all by the will of Allah, I swear God, its dates are superior in quality).

or

‘*Allah yitrah al-barakah, ma-sha-Allah ummaha rawianah*’

(may Allah bestow His blessing on this garden, it is all by the will of Allah, her mother ‘the palm tree of these dates’ had been well irrigated)

or

‘*ya salam, ardh t'aibah wo zar'ah t'aibah*’

(oh Peace (one of the fine names of Allah) it is a fine earth and fine plantation).
One of the notable points here is the first part of the praising statements, which always come in forms of prayers and the second part that addresses the produce, the tree or the earth, but not the farmer. For them, they knew that praise is directed and meant for the farmer, but they usually refer the goodness and excellence to the Creator (Allah). According to Medina people, goodness and excellence is not a possession of the garden or the farmer per se, but it is rather a bounty Allah placed in earth, enabling man to discover it, and helped him to enhance and harvest it to convey the ‘goodness, welfare, and beauty’ to themselves and others (Raffah 1998). So when the guest admires the host, he actually praises Allah the ultimate reference of both goodness, the one embodied in man’s intellect and the one he placed in nature. By offering this religious form of praise, the visitor express his desire that Allah may maintain His bounty, which is exemplified in the integrated goodness between the farmer and his garden, on both the farmer and the garden.

In cases when the guest is not satisfied by the taste of the dates, he would likewise begins his comments by prayers followed by the evaluative statement. The guest would not show his dislike to the host, but might keep such impressions to himself. They usually exchange good comments freely between each other, but do not however pass negative impressions to others unless they are close friends or in occasions they would like to offer advice regarding the subject matter (al-Turki 1998). This social exchange of information enable the society to know which garden possess high quality dates and which does not. The cultural intention in this process can be explained as when the guest admire the dates, he actually assess the gardener’s keen skills and sincere commitment to his garden. His rank in the profession would therefore be determined among his immediate social group or among the whole society in very exceptional gardens like al-Śafiah, al-Salmiah, al-Eshqiah, Swalah, bilad Shakir, etc., (al-Turki 1998, al-Sarrani 1998).

At that time, as Sheikh al-Turki (1998) asserts, ripe dates were to be collected only when the bottom half of the yellow or red coloured zahou (unripe dates) acquire the brown colour of rut'ab (ripe date). This state of such dates was called mnaṣifah (half-half). In the market, dates were to be sold as zahou (unripe dates), rut'ab mnaṣif (half-half rip dates), or tamur (dried out dates). Gardeners learned that each stage of ripeness of different dates has its own value that differs from type to type, when some could not be harvested but only in one stage of ripeness at one particular season. Al-ghashjim (the unskilful gardener), is the one who bring to the market dates in improper stage of ripeness. Seasonality had a rhythm not only in Medina’s recreational activities as mentioned before, but also in its market. Al-Ghamdi (1997) indicated how people nowadays yearn for the rhythm of seasonal produce when the diet in Medina was a function of seasons.
Medina gardens constituted a social-professional framework that bound together social ideals and professional techniques, which were mutually charged by Islamic principles. This framework had a profound role in creating the distinctive characteristics of Medina garden, which are marked mainly by the continual process of work, production, and maintaining high quality of produce. Due to Medina's desert environment, the collapse of this cultural framework, even for a short period of time, meant the return of gardens into scrub (al-Turki 1998). This system articulated an ideological order between, on one hand, the farmer and his garden, and on the other hand, the farmer and other farmers (visitors and guests). Thus, to maintain sound professional standing in the community one had to maintain a tidy garden and good quality produce that entailed a sincere commitment to the working in the garden (al-Turaki; Shahat 1998).

Sincerity and commitment to the work of gardening in Medina was seriously expected within the circle of the profession. The traditional proverb, Medina people used to express this notion, says: 'To locate the fallah (farmer) you have to follow the water in the qant'arah (watering canal) of his garden' (al-Turki 1998). Shiekh al-Sharief Shahat (1998) adds 'in Medina we used to say 'al-filahah ribahah' (farming is profitable), by which we meant farming is profitable in the sense it is a reliable source of livelihood and profitable in harvesting success and self esteem. The linguistic analysis of the word fallah (farmer) sustains al-Sharief's point. The word fallah, come from the verb falaha (plough), which shares the root of the verb aflaha (prosper). The use of this term in farming and gardening has simultaneous environmental and cultural dimensions. The desert environment of the area engenders distrust toward farming since a farm might prosper, but might also fail. Nevertheless, when a farmer succeed, the farm would have realised two forms of success, one in this life by generating, a culturally considered, reliable source of livelihood and one with earth by reclaiming it; by merging the goodness of himself (what he possess of knowledge in this field) with the goodness of earth (what it possesses of good soil and contain of water) (Raffah 1998). So when one says 'falah al-ard' it means simultaneously he ploughed the earth, and he successfully ‘brought life unto it.'

5.1. People of Medina Gardens.
What is common among all historians' and travellers' literature on the history of Medina is that visitors to Medina are always surprised by the generous hospitality, kind treatment, and warmth offered to visitors. Abd-al-Aziz Doltchine, the Russian soldier, in his pilgrimage to Medina in 1898 called people of Medina 'al-Arab al-Baladioun' (city settlers or Arabic people who live in cities) (al-Naser, 1995). He noticed that among all people he encountered in his trip, al-Baladioun of Medina were salient as their attractive local costume and appearance, and pleasant behaviour.
towards visitors. In his trip to Medina in 1903, Mohammed al-Batnouni, for example, found that among all Arabs, Medina people were the most gentle, fine, kind, modest with a very remarkable deal of hospitality (cited in Kamal not dated). He added ‘it might be that they gained these manners by neighbouring the Prophetic grave of Mohammed (pbuh) who was the master of this fine behaviour.’ He recorded also how Medina people loved their gardens, he said: ‘it was clear that Medina people were very connected to their gardens. They used to go weekly to picnic (meqial) in these gardens in the suburb with joy and happiness (Kamal not dated). John Keane (1877) in his visit to Medina recognised Medina people as the finest Arabs he encountered in his travels. Among the behaviour of Medina people, he was especially astonished by the warm greetings and welcoming reception Medina people had toward each other and foreigners as well. He recognised also how they were proud of their gardens.

5.2. Medina People’s Love of Palm gardens.

As Kevin Lynch (1988) argued that historic ‘primitive’ societies had strong culture in relation to the natural environment; ‘the people work, create, and play in harmony with their landscape. Most often, they feel completely identified with it, are loath to leave it.’ Similarly, Medina people liked their desert environment and loved their gardens. Āishq al-nakhil (tree lovesick palm) is one of the diseases people of Medina diagnosed in palms when their fronds turn abnormally on yellow colour. It has been believed that by doing this, a female palm tree is showing symptoms of lovesick she developed with a nearby male palm tree. Madani fallahyin believed that the only remedy for such symptoms was to wrap some of the fronds of both palms with each other. In some other cases and when palms were distanced from each other, they used to make a rope out of the beloved male-palm’s fronds and tie the two palms using this rope (figure 5-2). Al-Turki (1998) said ‘from my own experience I came to the conclusion that the best way of dealing with

1 Meqial is also found in other literature as qaila especially in those ones, which are newer than this book.
such palm’s problem is to fertilise the female palm from the nearby male palm’s pollens. This kind of remedy approved great success and was also tried by others who committed positively.’

Despite its nostalgic and mythical nature, the tendency of dealing with palm trees on the basis of humanistic relationships reflect the high status the palm trees possessed among people of Medina. On the other hand, this tendency has its historic roots that go back to the Prophetic time. Jabir bin-abd-Allah narrated in al-Bukhari (1995) that ‘the Prophet (pbuh) used to give his preach leaning on a palm tree in the mosque. It happened then that a woman asked the Prophet if her son, who was carpenter, could make Him a minbar (pulpit). Next Friday and while the Prophet was preaching on the top of the pulpit, we heard the palm tree moaning as if a boy crying. The Prophet descended from the pulpit and hug the tree until it calmed down.’ In another script of Anas bin Malik he said ‘the tree cried as al-walih’ (a person get confused by love) (al-Husari 1994).

The Prophet said ‘there is nothing more lovely to Allah but farming, He sent no Prophet but a farmer except Idris, he was a tailor’ (Fahs 1999). Hassan bin Thabit², is one of the most early examples who reflected Medina people’s love of palm trees and gardens. In his poem, he debased the careless attitude Bani Luai (a Juish tribe that descend from bani-al-Nadhir which settled in Medina at that time) showed toward their palm garden (called al-Buwairah) when it was on fire.

I wonder,
How the chiefs of Bani Luai found it easy,
to watch fire spreading at al-Buwairah.
(Khan, not dated).

In another early example, we see in this line of abu-Qatifah’s poem (cited in Kamal not dated) how Medina gardens were beloved and preferred more than other gardens as he said:

The palace (palace of Saied ibn al-Aas³ in Medina) with its palms and al-Jama⁴ in between,
is rather seductive to the heart than the gates of Jairoun⁵.

²The famed poet of the Prophet (pbuh) who called him ‘the poet of the Muslim nation.’
³Saied ibn al-Aas, was the governor of Medina at the time of the first Umiad Caliph Mu’awiyah bin abi Sufian (602-680 AD).
⁴Al-Jama, is the small wadi that flow perpetually.
⁵Jairoun, is an old name for Damascus.
Saeid bin Sulaiman al-Masahiqi wrote a letter to abd-al-A’ala bin abd-Allah and Mohammed bin Safwan who were in Baghdad (in which gardens were fancier than the ones of Medina) reminding them of the beauty of gardens of wadi al-Âaqiq in Medina. He wrote:

Oh tell abd-Allah if you encountered him
and tell ibn-Safwan about closeness and remoteness.

Do not you know al-Musala 6 is still in its place
and al-Âaqiq is still full of trees and flowers.
And its gardens are ornamented
by its yellow nawar 7 and al-shka! 8.

And in it also if you know asaela 9
and delicate nights as before.

And the brook of the labatain 10 is still flowing
and the way to the two mosques is as beautiful as it was.
Is there of you who would yarn and greet home,
or visit who shares you affectionate affinity.

In recent history, people of Medina showed a rather intense state of attention toward their palm gardens. Shiekh Hasan Sairafi, for example expressed this liking in the following sentimental prose:

‘... ask anyone and you would learn that, we people of Medina had a chronic disease that nothing can cure but scenes of palms stretching in the horizon and palm gardens spreading as far as sight can see. If you search you would find that perhaps Medina people wrote the most charming poems on beauty of gardens, who themselves have already lived in beautiful ones’ (al-Sairafi 1998). Anwar Eshqi was one of the poets who translated his love of gardens in turning his palm garden into a cultural centre that hosted weekly poetry seminars on Medina and Medina gardens. He said praising his al-‘Eshqiah garden (on the foot hill of Sel’a mountain (to the Northeast of the Prophet Mosque):

Wa rawdatun (a garden) I would never exchange
Even with the luxury and wealth of Caesar and Queasier.

6 Al-Musala is a place in wadi al-Âaqiq known for its sweet water and fine gardens.
7 Nawar is wild flowers yellow in colour.
8 Flowers that are red and white in colour.
9 Asael is sort of native flowery ground cover that carpet wadi courses in early spring, but when dry out in summer, turn into yellow revealing dramatic landscape in the desert.
How would I when it is my dream
How would I when it houses 'Eshqi (my love).

As palm gardens started to disappear during the 1970s, Medina poets expressed their grief and regret toward this loss in poetry. Hassan Sairafi in his poem titled 'if I were,' tried to convey images of decaying beauty of Medina gardens by exposing nostalgia against his memories of these places. He wrote:

these are the ruins of my soul, nothing dwell in them except memories of our nights in Qurban.
In al-Åaqiq, Qanat valley,
Sel’a plateaus, in Roma, and Bathan11.

who can, for me, revive a night of Quba’s nights between the palms, the raihan12, and profusion of life.

Ali Hafidh (1996) wrote ‘we surely have a great feeling of regret toward what the city has lost of historic gardens when we have done little to stop this misery.’ Al-Turki (1998) adds, ‘water is diminishing, . . . area of palm gardens are shrinking, . . . old farmers are easily abandoning their profession of desert-gardening, . . . and Medina is loosing its beauty. Sharab (1985) highlighted that a great proportion of elegiac poetry in Medina is written on the loss of Medina gardens especially along wadi al-Aqiq, on which palaces and gardens were in abundance.

5.3. Public Recognition of Beauty of Medina Gardens.
Language was one of the most powerful tools Arabs used to express beauty of the landscape. Faried Shafe’ei says ‘Arabs had portrayed extraordinary plates of various forms of beauty by facilitating their rich words and rhetoric language of poems rather than brushes and paintings’ (Ukashah 1981). An ancient Arabian poet expressed this trend as a responsibility and stressed the religious dimension of such work:

There is none a writer that write, but one day would vanish away, however, time would perpetuate what his hands write and portray.

10 labatain (singular is labah) which are the two lava harrats of Medina in the east and the west districts of Medina.
11 names of valleys and wild areas in Medina.
12 a scented flowering bush.
So, do not write, but valuable things that may, bring you happiness in the Hereafter’s day.

Al-Naasen (1992) claimed that Arabs developed what so called ‘al-rawdiat or qasaed al-janaien’ (poetry of gardens) from Persian culture. Nevertheless, the diversity of the landscapes in the Muslim world had enormously influenced poets’ perception in a way that created diverse poetic styles. In the Andalusi poetry, e.g. ibn-Khafajah, the lush green landscape of al-Andalus (south of Spain), had shaped a corresponding metaphor responding to the lushness and richness of the landscape. He wrote for example:

For Allah, a river runs through a plain,
It is more seductive than lips of a glamorous girl.
Twisting as a bracelet,
Bordering its sides as long as it goes.
Branches bound it tight
As lashes flank blue eyes.
(cited in al-Takriti 1994).

In another example it can be inferred how the influence of home landscape is conjured in the perceptual appreciation and verbal depiction of another landscape. Hamdounah al-Andalusiah said in her popular poem describing one of the valleys in al-Andalus:

A valley shielded us against the scolding heat of ramdāa (sandy plains),
Watered abundantly by generous rain.
It Compassionately housed us within its shade,
As compassionate as a mother nursing her own tot.
It sipped our thirst with its pure-sweet water,
Charming than having wine with a companion.
It shielded the sun where ever it had faced us,
Blocking its heat, while allowed breezes to pass through.
Its pebbles panicked the virgins’ adornments,
So she check her necklaces’ precious stones.

We find a similar attitude in the poem of Jariat Yazid bin abd-al-Malik, who was in Syria, in which she sang praising her enchantment by the mountain of Salà in Medina:

La-àamruka (a form of swearing) I do like Silà
For its looking, and also its protection.
My eyes would be pleased only by being close to it,
Wish it would be my home when I am back.
(cited in Silim 1997).

Beauty of Medina gardens was likewise acknowledged mainly in poetry. The popular Madani historian Mohammed Kibrit Al-Madani (1650) listed the most popular noble gardens of Medina with poems wrote on them. One of these gardens is al-Qawim which is considered one of the oldest gardens that provoked several poems. In most poems, cited in al-Madani (1650), beauty was admired at two scales. The small scale dealt with gardens’ individual components, like palms, trees, water, and diwans; and at a large scale the garden as a whole was the centre of poems. In most of these poems the Madani term bilad (garden) is replaced by rawda (paradise). The following excerpt is an example of rawd or riad (plural of rawdah or paradise), which replaced the local name bilad for garden to express an extravagant level of beauty.

RAWD lie as virgin’s crib and a brook,
on which the ever-cooling breeze is engraved.
And palms look like pretty dressed up brides,
of their fruits wore their necklaces.

In another poem, the poet wrote about one of the gardens’ elements, which is the birkah (water pond).

I look at the delightful birkah surrounded by wondering eyes,
just as an eye surrounded by eyelashes
As when it worth the sight of the overlooking eyes,
it look like a shining moon in the middle of a constellation.

Reading through this literature show that there are diverse aspects of beauty Medina people recognised in these gardens. In coherence to Andalusi poetry on natural landscape, Medina poetry was to some extent concerned with scenic beauty of gardens, nevertheless it gave more emphasis to functional aspects of the landscape as a way of expressing natural beauty. Cool stretching shade, breezes, fragrances, plants, water as taste and water as sound and scenery, and gardens’ architecture were the common elements of gardens that have been alluded to in Medina rawdiat (poetry on gardens). An ancient poet, (cited in Al-Madani 1650), wrote on one of Medina gardens:

Why shouldn’t I wonder through the beauty of the riyaḍī?¹³,
And stray my soul tracking its stretching shade.
Blossoming flowers greeted me with dazzling glee,

¹³ (plural of Rawdah, paradise)
And water amazed me enough by taste of impurities free.

It can be inferred here that garden’s beauty is expressed in emblems that are not only of visual aspects. Beauty here is perceived once, in the comfortable environment the shade created in the garden, and secondly in the pure taste of garden’s water. A similar attitude of defining the beauty of the garden is found in historians’ writings like Mohammed Kibrit al-Madani (1650) who wrote:

‘al-Qawim was a spectacular garden penetrated by streams of canals, sprinkled with palaces as if they were stars spread in the lay of the sky. It bounded countless palms and numerous trees. Its crop is voluminous, its inviting basins are shaded and wide, bordered luxurious paths and full of enduring emblems of beauty. It has a wide well, a spacious diwan erecting over a neatly situated birkah (water pool) and plenty of places of pleasure.’

A similar account found also in words of elderly people of Medina. Sheikh abd-al-Rahman Raffah (1998), for example said in describing the beauty of Medina gardens:

‘In the world of green, you would rarely come across a matching paradise of jama‘un bahir (gorgeous beauty), in which a perpetual feeling of tranquillity is always combined by a generous feelings of divine benevolence. A forest of trunks of palms, a stretching shadow, ever flowing water in qanā‘ir (irrigation canals), are nothing but common expressions of beauty that people usually seek in gardens. What is more important here is not only this beauty, but the factors that shaped this beauty: men with sincere faith, bequeathed knowledge, and sweating days of hard work’ (Raffah 1998).

As another example, Sheikh Hasan Sairafi (1998) said:

‘There are no two who could disagree upon the beauty of Medina palm gardens. You head Medina from any side and you would smell its gardens before your sight recognise them. You arrive and find yourself within these extended and generous gardens able to say nothing but to praise and thank the Creator of such beauty.’

Sheikh al-Turki, from another point of view said:

‘when we planted different scented herbs and allowed other wild plants to develop around walls and on the āqūim (earthberms) of our gardens, it was our intention to share the beauty and the desire of observing such beauty with others: neighbours and passing by. By maintaining these gardens, you are maintaining the tradition, the beauty, and the desire to perceive this beauty.’

Another important aspect Medina people considered greatly in the beauty of gardens is the barakah (divine blessings). In the following example the poet started his poem by gesturing to the significant
blessings their gardens gained by being located in the city of the Prophet Mohammed. Mohammed Kibrit al-Madani (1650) in a long poem referred beauty of Medina gardens to Divine blessings:

'We, the neighbours of Ahmed
In blessed gardens in which, picnic has always been pleasant.
Our water, by Allah’s benevolence, is pure and cold,
and in the forenoon we have, fine rtaab (ripe dates) and umbrageous shade.'

As another example, al-Áaff al-Tilmisani, attributed the beauty the Quba area possess to the Divine blessings also evoked by the presence of the Prophet’s grave (pbuh) being placed in the city. He said:

If would not Him, Quba would not been prized with the beautiful pride,
And would has not been exceptionally mentioned in the Quran.
Lofty is this mosque, of which its pride is still in heart,
In which the dew resort; how magnificent is the landscape (around it).
Hands of Breezes have shaped the gardens of the finest,
And trunks and branches have tilted by fruits.
And the sweet (the water) has become clear but the sawani (water mills),
Run it through brooks in gardens of herbs and blooms.

Medina people also expressed a remarkable degree of awareness of various aesthetic aspects of plants of their gardens. Scents of plants were among the most liked forms of beauty Medina people appreciated and enhanced in their gardens. Similar to Francis Bacon (1561-1626) who classified flowers and trees according to the strength of their perfumes (Moore et al 1993), Medina people classified not only plants, but also time and locations in gardens according to saturation of fragrance in the air. Summer is the time of laimoun benzehair (lime) to crop and load trees, not only with limes, but also with scents Medina people loved. Áâsr (from afternoon to evening) was the perfect time for Medina people to sit out or walk in the garden as they realised that it is the best time the garden would be redolent of fragrances. Sheikh al-Turki said and al-Sharief Sahhat made a similar comment:

‘nasjim al- áxari (the breeze of the evening) was saturated by scents of lime that you do not find at all times. At those times, people had used to come from Medina (down town) to enjoy this beauty in gardens of Quba and other suburbs. We used to drink tea in Áâsr time in birza so we can indulge our senses with the fragrant breeze and scented tea with different herbs.”

14 Ahmed is the other name of the Prophet Mohammed (pbuh) whose tomb in Medina is located within the old part of the Prophet mosque.
A traditional Madani poet indicated how Medina people liked this particular aspect in gardens as situated in this poetic dialogue:

Alliem\(^{15}\) complained to the lime:

picking nawami\(^{16}\) deprived me off a verdant look

You have the frisky shoots, but I am the one who left sick,

should not your leaves were the valued ones as to be picked and leave me a life?

Despite stereotyped ideas that consider Medina desert-gardens as colourless, early people of Medina recognised the beauty of seasonal colouring of their desert gardens. Al-Afandi Ali Mousa (1885), for example, indicated that there was a relationship between cropping times when the landscape attain natural colours of fruits and intensity of geilah (picnic) in palm gardens. Sheikh al-Turki explains this relationship as he says:

'when summer arrives, you see one of the marvellous subsequent colouring process in gardens. At first, altal’a (spadix) white the heads of palms, then the zahou (unripe dates) grow large in green colour and slowly heads of palms split into two colours, red and yellow of the zahou. At mid of the summer zahou, both red and yellow, ripe and get mixed with the light brown colour of rutab\(^{17}\) (ripe dates). By the end of the summer, some palms are harvested, others would had been left burdened with their rutab to dry out as kamur (dried out dates) which colour palms with ghamaq (dark brown colour)' (al-Turki 1998).

Although such seasonality of colour in the desert landscape has not found such advocates in contemporary literature, abd-Allah al-Nasir in his ‘Ashbah al-Sarah’ (1999), gave an example in which he demonstrated rhetoric expressions of beauty of desert gardens found in one of the fictions in his book. He wrote, for example: 'the light goes fade, the room split of palms and desert . . . , the lined woody palms in confrontation with the horizon loom in the light of the morning with clusters of yellow and red colours . . .'

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\(^{15}\) Alliem, is a large shrub cultivated for long history in Medina. People of Medina use its leaves to flavour shahi al-‘aasur (evening tea).

\(^{16}\) Nawami is the name of the leaves of alliem tree. People, other than farmers, mistakenly think nawami is leaves of lime trees as it smells little bit similar to lime. Until recently, nawami was wrapped by fibre tissue of palm’s trunks to preserve its freshness for long time in the market. Medina is reputed for its Ni’ana’a (mint) produces (which include all scented herbs, used as flavours for tea, like ni ‘ana’a mugrabi, ni ‘ana’a hasaw, ‘eitrab, lamam, doash, nawami, ward, and ful) and Ni’ana’a market in the whole kingdom. On the other hand, the market is, unfortunately, loosing its traditional look in the face of the heavy adoption of modern wrapping and marketing material.
From some other forms of writings it is evident that Medina poetic documentation of perceptions toward desert gardens was a response to comprehensive experience with different parts of the garden such as architecture, water, plants, and shade. These poems had not merely evolved in response to visual interaction, but also to physical experience as indicated in the following poem recited from memory of Sheikh abd-al-Rahman Raffah (1998) of an anonymous poet:

*birkat* (water pond) *Swalah*¹⁸ was superior in its geniality,

At all times the eye marvel at its water's sweetness and purity.

On it, there is an erected *diwan*,

No scene is obscured due to its spacious span.

In an awesome majesty, blooms stand in shy,

Encompassing the *birza*, spectacular to the eye.

The water gurgle as it seeps out of the gutter,

And palms' branches sing in its different languages (rhetorically gesturing to palms' varieties) and utter,

Who could possibly resist indulging in my shade,

Who could avoid the view when twilight between my fronds fade.

Another prominent characteristic of Madanis' perception of desert gardens is the unique perceptual perspective of water. Taste of water seems to be an important component in the perceptual evaluation. We see in the previous poems of Hamdounah al-Andalusiah and al-Mutanabi how the attribute of 'sweet' (i.e. taste) is considered as a form of beauty of gardens. In Medina, most poems wrote on *birkah* (water pond) had frequently described water in term of its taste. As cited above, Sheikh abd-al-Rahman Raffah (1999) wrote on the garden of Swalah:

*Birkat Swalah* (water pond of the Swalah garden) was superior in its geniality,

The mouth marvel at its sweetness and the eye wonder at its purity.

In another poem, al-Àasif al-Tilmisani (cited in Silim 1994) wrote:

And the sweet (the water) has become clear but the mills,

Run it through brooks in gardens of herbs and blooms.

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¹⁸*Swalah* is one of the most historic and beautiful gardens of Medina located on wadi Bat-han belong to al-Sharief Shahhat who inherited it from his father al-Sharief Ghalib. The historic *diwan* and its *birkah* was unfortunately demolished in the summer of 1999 despite the author’s advice offered to the landlord’s son (during an interview), which proposed the erection of the new residential building next to the historic *diwan* and *birkah.*
Not only water, but structures that symbolised water was also praised as a beautiful component of garden's landscape. Sheikh Hasan Sairafi (1998) cited a long poem on sāniḥa in a way that praise the beauty of its garden:

A sāniḥa (water mill) was made of what once were leafed branches,
Rotating, but when brought down by hands of epoch.
It remained in gardens of al-Jizā sweeping and complains,
By tears on days of the gone early ages.
Sheikh Hasan Sairafi himself wrote on sāniḥa:

Oh nights of ‘Erwah\(^{19}\) down in the course
And al-sawani (water mills) sheer the nights with sweet music.
And the perfumed breeze penetrating the low light.

One of the possible reasons for the facilitation of such perception of water, (i.e. taste), might be referred to the desert nature of Medina, in which saline water is a potential possibility. Thus sweet water is a valuable resource that complement the beauty of water in addition to its appearance and sound. The Quran also support this mode of perception where in Surat Fatir, verse 12 reads:

‘Nor are the two seas alike, - The one palatable, sweet, and pleasant to drink, and the other, salt and bitter.’ In another place Quran says also: ‘And made therein mountains standing firm, lofty (in stature); And provided for you water sweet (and wholesome)’ (the Holy Quran, al-Mursalat : 27).

Another worth mentioning the point here is that among Medina desert gardens there were gardens aesthetically preferred than other gardens. Quba gardens were among the most popular gardens that had been the subject for many poems. Al-Qazwini in his ‘Athur al-Bilad wa Akhbar al-Âibad’ (Vestiges of Countries and News of People (servants of God), for example, wrote a poem about Quba’s gardens in which he said:

In it, you find what pleases the eye of pleasant scenes,
And also what the soul dreams of delicate desires.
Green emerald, of which, its middle is adorned,
With white pearl crafted of its flowers.

(cited in Silim 1997).

Mohammed Kibrit al-Madani (1650) also wrote about the beauty of Quba’s gardens where he said:

‘in Quba are gardens of generous earth, pleasant breezes, fragrantly smelled; its nightingale

\(^{19}\) ‘Erwah is the western area of Medina where wadi al-Âaqiq passes.
admirably sang, its branches coherently danced, its flowers perpetually excelled, its nightingale continuously warbled, its brook smoothly penetrated, its bulbuls intermittently sang. This is what its beauteous flora has narrated by their winks, what its slight breezes has revealed by their touches; what its delight flowers has gestured of their state of delicateness, and what its birds has uttered in their stay and migration. The branches look as if have been created to be pulpits for preachers of pigeons, the leaves are shaped as if have been shaped to collect clouds' tears. Birds are between observers from their holes and erecting on twigs; and a ringed dove extols its ring over the pure golden one.'

One of the reasons for Quba's gardens being subjects for most poets is that Quba gardens were considered the most beautiful gardens in the city. Sheikh al-Turki (1998) stressed this point by saying:

In the past, there were many *samars* (night entertainment) in which poets congregate to praise gardens of different areas. The most two competitive areas were of al-Awali and Quba, but poems on gardens of Quba were the mostly winning ones.'

He explains:

'Quba is a blessed area in which al-Ansar (the auxiliaries) received the Prophet (pbuh) with pleasure when He immigrated from Macca. His first journey in Medina was between Quba and His mosque at the centre of the city. Ask any one and you will find that the most beautiful and generous gardens of Medina were located along this trail.

5.4. Anashyid (traditional chants).
Enchanters entreat Allah by praising His benevolent provisions and general munificence to maintain His blessings and extend His mercy over their gardens. Farmers at that time used to sing chants, (in formal Arabic: *yartajizii*, and in traditional Arabic: *yinashidii*), during day time while working in gardens' (Al-Turki 1998). It was a tradition that had its roots back in the Prophet time, during which Muslims used to utter chants at times of working in groups to ease the hardness of the work and make it an enjoyable task. These chants were full of incidents through which people of Medina demonstrated their love to their gardens. It was very much, as Sheikh abd-al-Rahman Raffah asserted, 'a Madani culture that celebrated various aspects of beauty we of that time found in our gardens' (Raffah 1998). Sheikh al-Turki (1998) adds 'songs in Medina gardens had surely worked to ease the hardness people found in hot working days and filled their time with fun and joy. People of Medina at that time were very proud of their products and these chants were the means with which they expressed this pride. They, for example, used to say about *Swaidaa* (one of Medina's popular varieties of dates Medina people were proud of this variety of dates, as it does not grow in other regions of Saudi Arabia):
Oh Swaida of blacked āaināain (eyes amended with kohl),
My Lord gifted you to the land\(^{(20)}\) of labatain\(^{(21)}\).
The day of your jidad (harvesting) for us is a āyid (festive),
Between āair and auhud (the two largest mountains, the embrace Medina from the southern and north sides) and bat- har\(^{(22)}\) and al-āqaqiq. (the two major valeyes that pass through Medina from south to north).'
Sheikh al-Turki (1998) continues 'another nashyīd people used to utter about Swaida during the harvesting is the following one:

Indulge in happiness people of Taiba (another name for the city of Medina).
Here it came the sweetest one, Swaida (one of Medina's popular types of dates).
It has been a wisdom conveyed by a habibah (the beloved one, meaning Medina garden),
The state of lovers is always āasyībah (harsh)
No one could make of it a āaibah (defect)
For its likeness, Allah is its hasībah (Allah, the most Sufficient, will help us to deal with such love).

(al-Turki 1999).
Sheikh Hasan Sairafi (1998) explained 'people of Medina also exchanged ideas through these traditional chants, i.e. the emblems of beauty one see in something is not necessarily the same others see. It had also rooted the likeness of gardens and palms in the hearts of the young ones who used to accompany their fathers during harvesting times. It should work nowadays to teach us about the relationship between our ancestors and their gardens and what are these things that pleased them the most in those gardens' (Raffah 1998).

Hasan Sairafi (1999) asserted that "although we do not see cultural affinity to modern Medina gardens, the whole society in the past and in different fields of art was remarkably inspired by historic Medina gardens.' During the transitional years of the 1960s, on the threshold of the Saudi economic boom, the art of song had its first steps that was characterised by going not too far from the thread of the local culture and landscape. In 1969 Ghazi 'Ali sang his popular song ya rawabi-Quba (oh Gardens of Quba). Around the same time, Mohammed Ali Sindi, who was the senior singer of that time sang his famed song, 'ēala al-Āaqiq ajtama'āna’ (on the edge of al-Āaqiq valley we met) (cited in Sharab 1985). Even children’s songs of that time were mainly inspired by gardens

\(^{(20)}\)The interviewee can not remember whether it is 'land of' or 'people of.'
\(^{(21)}\)the two harrats (lava flow area), which embrace Medina from the eastern and western sides
\(^{(22)}\)In the Madani traditional accent they pronounce it ‘bat-ha’ to fulfil the rhyme of the verse.
and natural features of Medina’s landscape. ‘Aunab al-Madinah’ (grapes of Medina) and ‘ana ina’ (I am thirsty, the song was about Medina’s major valleys, e.g. wadi Erwah and al-Zarqa stream), etc., evolved at a time when people of Medina were still attached to their local landscape and intimate culture.

To sum up, in Medina gardens, visual appreciation of natural beauty was expressed in both verbal and vocal expressions. Rather than paintings, poetry, traditional chants, and early songs were the major medium through which Medina people conveyed their perception of the beauty of the natural landscape and gardens. They reflected also what and how they aesthetically valued the local natural landscape within their cultural and natural setting.

5.5. Medina Garden as Centres of Cultural Celebration.
In addition to being an agrarian systems also used for recreation, Medina gardens were also used to celebrate cultural events. Some of Medina gardens specialised in hosting poets, narrators of history and parables, other hosted traditional singing and dancing parties. The Al-Abbariah garden owned by abd-al-Jaliel Barradah, the al-‘eshqiah garden owned by Anwar ‘Eshqi, bilad al-Raffah owned by abd-al-Rahman Raffah, al-Khraiijah owned by abd-al-Rahman al-Khrajji, and many others were the most popular gardens of those which were functioned as local cultural centres for Medina poets. Al-yawm al-sultan (‘the royal day’ is the vernacular name for qaila ‘picnic’ used by poets as a prize for the winner in poem’s competition). This day was usually celebrated in palm gardens. Hafidh (1983) described one such day in Medina with people congregating in these occasions to celebrate and listen to various forms of literature. As well as poets, other societies also used to celebrate ‘occasions’ in biladiis. Othman Hafidh (1983) identified al-Muftiah garden in the al-‘Eioun area, to the north of Medina, as where the education department used to celebrate its occasions. Al-Ghurabiah, al-As’aadiah, and al-Madaniah, and many others had hosted such celebrations.

Medina gardens also accommodated summer gaila (picnics), samar (night-time cultural and/or recreational entertainment) In a typical samar men discuss subjects ranging from religion to affairs related to gardening and agriculture. The samar was an important social activity for young people to learn from old people on various aspects related to gardening (al-Turki 1998). The diwan during these samars of old people were open to those who came to seek knowledge, help and advice in farming affairs from experienced practitioners.
5.6. Recreation in Relation to Medina Gardens, public urban, and Desert Landscapes.

In historical Medina, the term recreation was not defined the same way as it is today. The common terms used by interviewees to mean recreation were ‘*auns*’ (amiability) and ‘*samar*’ (night entertainment). They would say, for example:

‘Nights of *auns* and *samar* was in the past when one had his sincere friends, places were less busy, and life was easy going’ (Raffah 1998).

Sheikh al-Turki (1998) added:

‘Our days were full of *auns* and our nights were alive by *samar*, with no sort of troubles or depressions. Wherever you go you find a fellow whom you know, wherever you go you encounter a beautiful garden in which you have some memories. People of today are deprived of all of this, they know nothing but are trapped in their houses and offices. For us, our work was joyful and our nights were busy in *auns* and *samar*.’

What can be noted here is the use of the term of ‘*auns*’ and ‘*samar*’ in both dialogues to express tranquil entertainment and passive recreation. Both terms involve calmness, peace, and tranquillity. Recreation in the past of Medina did not involve extravagant and boisterous kinds of amusement.

One of the popular recreational activity people of Medina facilitated during summer is called *est'iaf* (to spend summer in a cooler area other than the one people live in). *Est'iaf*, as Mohammed al-Faham (1978) indicated paraphrasing al-Asma’i 23, ibn-Khaldoun 24, is an intimate Arabian tradition that was accompanied by other non recreational activities like trading, farming, pasturing, worshipping, defending, in sometime was set aside for recreation. Turfah ibn al-Abd (one of the early famed poets) gestured to this tradition in Najd (central region of the Saudi Arabia) by saying:

> When fatigued by heat of Najd, they spent winter
> Between dhat-al-Hadh of Thani and Qaur 25.

In Medina, *est'iaf* was accompanied by farming. The word *saif* (summer) had been used interchangeably between *saif* as summer and *saif* as harvest 26. In another word, *est'iaf* for Medina people was meant to be spent in their gardens to harvest crops and at the same time recreating.

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23 Al-Asma’i (740-828) is an Arabian historian and specialist in language (al-Ba’albaki 1993).

24 Abd-al-Rahman ibn-Khaldoun (1332-1406) is an Arabian philosopher and historian, considered the first who philosophised history and social science in the Islamic world (al-Ba’albaki 1993).

25 Thani is a place to the east of the al-Rasafah in which banu-Taghlub and banu-Bajier aggregated to battle with Khalid bin-al-Walid During abu-Bakr’s period in AD 633. Qaur is another place in the north known for its cool weather for which the name ‘*Qaur*’ (which means cool) was given to it (al-Hamawi not dated).
Most recreational activities involved trips to natural areas. Hadabat al-'Aanbariah (the plateau of al-'Aanbariah) to the west of the old city of Medina, for example, was a popular spot for people of Medina to stroll and look over the city after evening. Othman Hafidh (1983) said:

‘al-Hadabah al-Gharbiah (the western plateau) was the affectionate nest on which we used to congregate in the evening after a hard working day. I still remember that I used to see friends like Mohammed Husain, Hasan Sairafi, ... etc.’

Al-Ghabah (forest of desert plants) lies to the north of Medina where all valleys of Medina intersect to form the richest, most biologically diverse natural desert forest in the region. Al-Samhoudi (1506) highlighted that the history of the recognition of the beauty of the Ghabah dates back to the time of the Caliph Muawiah bin-abi-Sufian (602-680) who moved the capital from Medina to Damascus when establishing the Umayad dynasty, nevertheless was fascinated by the desert nature of Medina. His representative in Medina advised Muawiah to purchase the land of al-Ghabah, to create a natural garden, but was unable to execute the transaction. Hafidh (1983) mentioned in his ‘images and memories of Medina’ how dense native trees were in al-Ghabah and how people of Medina used to use the area as a natural resort during spring. In 1931, Shiekh abd-al-Qudous al-Ansari, one of Medina’s pioneer scholars said when visited al-Ghabah, ‘glory to Allah, was this place a life one day? It might be true that landscape is like man, one day it is indulging in happiness, but in another is in deep grief. I wonder if a day would come when this place is happy again’ (cited in Sharab 1985). The construction of dams across Medina valleys in the 1970s blocked the streams that fed al-Gabah. This contributed greatly in the deterioration of the area to the extent al-Ghabah is not considered a recreational attraction anymore.

Sel’a area (the area around Sil’a mountain, 500m to the northeast of the prophet mosque) was the second most popular natural spot in Medina in which people used to picnic. Ali Hafidh said in his poem (cited in Hafidh 1983):

How sweet is a picnic at the foothill of Sela’
And in al-Áaqiq valley and in its countryside.
Friends we have in Qanat valley
As roses of paradise wetted by their dues.

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26 A traditional farmer at that time might say: ‘how was your saf,’ to mean ‘how good was your crop.’
Meanwhile he might say also ‘how was your saf’ to mean ‘have you had a nice summer, recreational wise.’
27 Sheikh al-Ansari refer his judgement of bareness of al-Ghabah to what he read of early history of the area, at a time the Ghabah was more frisky (as Hafidh 1983, mentioned earlier: it was a place of attraction for Medina people) than nowadays.
Bin-Mousa (1972) located dikak (plural of dakkah, docks or terraces) on Jabal Sil’e that have been built for qailah (picnic). The location of the mountain within the city’s urban domain in addition to the common desire of viewing a prospect (in this case an aerial view of the city) gave great recreational importance to the mountain. As Barr (natural wild areas that were the major winter recreational areas for Medina) were too far away at a time of restricted transportation, jabal Sil’e was founded, therefore, as a nearby miniature of Barr. One of these terraces was built at the early 19th century by Sharief Basha and was called qarien (a room walled at three sides and arched open toward the view and roofed, in some cases, by domes) (bin-Mousa 1972). According to al-Turki; Raffah (1998) noted that qarien was built of stones and roofed either by wood (flat roof), or stones (domes). It is obvious that this morphology is typical of that of the diwan of Medina bilads (palm garden). In these two locations (i.e. bilads and the mountain) view, privacy, and protection from extremes of climate (hot and cold) were the main criteria for the design of the qarien and diwan. Despite different names, the architectural unit was used with little alteration, wherever it was needed in Medina.

To the north of Medina on the foothill of the Auhud28 mountain, al-Maharies was another natural-desert recreational area, i.e. picnic area, during the rainy season for Medina people (Hafidh 1983; Raffah and Sairafi 1998). Al-Mharies are a group of ponds formed naturally in large rocks that lie in various places on the upper third of the mountain (figure 5-3). The presence of water make the area valuable as an essentially suburban, yet semi-natural resort. The Wadi al-Åaqiq, as another example, was another desert place for Medina people to go after rain from the time of the Prophet until the first half of this century (Sharab 1985) (figure 5-4). He adds, ‘al-Åaqiq was not only a recreational place for Medina people, however, but also a meeting place for scholars, poets,

28 Auhud is a historic mountain around which the battle of Auhud, (between Muslims of Medina and non-Muslims of Mecce at the time of the Prophet (pbuh), took place.
singers, hunters, and seekers of lawful natural amusement and fun.' In short, life supporting natural resources like valleys and mountains, landscapes were mainly kept as sanctuaries for wildlife to prosper and recreational places for the public.

In Medina urban landscape, trees were rarely found outside the *ahwash* (public-outdoor courtyard), private-indoor courtyard, and private palm gardens. Within the walled city, many houses possessed palm trees in small *ahwash* (plural of *howsh*, courtyard on which group of houses overlook), but these were rarely in front of their doors in *azziggah* (plural of *zugag*, alley) (bin-Mousa 1972; Akbar) (figure 5-5, 6, 7). The need for privacy, in a religious-cultural sense, restrained the city from possessing public parks and gardens. The Quba area was popular for its alluring, vigorous palms, and quality agricultural produce. Examples of these gardens were al-Biwairah, al-Shadaqah, Qawiem Barri, al-Qaiem, al-Qawiem, al-‘Usbah (bin-Mousa 1972), al-Ehain, Swala, al-Mabroukah. In Medina, recreation was totally integrated in daily life rather than seen as something separate. Different seasons meant different recreational activities at different landscapes. Recreation for Medina people did not only mean entertainment, but also a chance to contemplate upon the bounties of almighty Allah and to submit due thanks. This recreational trend has its roots in history. Omar bin al-Khattab (the second Caliph 568-644 AD) used to command people of Medina to go out to the desert in spring to acknowledge the blessing of Allah and to learn how the earth become alive after death (cited in Sharab 1985). He also used to go to wadi al-‘Aaqiq during rainy seasons to admire the beauty of its water and to submit his thanks to Allah for this valuable bounty (cited in Sharab 1985). It has been reported also that Abd-al-Rahman bin Awf with Jabir bin abd-Allah (two of the Prophet’s companions) had used to go to Al-‘Aaqiq, as Sharab (1985) explained, ‘to delight the soul with the beauty of what Allah created of desert nature.’

Historically, Medina economically relied on agriculture and pilgrimage related trade which depend on annual pilgrimage services like housing, guiding, etc. Because religious seasons follow the lunar calendar of al-Hijrah while agricultural activities work on the *Shamsi* calendar (solar calendar), people of Medina were split between the two businesses. People who were involved in pilgrimage related trade had, in most cases, no gardens but they used to rent farms for recreational purposes during summer season (Makki, 1982; Msalam, 1993). Rental periods varied according to the purposes of rentals. People who rent for recreational purpose only usually made short leases while others who sought trading in summer crops, i.e. dates, in addition to recreational purposes, would have a long lease called *saif*.
Poor people who could not afford renting a palm garden in summer for recreational purposes, would be supported by the more affluent individuals. Garden lords would allow them to build temporary shelters (using dried palm's fronds and tarfah wood), inside and next to garden walls to spend some time in the garden. In such occasions, these people would eat from what fell out of trees, but were not allowed to pick from trees except by permission of the garden's lord.

Figure: 5-6, al-Manakhah street on the top left, bab-al-Masri walkway on the top right, and zugag (alley) al-Tajouri on the bottom right. In these three categories of Medina streets, planting had not been part of the streetscape as was the case in public and private courtyards. Limitations of space, crowding traffic, and lack of a responsible party for running maintenance were the chief pragmatic reasons for treeless streets in old Medina.
Figure: 5-5. Planting in open spaces in Medina was limited to spaces that had a realistic chance of maintenance and regular keep up. Examples were courtyards of mosques (1), public courtyards (2), private courtyard (3), in private small gardens in beyond city wall large houses (4), and in small gardens around mosques where ablution water had been recycled for irrigation purposes (5). Plants used in mosque courtyards, in spaces around mosques, etc., were notably of native plants like date palms, cider, and acacias.
Figure: 5-7, Medina aziggah (plural of zugag alley) was narrow enough to maximise the period of shade. This limitation offered no space for planting scheme to develop, whilst public and private ahwash (plural of housh courtyard), house-diwan or kharjah, and the indoor space of rowshans were the most appropriate space for small gardens to prosper. In such small gardens, maintenance was undertaken by the community in the public housh, or by households in private housh or house-diwan.
5.7. Social Solidarity in Medina Garden.

In Medina, palm gardens did and to some extent still do define the city map along a north-south agricultural spine. The evolution of this green spine was not only in response to the environmental conditions of the area, but was also following an earlier pattern defined by historic sites (Farahat and Alturki 1991). Mapping these historic sites would reveal that these acted as nodes for small settlements that served palm orchards developed around them. Until the 1950s, these palm gardens formed the boundaries to these historic sites which lay outside the city wall and penetrated through the inner urban fabric of the city connecting these sites with the centre occupied by the prophet mosque. When walking was the only means of transportation, pilgrims and visitors used to walk through these palm orchards toward these historic destinations. For fallahim (garden's owners and farmers) this was a chance to perform charity. fallahim believe, that they will be rewarded for the shaded walkway they offer to pilgrims through their gardens. They also believe that the dropped dates pilgrims collect and eat on their way is considered charity that is worthy of the Divine reward. Even for local residents, walking through palm orchards toward their own gardens or to perform prayers in one of these historic mosques was considered charity.

One of the common rules among fallahim is that 'collecting dates dropped from the arabia-carrow (cart pulled by oxen) by the aarbadji (driver) was considered a shameful practice that brought dishonour to the garden’s landlord. For fallahim, it was also considered a way of performing charity for the poor who were not able to purchase expensive varieties of dates. Dropped dates, therefore were the only chance for the poor to taste the high quality kinds of dates. This aspect of social integration accorded special aesthetic characteristics to Medina gardens that have not evolved in other gardens.

Going to palm gardens through palm orchards in the early morning was one of the daily tasks that can be categorised under what Bianca and Anqawi (1989) called 'the Islamic art of living.' This daily trip was one of the distinctive traditions, which characterised old Medina from other agricultural cities. The journey, from the time of dawn prayer until reaching the garden, was full of charity works and good deeds, e.g. offering breakfast to the poor, greeting old people, and removing obstacles from the road. For Medina people, Islam as a religion was not only the performance of religious rituals such as daily prayers, but a totally integrated code of ethics and behaviour that find its application in all daily life activities and in social and cultural interactions. For most Medina people, for example, walking to gardens in the morning was a chance to recite and memorise the Quran. Sheikh al-Amasi, Omar Taha, Ibraheem al-Akhdar, abd-al-Jaliel Murshid, Omar Mousa and
many others among those who have usually been heard in their way to Quba mosque reciting Quran (Alturki 1998).

‘Al-filaha ribaha’ (farming is surely profitable) is a proverb Medina people used to express that farming realises two rewards: the material reward from selling the produce and the divine reward that is gained when people passing by eat their fruits and indulge in the shade and pleasure of their gardens (Al-Turki 1998). It has been narrated that Urwah bin al-Zubair used to demolish the wall of his garden at harvesting seasons for the public to collect what they needed of produce and rebuild it afterwards (Sharab 1985). Mohammed Kibrit al-Madani (1070 AH) said ‘in al-Husniah garden lies a pond, wonderful in its shape, masterful in its structure, encompassed trees and blooms, permissible to the poor and visitors’ (Silim 1997).

Harvesting of cereals was not a feast for gardens’ lords only; it was a feast for the masakyin (the poor) as well. Medina farmers had very restricted traditions in reaping grains. They used to winnow and garble the whole harvest just once, for the poor can have the second winnow. In the way to the market, the farmers would insistently ask al-’arbaji (the driver of an oxen cart) who would transport al-bugānah (ready produce for sale) to the market, not to forget to hole one of the sacks by qasaba (a piece of hollowed bamboo with sharpened end). Along his way, al-’arbaji would insert the qasaba to allow poor people who live away from gardens to collect their share. There were many gardens in Medina which were established as pastoral endowments to retired domestic animals such as oxen, horses, etc., (Al-Turki; Sairafi 1998). When dates were collected on mafattah (a rug made of palm’s leaves), what ever amount of dates fell out of the mafattah would not be collected but left to the masakyin (Al-Turki 1998). All herbs and other herbaceous plants, e.g. alfalfa, rocket, or celery, which the scythe skipped during harvesting should not be re-scythed again for, Medina people believe, they have been destined to the masakyin. One of the remaining examples of such endowments is the one of Bilad al-Sheikh al-Sihaimi (in the western side of the city along al-Aqoul wadi course) which he devoted its complete crops to birds and masakyin all the year around (al-Sihaimi 1998).

Farmers also used to share the blessing of thanking Allah for all His bounties with their neighbours. At spring times when cattle feed on rich pasture, for example, the milk used to be topped with an unusually thick layer of fat, farmers would share their thanking to Allah by showing the milk to neighbours and saying:

Sheikh al-Turki narrates what he titled 'the first lesson in bild.' He said: 'it was my first day climbing the palm to collect tamur (dried out dates) from the top of a tree. In my way down, I snatched a piece of palm’s frond and managed to collect the dates collected between the fronds on the tree’s trunk. My father shouted at me from down and said: ‘you can not do that, it is shameful and wins us nothing but dishonour. These are not our dates any more, they belong to the birds now; you could not intercede and deprive them of their gismah (share) that Allah destined for them,’ i.e. what has been collected between the fronds of dates is winter food for birds (al-Turki 1998). There was a similar account in history which exemplify a similar attitude. It has been narrated that ‘a group of people had their dinner in one of Medina gardens, when they finished their meal, one of the group was about to pick remnants of the food that fell to the ground, the host said ‘this can be done in houses under roofs, but not in gardens, for this would be the share of birds and other beasts (Raffah 1999; Fahs 1999). In Medina, the prune bird (a small bird brought to extinction due to the massive depletion of its habitat in Medina) used to make a hole in the pomegranate, the fallah (farmer) out of the belief that this is what Allah had determined was the birds’ share, would not pick it and leave the pomegranate for the bird to consume. Although fallahyin believe that the bird usually pick the sweetest pomegranates, they would not dare deprive the bird out of its gismah. The bird would consume the fruit over several days until hollowed dry, and sometimes build its nest inside the hollow pomegranate (al-Turki 1998).

These examples show how Medina people had respect toward other non-human creatures. Such recognition of other living creatures in the natural landscape is also found in other cultures. Ralph Waldo Emerson (1855), for example, wrote on Sleepy Hollow that:

‘the beautiful night and the beautiful day will come in turn to sit upon the grass. Our use will not displace the old tenants. The well-beloved birds will not sing one song the less.... They will find out the hospitality...of this asylum, and will seek the waters of the meadow’ and in the grass, and by the pond the locust, the cricket, and the hyla, shall shrilly play (Nadenicek 1997).

For Medina people, it was not only the beauty in the garden they sought to maintain by avoiding disturbing the birds’ habitat, but they were also after the reward they would get for such deed. Charity was a major aim of Medina gardens.

This illustrates how the Medina garden had evolved on the basis of takaful ijtimaâî (social support) not only between various strata of the community but also between man and wildlife. The garden in
Medina was more than a place to contemplate and seek pleasure only, rather, it was a complex working place that was developed to worship Allah through every, (utilitarian or recreational), activity people performed in it. It was a place through which people sought ways of depicting explicit testimony to the wise stewardship of the earth. Their total reliance on the Divine benevolence and strict embrace of the Islamic laws and principles produced a distinctive desert-garden culture. The Quranic parable in Surat al-Qalam (17-35), which demonstrates how greed could provoke the Divine wrath and bequeath nothing but loss in this world and in the Hereafter, is an example of how the Quran had a great influence in shaping this culture. Allah says:

"Verily we have tried them," (people of Maccah), ‘as we tried the people of the garden,’ the sons of a wise man who lived in Yemen and was generous in giving to the poor, ‘when they resolved to gather the fruits of the (garden) in the morning,’ after their father’s death. ‘But made no reservation, (‘if it be Allah’s will’). ‘Then there came on the (garden) a visitation from thy Lord, (which swept away) all around, while they were asleep. . . . Shall we then treat the people of faith like the people of sin? (the Holy Quran, al-Qalam: 17-35).

Children were not allowed to pick up fruits of trees until having gained permission from the garden’s lord. Parents used to say ‘these are the trees of the secular paradise, if you pick their fruits without permission you would not be allowed to pick up more sweeter fruits of the heavenly paradise’ (al-Turki 1998). Even when they were allowed to pick up fruits, they were taught to pick up the ripe ones only. Parents would say ‘these are the baby fruits, if you pick them up now they would tell it to Allah’ (al-Turki 1998). People were aware that any form of abuse to the garden would contribute to the destruction of its beauty and they could not come again to recreate under its palms (Sairafi 1998). Children are a potential source of vandalism and their naive play might end up with unintentional, but serious damage in a garden. It can be concluded here that parents’ deliberate involvement of Islamic implications in their advice would ensure that they can leave their children on their own in the garden and they would not go against the advice. Unfortunately, foot paths in historic gardens nowadays are fenced to avoid such vandalism (figure 5-8). Today’s garden culture is informed by modern gardens in which children go mainly to play (al-Turki 1999). He adds, ‘children’s
definition of 'garden' is a playing place; ask them to name the most common plant even in a modern garden and they would never give a correct answer.'

5.8. Sense of Responsibility in Medina Gardens.
In Medina most social activities have a congregational format, for example chanting, dancing, samar (staying over night for lawful recreation), etc. In gardens, neighbours, relatives, and friends, for example, congregate on the day of janien, (harvesting wheat) not only to offer help, but also to have the blessing of working in a jama'ah (group) (Raffah 1998; al-Turki 1998). This behaviour has its background in Islam where the prophet says 'the hand of the almighty Allah is with the company.' In fact, most religious performances in Islam could not be done except in groups, i.e. daily prayers have to be done in groups in mosques and most scholars disapprove prayers at home (figure 5-9).

Figure: 5-9, traditional sword dance on horses' back, top-left, and mzmar traditional dance that exemplify a form of congregational performances top-right, as a response to the established Islamic rule of jama'ah (community) which found application in many daily rituals like the performing of the five daily prayers which is done in congregations in mosques.
Neighbours used to contribute their skills, time, and, most importantly, their prayers in major gardening tasks in Medina (al-Turki 1998). Major tasks in Medina gardens had always involved relatives and neighbours who voluntarily shared responsibility for heavy tasks and common concerns. Such tasks included seasonal harvesting, pollination, sharing water during drought seasons, abandoning edges of gardens to a new evolving garden, donating offsets of palms and vines, etc. In general, this sense of common welfare emanates from the Islamic injunctions that encourage communal solidarity among relatives and neighbours. In particular, neighbouring falakahin in the past, as al-Turki, Raffah, Sairafi (1998) agreed, shared a basic concern toward gardens that lie within their agricultural fabric. It was vital for falakahin not to spoil the beauty of the area, which was considered a communal value. A similar response to this sense of responsibility between neighboured gardens was the sharing of water in times of droughts. Although gardens of Medina were adjacent to each other, wells differed in term of water availability. At times of drought, some gardens run out of water in early summer, others passed through the summer without being affected by a shortage of water. During such times, neighbours used to extend their qanafir (irrigation canal) to neighbouring gardens that complained of water shortage. In very densely gardened areas, the need for a new garden for a new member of a family, sometimes, meant the relocation of the periphery of existing gardens. This also involved the extension of a qantarah to the new garden from one of the surrounding gardens until the new landlord dug his own well and ensured prosperity for his garden. Waddi (palms’ offset) were also part of the common wealth among neighbours. New gardeners did not buy waddi from the market, instead, they would receive them as gifts from neighbours and relatives. Such forms of assistance was not only considered charity, but also a participation in ehyaa al-mawat, (giving life to earth by planting development) a concept which result in Divine reward. In al-Eioun, the northern part of Medina, eioun (underground stream system) were built to ensure equal opportunity of access to water among all farmers. This irrigation system is composed of a group of wells (10-100) dug along a spine that follow natural drainage lines, connected by underground channels called khaif, and aerated by manholes called kharazah (al-Turki; Sairafi 1998; Hafidh 1996). The underground stream reduced water loss through evaporation and allowed an equal share of watering for both, those who has water in abundance and others whose wells ran dry.

All these forms and expressions of devotions are invariably a harvest of the Islamic teachings that we similarly find in Muslims’ devotions of time, effort, and money in various worshipping performances and rituals. The mere reporting to the mosque for daily prayers that imposes temporal abundance of secular concerns is a formal expression of devotion (al-Dimashqi 1987). Most Islamic rituals express the spirit of uniting various social and economic classes. The daily five prayers bring
the rich as well as the poor, the old with the young, the knowledgeable with the ignorant together, shoulder by shoulder to perform prayers and pay homage to the One God. Through these daily congregations, Muslims interact socially, learn about each other’s problems, provide help to the needy, learn more about the community they live in, etc. This Islamic social model was reflected in Medina’s *fallahin* in the garden culture.

5.9 Naming of Medina Gardens.
Names of Medina’s gardens consisted of two parts. The first part was the title of *bilad* (garden) followed by a name landlords gave to their gardens, e.g. *bilad* al-Mabroukah (al-Mabroukah garden). There is no linguistic reference for the title ‘*bilad*’ (literally means country) that used to be called for gardens of Medina (which is not common in other Saudi cities). One of the most possible justifications is that ‘Medina gardens were large, enclosed, and independent in all their requirements from beyond their walls. This is to say, a *bilad* can be erected from within and without being supported by things from outside’ (Sairafi 1999). The naming of Medina gardens, which is not found in other cities in Saudi Arabia, implied the preservation of these gardens against oblivion. Even with the disappearance of the actual gardens, names that Madani people gave to their gardens made them remembered by names in poems, prose, history, and memories. There are gardens in Medina, which have existed from the time of the Prophet (pbuh) and survived until recently such as al-Qawiem, but others are still known by names. Gardens’ names provide reference for images.
and compositions elderly people describe; without these names, such gardens could have not been known by now. Unfortunately, names of the most historic gardens of Medina now are given to modern buildings, markets, and gardens erected on their places (figure 5-10).

5.10. The Disappearing Historic Palm Gardens of Medina.
It has been established by researchers in urban planning and design that the provision of low-income housing and preservation of historic architectural heritage are the two alarming problems in contemporary Muslim cities (Arif 1980). These two different urban problems reveal that low income communities and their economic, and social difficulties are part of the common backgrounds to both problems. On the other hand, low-income communities make the largest populations of Muslim cities, yet develop in problems caused to cities remarkably. In most cases low income communities live adjacent to Muslim architectural heritage as a result of the city abandoning its old centre for new areas on the edge. From a Saudi perspective on urban development, the upper class of the city do usually move outward leaving the old districts to become lower class communities. In the case of Medina, the imported labourers were housed in the abandoned historic district of the city. Part of the physical degradation and destruction that plagued the historic area is partly due to the poverty and illiteracy that characterise this social group. This situation of such areas plus the absence of rigorous historic preservation policies created the opportunity for large corporations to redevelop inner urban areas. The approach of such corporations rarely goes beyond the replacement of existing urban setting with modern, western style urban landscape.

In Medina, the decline of the historic palm gardens is almost identical to the situation of historic urban landscape in the centre of cities, and can be attributed to the following reasons:

i) During the last three decades of the 20th century, the city of Medina, as well as most Saudi cities rapidly expanded in size. This created a desperate need for high-standard transport network (Cantacuzino 1982), new housing (Farahat and Cebeci 1982), infrastructure, and services. Nevertheless, the Prophet Mosque remained the centre of gravity for the city even with the provision of a new traffic circulation system. The consecutive City Master Plans of Robert Mathew, Shakir, Musali and Mandili and Sha’eir and Partners gave great consideration to the city centre and the provision of services, (i.e. housing, for pilgrims), but little consideration to the historic value of different places in the city. This policy led the modem city evolving without responding positively.

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29 Paul Gruchow (1999) justifies that we give names to a place, a plant, an idea, etc., for ‘if we do not know the name of a thing, we cannot know anything else worth knowing about it.’
to historic places of the city. Blocks of high rise buildings replaced old historic districts around the Prophet mosque causing enormous loss to the city's distinctive identity (Bianca 1984). Residential subdivisions stretched all over the city replacing thousands of hectares of historic palm gardens (see Table: 1). What makes the problem worse, is that numerous palm varieties such as rieq, shuqri, qattarah, tabarjali, khshaimi, bakkaiah, ruba'ei, etc, are disappearing for ever (al-Turki 1999). Another major loss is the whole garden culture uniquely to this city.

Table: 1. Shrinking area of palm gardens of Medina in relation to increasing population during the last five decades.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total area of palm orchards in m²</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>n/a</td>
<td>60,000</td>
</tr>
<tr>
<td>1962</td>
<td>8,136,000</td>
<td>72,000</td>
</tr>
<tr>
<td>1976</td>
<td>6,770,000</td>
<td>(1974) 198,200</td>
</tr>
<tr>
<td>1980</td>
<td>3,230,000</td>
<td>350,000</td>
</tr>
<tr>
<td>1991</td>
<td>2,377,600</td>
<td>404,000</td>
</tr>
</tbody>
</table>

n/a: not available

ii) The historic districts of Medina have experienced successive re-developing projects that were sealed finally by the most notable clearance that swept away virtually the remaining vestiges of the past generations (Badr 1993). Generous government reimbursement for private properties including palm gardens seemed the only logic means of transferring wealth from the government to the public. This policy served the planning authorities in two ways: it offered an easy way of creating space to accommodate the required urban expansion and secondly enabled the public to cope economically with the modern international scenario. Landlords of historic palm gardens, on the other hand were seduced by the generous reimbursement they received from the government for their agricultural lands. As a result, 75% of Medina historic palm gardens have been replaced by residential apartment buildings, commercial malls, wide streets, and public parks within the last three decades. The remaining 25% of Medina historic palm gardens have been either abandoned and allowed to decline as a preparation for urban development (figure 5-11), or left to unskilled foreign labour to operate. The impact of the later can be detected in two ways: the tidiness and level of maintenance of the garden and low quality of products (figure 5-12).

iii) The third problem is a result of ii) above. High governmental compensation given to agricultural lands inflates the value of architectural development of lands at the expense of agricultural
Figure: 5-11, these ruins are a common scene in Medina since 1970s when housing projects pushed gardens out of the city. Gardens are either abandoned or cleared as a step in the process of replacing gardens by subdivisions.

Figure: 5-12, on the left, an image of a palm garden, which has been taken in the summer of 1998. On the right, an image of a palm garden, which has been taken in early 1920s. The most obvious difference between the two images is the degree of neatness and tidiness of the garden in general and of palms' trunks and fronds in particular. This can be reasoned to the fact that Medina people left their gardens to foreign labour, who are farmers rather than gardeners, and have little experience in desert gardens.

development. This policy created a new set of priorities and values within the public domain. The gardens that were considered for their historic and religious values in the Madani culture became nothing but agricultural fields that can be abandoned, traded for cash, or relocated in the new suburb of the city. This trend has relocated most Medina desert garden not as gardens but as agricultural fields in areas like Abiar al-Mashi in the south, Qraidha in the south east, or even to other regions like Qasiem. The traditional gardening profession that for a long time developed its own social-cultural, aesthetic values and agricultural techniques that fitted the desert environment and local culture and traditions has been industrialised to fulfil solely production objectives (figure 5-13).

iv) The most substantial problem is that none of the planning consultants who were in charge of the Medina master plan recognised that Medina palm gardens are not merely agricultural fields, but also

30 The total reimbursement for private properties between the year 1985 and 1989, for example, was about 850,000,000 Saudi Riyal (about $227,000,000) (Medina Municipality 1991).
Although, the modern size of population of the country is obviously in need of large quantity of food supply, this objective can be realised in an alternative way that fit other cultural objectives. Industrialised agricultural fields have depleted historically established social and cultural values that evolved in historic gardens.

Figure 5-13, top, Centre-pivot irrigation in Qaiem region, bottom, mechanical harvesting of mass produced wheat.
part of Medina’s historical cultural legacy. Sheikh al-Truki (1999) said ‘the razing of Medina gardens would not only bring agricultural activities to halt, but also threaten the long history of garden culture that embodied a unique sense of beauty, tradition, poetry, and attachment to Islamic principles.’ Discourses on historic preservation rarely go beyond the old parts of the city located in most cases in city centres. Suburbs are the least considered historic designed landscape although they might house valuable historic forms of art such as gardens and suburban garden-architecture such as diwan, nuzul, al-sawani. Lawless (1980), for example, did not consider Medina palm gardens as historic sites when including Medina in a category of cities that retained their ‘integrity’ in their historic parts. Although city centres i.e. historic quarters, were the parts of cities most influenced by modernisation (Lawless, 1980), the consequences for the suburb was of an equal destructive level. When the historic quarters of Medina had been razed to accommodate the Prophet mosque extension project, the peripheral palm gardens were the nearest alternative urban developable lands. In the new urban development, the close proximity of this area to the city centre and the Prophet mosque led to these palm gardens being prioritised for development. Hundreds of palm gardens, as a result, were cleared, abandoned, and little survived this urbanisation process. The absence of a historic preservation-institutional authority, historic preservation act, and listing of historic sites (Gruffydd 1977) in Medina’s planning and administrative system facilitated the eradication of historic sites (Farahat 1984), such as Medina palm gardens. Such an institution could restore the historic cultural, recreational, and agricultural definition of Medina gardens. Both as an idea, but also as a landscape by re-establishing it as an integral part of the urban fabric of the city.

v) New jobs generated by the modern economic state contributed to the abandonment of Medina gardens. Farmers left their traditional profession in favour of opening small retail business projects inside the city or filling new governmental jobs.

vi) Lastly, the public as owners and as users of Medina gardens are not involved in the planning process, nor consulted on decisions made by planning and design consultants regarding historic sites such as gardens.

The loss of Medina gardens did not only affect the landscape image of the city, but also and may be more importantly, changed the societal relationship with the natural environment. The reasons that led to the loss of these gardens created a new perception for nature (which, according to the Madani definition of nature, include gardens) that, in contrast to the historic culture, separate natural from urban worlds. This led the society to lose knowledge and culture related to the natural environment and therefore possessed different values toward nature.
Desert in Saudi culture.

Attitudes towards designed landscapes in two desert cities: Medina, Saudi Arabia and Tucson, Arizona.

6.1. Traditional Attitudes to Desert Landscape.

Love of gardens and nature has been expressed in many forms since the emergence of the Islamic dawn in Arabia. Annexing names derived from the world of gardens to palaces was one of the ways Muslim expressed their love of gardens. Al-Qasr al-Akhdar\(^1\) was the first palace built in the Muslim world that twinned gardens and architecture in its institutional title as well as in space. Other palaces that appeared thereafter enhanced this notion and provided further examples of connections with gardens. A similar process occurred with wild desert landscapes. Mohammed al-Na’asan (1992) attributed Ummayyad caliphs building their palaces in the wilderness to their innate affection for the pure nature of badiah (wilderness). In Medina, most ancient palaces were built on the sides of valleys such as ‘Urwah bin al-Zubair on wadi ‘Aurwah. Al-Batnoumi in his trip to Medina (Kamal not dated) noted how remnants of numerous palaces built along wadi al-‘Aqiq in Medina are evidence of Medina’s distinct architecture in relation to the natural setting of the city within a desert landscape. Shiekh Hasan Sairafi (1998) stressed this point by saying: ‘where ever you locate your house in Medina, you would never find a better location than on the edge of Medina valleys. Early people of Medina identified this scenic desert landscapes and framed them as scenes to be viewed from their palaces.’ Shiekh al-Turki (1998) confirmed the views of Shiekh Sairafi and added ‘the only factor that restrained Medina people from building their houses on these sites was lack of security at that time as opposed to the walled safety of the city.’

In contrast to modern Medina which excludes nature, old Medina was attached to its desert environment. ‘Man of today constructed dams to collect water, but lost the glamorous scenes of nature, which exhilarate the feelings and purify the souls’ (Ali 1999). In the past, Medina social and recreational activities were responsive to the natural desert landscape in its various forms and phenomena. When it rains, for example, wildlife disperses all over the desert landscape and so do people, but as the desert dries out, wildlife and people retreat to gardens. This consecutive dispersal and retreat was very apparent in Medina landscapes and in people’s behaviour, both in the desert and in the urban domain. The seasonal rivers of Medina (known as sail\(s\)) that crossed the city at many areas, sail al-Hammad in the north, al-‘A-aqoul in the east, al-‘Aaqiq in the west, al-she’a-aibah in the south west, and abu-Jiedah at the south east, were associated in the formation of the city urban image. One of the examples that have depicted the way natural phenomena were practically involved in the planning of urban space is Sail abu-Jeidah which runs through the Quba and al-Saih.
It is one of Medina's largest valleys that runs from the Bathan area (to the south of Medina) and collect its water from wadi Bathan. The portion of the valley course that passes through Quba and al-Saih areas is called abu-Jeidah. The name refers to sheikh abu-Jeidah whose palm garden (bilad abu-Jeidah) was located on the southern edge of Quba area through which the valley course enters Medina. Sheikh al-Turki (1998) indicated that 'this wadi course was considered a major pedestrian spine along which people walked daily to their gardens. One of the beautiful aspect of the wadi is that when you walk along this wadi course you find your self crossing different landscapes, i.e. desert natural and designed landscapes. Wild desert plants such as cider, hamdh, ushar, aaqoul, etc., were in abundance especially in winter and spring when the whole course turn green because of these plants. Until recently people who lived on both sides of the wadi adapted different social and recreational activities for portions of the wadi at different times of the day. Children play in the morning, youths play football in the afternoon, men sit to drink tea and chat under trees in the evening.' The wadi course today, as with many others, is submerged in pipes leaving no trace of the historic benign natural-cultural interactions.

One of the most conspicuous responses to Medina desert landscape is found in Medina architecture. There is a consensus that Medina buildings, like other Hidjazi buildings, have developed an adaptive architecture to fit the local environment. Part of this adaptation is association with building construction and the surrounding desert landscape. Granite black stones of harrat, being the most available local material, have played a significant role in setting Medina urban landscape apart from other Hidjazi cities (Taha 1999). Black buildings decorated by the natural-wood colour of roushans have provided a unique architectural pallet for Medina in comparison with other Hidjazi cities. Even little architectural details like takhiel (mounding joints between stones by mortar) had not been a technique in Medina masonry, as in other areas. Instead, the joints were filled out with crumbs of stones (called takhshinah) to fill the gabs under stones and to make walls look as one piece of granite (see figure 4-14). Unfortunately, in modern masonry practice in Medina, these techniques have been ignored creating less effective finishing for stone walls (figure 6-1).

Another distinctive aspect of the Medina urban landscape was the great importance it given to the relationship between houses and the landscape they overlooked. In the centre of the city, various design techniques had been facilitated to allow a great number of houses to overlook the Prophet mosque. In other areas houses were developed to overlook different views such as valleys and wadi courses, palm gardens, and planted courtyards. In the early history of Medina, al-Zubair palace, for

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1 Al-Qasr al-Akhdar (the Green Palace) was the first palace built in Islam. It was erected by Mu'awiyah bin-abi-Sufian (602-680) the first Umayyad Caliph who moved the capital of Islam from Medina to Damascus in Syria.
Figure: 6-1, the historic techniques of stone masonry, top, have not been studied in a way that could have inspired the modern use of stone in buildings, middle and bottom. The horizontal placement of the longitudinal side of stones, the use of takhshinah to settle stones, the carving of the outer facet of stones are all historically part of stone masonry craftsmanship in Medina. In modern practice, stones are laid vertically, with no takhshienah, and un-carved.
example, was one of many other palaces, which were placed in positions overlooking the valley of al-'Aaqiq. The whole district of al-Saih, al-barabiekh, al-Mighaislah, Qurban, parts of al-Àawali was developed on banks of sails like Abu-Jeidah (valley course of Abu-Jediah) in al-Saih district. The placement of houses on both sides of the sail and on azegqah (alleys) opening unto the sail was employed to define visual connections with the natural beauty of the sails’ landscapes. Residents of houses located in the interior ahwash (courtyards between buildings) used to come to relatives housing on the sail’s fringe to observe the annual phenomena of sail (Ali 1999). After the rainy season, masiel (the valley course as a space) would not lose its beauty for the sail would create an habitat for broad range of wildlife (al-Turki, Raffah 1998; Ali 1999). 'At summer, children get out from nearby ahwash heading towards wadies flanked by cider trees to play under their giant branches and collect the fallen nibiq (fruit of cider tree), pick wild flowers of labbah, lose al-nabi, and reish al-dieb plants that grow on the embankment of the masiel, trace drumba (grey mongoose) back to their dens in palm gardens, and many other activities that took place in these masiels’ (al-Turki 1998).

Palm gardens which were developed in the desert landscape of Medina were also used as prospects for houses in areas where palm gardens penetrated urban areas like bilad al-Safiah, al-Dawoudiah, al-Busatiah, al-Katbiah, and many other gardens (figure 6-2). In situations when urban expansion or road construction was needed, palm gardens were not fully cleared, however, there are many examples in which palm gardens coexisted with new urban infrastructures. The Al-‘Aainiah street, for example, was one of Medina’s old streets built by Fakhri Basha in 1912. The street was built in the place of al-Àainiah palm garden, belonged to Sheikh al-Saied al-‘Aini, to connect the al-Manakhah area with the Prophet mosque. Ali Hafidh (1983) highlighted that the garden was not completely razed, however, part of it was cleared for the street’s construction while the rest of the garden was walled by houses that overlooked the street from one side and the garden from the other.

People of Medina from early on differentiated between environmental zones of the city by locating different kinds of developments in different areas. Wadi al-Àaqiq, for example, housed most of the luxurious palaces of Medina. Sharab (1985) named 24 historic palaces along wadi al-Àaqiq, one of which is the palace of Urwah bin-al-Zubair (occupied during the first century of the Islamic period). This awareness of the positive and negative aspects of different areas of the city and the selection of the suitable kind of development was also documented in poetry. Amir ibn-Salih said in his poem:
How lovely is a palace with shadows and wells
In the heart of al-Áaqiq where profusion of water is its major trait.

In a cosy place of al-Áaqiq
Where cold shadow and fine weather is always there.
(cited in Sharab 1985).

In another poem, al-Ahwas al-Ansari praised al-Áaqiq where he said:
Wear me a shroud of Arwa if I died,
And water me from Erwa’s well.

Warm in winter, cold in summer,
A lighted candle in black nights.
(cited in Sharab 1985).

Figure 6-2, most Medina houses were built around palm gardens, which penetrated the urban fabric of Medina, tracing fertile patches inside the dense urban part of the city.

\(^2\) Al-Manakah was the reception point for merchants, travellers, visitors and pilgrims in which they park their beasts of burden.
Different cultures appropriated various names that in most cases represent the emptiness and sterility of desert landscape. In Niger, for example, the Tuareg give the name of Ténéré to desert landscape of sand dune fields and plains, which means ‘nothing.’ Arabs called desert mafazah (an adjective describing the feeling of victory associated with delight and pride caused by possession of something of real value). Al-Seiouti (not dated) attributed this name to the common traditions of Arabs who used to call things of ambivalent nature by their opposite-positive names. The aim was to extenuate the pervasive and ruthless reality of things like hostile environments or diseases. Al-Seiouti (not dated) provided evidence for this attribute by the prophetic saying narrated by abi Saeid al-Khudri who said: ‘a lady stopped us and said ‘our master is saliem (literally means ‘well or healthy’ but Arabs used this term for a person who has been stung by a scorpion). . . .’

In early literature, poets had also recorded situations through which their endeavour was to stimulate Medina people to work more efficiently toward natural resources in the desert landscape. Hassan Sairafi in the 1970s, for example, in many poems tried to highlight critical cultural-environmental problems that Medina people had not practically recognised and resolved. In one of his poems titled ‘The Wild Beauty’ in describing the beauty of wadi al-'Aaqiq, he said:

Look at the water running between the wadi’s banks
Suffering in pain of sorrow as of a sick person.
Help me! Join your cry with mine!
How sands are quenched, but not the palms.

In another poem al-Sairafi provokes the subject again by challenging the farming guild to deal with rain water in a more practical manner. He said in a poem titled ‘Water Committing Suicide’:

As this! . . . valuable things are always spoiled
In the hands of the folks, who know nothing about precious pearls.
Is it Qanat, al-'Aqiq, and Bathan
Run stray to no destination.

. . .
ask them from where they came to us
and to which land are they keeping in traverse.
They are deplorably heading the seas

3 Very similar to the idea was applied in John Singer Sargent (1856-1925) ‘The Misses Vickers’ (1884). He referred to the girls as ‘three ugly women’ when the three sisters aged (16-21) were obviously beautiful.
To commit suicide after having long waits.

In recent history, poets like abd-al-Rahman Raffah, Hasan Sairafi, and Mohammed Hashim Rashied were much stimulated by the natural beauty of wild areas of Medina like wadi al-Áaqiq. In their writings one can easily feel the nostalgia they provoked by recalling the past state of wadi al-Áaqiq. Historians emphasised that wadi al-Áaqiq (as cited in Sharab 1985) was a cherished area for it was a fertile stripe forested with native desert trees like tafah, gharqad, cider, salam, tahl, and áawsaj, and bushes like hormal, sial, riesh al-dieb, áabal, mussaàá. One of Medina’s most ancient gardens is the one of Saeid bin al-Aas which was located next to his palace in wadi al-Áaqiq. Historians such as Sharab (1985) commented, that birds did not leave al-Aas’s garden for other gardens for it was full of produce all year round and surrounded by forests of wild trees and bushes. Al-Samhoudi also said that the garden was sold for a thousand thousand (a million) dirham⁵. Raffah (1998) said, ‘in the past you would have never walked under the sun in wadi al-Aqiq for wild trees were dense enough to provide nice shade and charming landscape to wander through. In late winter and spring, people would come here in large numbers to indulge in the natural celebration of wild flowers and green.’ He celebrated the way people of Medina loved wadi al-Áaqiq in a long poem of which an excerpt reads:

Oh my companion from the banks of Bathan,⁶

Greet al-Áaqiq and settlers of these tracts.

Sing my poem in the land that housed our devotion,
In the land that would resurrect our youthfulness.

Allah guarded landscapes I extravagantly loved,
Where al-Musala⁷ is the meeting place of brothers.

(Raffah 1978).

In Hashim’s poem, the nostalgia take another dimension where he tries to blame the modern life that caused such wild and designed gardens to degrade and disappear. He wrote:

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⁴ The Arabic verb the poet used in this place is yatalwa, which has two different meanings, curving and move rampageously because of pain.
⁵ Dirham is an Arabian old currency, some contemporary countries still use.
⁶ Bathan is a wadi in the south of Medina.
⁷ al-Musala is a place in al-Áaqiq.
Here is al-Ăaqiq
this is its soil, do not you see.
The fine adore comes from all its sides
and here its banks would hug you.
To dive in the secret of life
my hope is glorious.
But nothing of it left except of fogginess
and my foreseen are not so clear.
But al-Ăaqiq
narrate among the hearing of the rocks.
About our values through history.

Compared with other regions of Saudi Arabia i.e. Central, Eastern and Southern parts of the Kingdom, Medina's natural environment is the least botanically explored province. One of the reasons for this is that oil and oil generated industry focused attention on the Central and Eastern deserts of Saudi Arabia in the 1940s. Secondly, Medina is a Haram (sanctuary) and restricted to non Muslims. Only a few travellers managed to enter Medina during the last century such as Sir Burton, Jamse Burkhardt, and John Keane. Other regions like the Empty Quarter and Asier Escarpments have in contrast attracted European and American members of political, geographic, and medical expeditions since Forssakal exploration of the coastal area along the Red Sea in Carsten Niebhrur voyage in the 1760's.

The presence of people in different environments is not always due only to the availability of natural resources. But sometimes, as Yi-Fu Tuan (1990) suggests, people find a particular kind of pleasure from merely being situated in a particular type of landscape. It has been said to an Aarabi, for example, 'how would you do in the wilderness in the middle of the desert when it is extremely hot and shadow has no place.' He said: 'isn't life but this: one would walk a mile, sweat, anchor his stick, hang his garment on top of it, sit facing the wind, and he is but in King's hall' (Sharab 1985).
A nomadic woman in the desert of Libya said 'proudly and with confidence' when a journalist asked her of her perception of life in the desert: 'we are happy here, look around you to see the beauty that surrounds us, sniff the air so you might feel how much it is pure and clear' (al-Majjalah 1999).
George Steinmentz (1999) who rode the wind of Tēnērē and Timia deserts of Niger said ' . . . the desert is stranger and more beautiful than I imagined, . . . I occasionally find its austere beauty

Aarabi: is a person who lives transmutational life style.
pulling me back.' This can also be evidenced by western travellers who came from temperate kinds of landscapes, settled in desert landscapes, and were moved by what is supposed to be an alien landscape. Alfred Thesiger, for example, was able to recognise the true beauty of the desert of Saudi Arabia and noted "peace" as one of the desert's aesthetic facets as a result of its solitude. Norman Douglas found in the salt depression in Tunisia a nature that resisted culturalisation. He admired that spot of desert for being "eternal, irremediable sterile" landscape. He said: 'at the idea that this little speck of the globe at least was irreclaimable for all time; never to be converted into arable land or even pasture, safe from the intrusion of the potato-planters or what not' (cited in Tuan 1993). For Douglas, the hostility desert posed to life was the most vivid aesthetic value of this landscape. Tor Eigeland in his expedition to the Jordanian desert shared Princess Sharifa Zein bint Nasser feelings toward the desert of which he said 'the desert, to me, has always meant extremes-of heat, cold, beauty, peace, pleasure, thirst, adventure, magic and sometimes danger... The desert was demonstrating how beautiful it could be while it thirstily soaked up the water' (Eigeland 1997).

Rick Golt (1980) who roamed the Saudi desert with his photography equipment described his book as 'a study of the grandeur of the desert and mountains, of the sand and rock, that for centuries have provided the forge upon which the Saudi character has been formed.'

In contrast to the above travellers, the few western travellers who visited Medina viewed desert as waste lands. They were primarily concerned with the city rather than its natural and designed landscapes. We see for example how palm gardens and native desert plants in most early paintings of Medina are omitted. al-Batnouni (cited in Kamal not dated) in his description of his journey to Medina in 1903 said 'the train continued slowly penetrating the western palm gardens of Medina until we reached the train station in al-'Aanbariah.' An early map of the city confirms al-Batnouni’s description of that area. The memories collected from elderly people of Medina confirmed also that these areas were forested with palm gardens and natural plantations of cider and acacias.

The 'countryside' in Saudi Arabia is still regarded by a high percentage of the population as a repository of natural scenery and a refuge for escaping the hustle and bustle of city life. Going out to the Barriah (wilderness) has been a long established practice since the time of the Prophet Mohammed (pbuh). The accounts of the life in the Barriah in Sunnah exhibited it as an ideal living environment for children. The Arab tribes of Quraish used to send their children to spend their first two to four years in the desert wilderness. In addition to learning the correct Arabic formal accent and Arab athletic traditions like horse riding and the art of war, the wild environment of the desert was considered healthier for growing children. Charles Home, in his comment upon Saudis' love of their desert landscape said, 'even though they have beautiful homes with all the modern
conveniences, they still like to go out to the desert and set up a tent' (Quigly 1999). Saudis in the past as well as in the present find the desert surrounding their cities a calming recreational refuge. In the recent past, Saudi families used to picnic in the desert for couple of days (Lipsky 1959). In the present Michael McKinnon (1990) in his ‘Arabia: Sand, Sea, and Sky,’ highlighted that despite the transformation in Saudi cities, the wild desert remains Saudis’ first priority among recreational places.

The demanding experiences of working in and travelling through desert landscape in the past does not seem to have generated a dislike of the natural landscape of the area. People at that time, as Raffah (1998) commented, were simple in their lives, but powerful and practical in their beliefs. One of their principal beliefs was that each constituent in Allah’s creation has its purpose and function in the way Allah destined for it and we have to accept this destiny if we are not to be disadvantaged (Raffah 1998). Questioning this creation, i.e. why desert is not blessed with plenty of natural resources? therefore is meaningless. To accept situations the way they are as determined by Allah is one of the major principles of the Islamic belief system. The Prophet declares this notion in His Hadith that says, ‘the meaning of faith in Islam is to, and counted, to believe in destiny, both good and evil.’ What seems more practical then is to deal profitably with a part of the creation, say desert landscape, with its present restrictive prospects. It is important to accept what Allah gifted a Muslim with what so ever leads to the ridha (divine acceptance) of Allah, which enhances the divine bounties that include the provision of graceful benevolence and the restraining of evil. Allah says in His book:

‘And remember! your Lord caused to be declared (publicly): If ye are grateful, I will add more (favours) unto you; But if ye show ingratitude, truly my punishment is terrible indeed’ (the Holy Quran Ibraheem: 7).

This philosophy has significantly influenced the way the early people of Medina valued their environment and in the way it is related to their local nature.

6.2. Negative Attitudes Towards Desert Landscapes in Modern Medina.
In the Muslim world, there is a great deal of agreement upon a correlation established between degradation in the natural environment and abandonment of religious values. Patricia Nelson Limerick (1992), for example, pointed out, in contrast to Adam and Eve who lost Eden by leaving to earth, descendants of Adam and Eve are losing this Eden by staying in it, for we shared them the commitment of sin. The sin of disobeying God. They disobeyed God by eating from the prohibited tree. According to Islamic doctrine, man by mischiefing on Earth, is disobeying God and therefore would ultimately lose the Eden of Earth. This mischief does not only mean the persistent
continuation in the deplorable exploitation of nature that might bring natural resources to extinction or scar the natural landscape (Olin 1994). There are, however, many other similar negative attitudes that are as harmful in their consequences to nature as those visible activities, i.e. mining, quarrying, etc. What make them invisible is their slow progress over time and the fact that they are in most cases caused by other, needs that paradoxically, are considered essential, such as seeking of modernity and a modern life style. One of these invisible negative attitudes is the change in societal behaviour toward and perception of the local natural environment. Modern Arabian cities are isolated from both the desert environment and culture. They are built in a way that created two separate worlds, a familiar urban-exotic and unfamiliar wild-native. As an example, the personal conclusion reached by Ervin Zube when he was one of a three-person expedition in Egypt, was that in general, Egyptians have no personal experience with the desert, and have general dislike of the desert.

Mineral extraction for building construction, waste dumping, wood cutting, range land for grazing, and extraction of valley soils for urban gardens are the values of desert that have stimulated investment in the Saudi desert. In response to these exploitative activities that accompanied massive urban expansion, the Royal Commission of Environmental Protection and Wildlife Development launched its intensive programs in 1980. The objectives of this agency includes the protection of the remaining relatively natural parts of the Saudi desert landscapes against misuse and to develop techniques of re-establishing the diverse wildlife in appropriate habitats. In addition to its efforts in the field, this institution has also contributed to nurturing the relationship between local communities and the local native landscape through national reserves to which the public has access to picnic, etc. The Ministry of Agriculture and Water has developed its own programs in which many environmental problems such as desertification, extension of wild plant species, etc., have been the focus for most numerous studies in the Ministry (al-Sharief and Haddadi 2000). On the other hand, these accomplishments have not included educational programs and projects that might have contributed to changing the public attitude, behaviour, and perception of habitation and recreation in desert landscapes. One of the major conflicts the Commission faces is in cases when urban needs contravene the objectives of the Commission. Not only in cities, but also in villages where the landscapes image increasingly mirrors that of large cities. In contrast to Tuan’s (1990) argument that humans are always affectionate to their home lands, badiah (desert camps), the famed nomadic affection toward desert landscape, has with few exceptions, been relinquished for an urban life styles. The cities cultural life has extended toward into desert villages and camps, not only in terms of modern technological support and urban imagery, but also in terms of attitude. The surrounding desert landscape is becoming and seen as an unknown and desolate environment which
is in most cases seen as needing be walled off the urban environment. In areas which are set-aside as natural recreational areas, picnic activities accompanied by unrestricted unmanaged traffic, visitors have devastated the most beautiful parts of the desert landscape in, for example, al-Baida desert natural park in Medina.

Figure: 6-3, some of the common scenes in the desert landscape around Medina include: 1) vandalism by the public, 2) driving over areas, 3) exposed water tables as a result of deep excavations, 4) disposal of building rubbles, 5) quarried mountains slopes, 6) heavy machinery in soil quarries, 7) dumping of domestic refusal, 8) destroying wild habitats for new housing subdivisions.
6.3. Tradition and modernity.
The definition of modernity has been a monopolised by western culture. Andy Serwer (1999) in his brief autobiographic writing of prince al-Waleed bin-Talal al-Saoud, for example, said ‘the prince wears traditional Arabic garb’ or what is called in Arabic *thoub*. For Serwer, the plain fact that the garb is not a western style caused him to call it ‘traditional,’ despite the fact that the garb the prince, as well as all garbs that Saudis and others in the Gulf states, wear nowadays are of modern styles and differ in many aspects from traditional ones. This example highlights the fact that western culture is internationally dominant. ‘At the end of the present century, the most triumphant ideology is Euro-liberal capitalism’ (Mazrui 1998). Indeed, Europe is the mother of all modern ideologies, whether good or bad: liberalism, capitalism, socialism, marxism, fascism, Nazism, and others. One of the most influential modern ideologies is globalisation. Marshall McLuhan (1968) was the first to use the term ‘global village’ in the 1960s. Ali Mazrui (1998) highlighted the two major characteristics of globalisation: homogenization and hegemonization. Hegemonization is the culmination of economic, technological, and political power in the hand of one-nation resulting in the creation of mono-hegemonic centre that impose its cultural and ideological concepts upon other nations. Homogenization is the increase of similarity among heterogeneous societies, as a result of which cultural distinctiveness dissolves and is replaced by one homogeneous culture formed by the hegemonic nations. Muqteder Khan (1998); Ali Mazrui (1998) concede that globalisation’s chief aim is the convergence of interests among diverse international groups into one arena charged mainly by Euro-American cultural and ideological liberal-capitalism. The clear payoff of consolidating such a homogeneous social and cultural global society is an economic one; to broaden the market beyond political borders and enlarge the list of goods that have an international nature (Ohmae 1990). The fast food industry, men and women, and children’s clothing, recreational facilities, etc. are familiar examples of globalisation’s practical impact on a border-less world (Ohmae 1990). At a larger scale, urban environments have been part of this homogenization process resulting in local urban landscapes that have lost their authenticity and cultural identity. Beverly Hills, California nowadays is not only an urban setting that inspires other developments in other cities, but has become an entity that can be reproduced *in toto* some where else. One such replica has been developed in Jeddah, Saudi Arabia. As an idea this project exemplifies the intense power of transformation generated by globalisation. Not only in the physical environment, but even more importantly in the local culture. The mere presence of such project demonstrates how receptive a society is to a diversity of goods of an international nature after it has experienced cultural transformation. Almost all authors agree that during the second half of the 20th century, the Muslim world has been ever more receptive to Western, particularly Euro-American, cultural arrays
Without cultural transformation, global goods would not find a local market, and without global goods, cultural transformation could not have occurred. John Pennell (1998) disagreed with Malcolm Water's (1995) argument that considers culture as a driving force behind globalisation, however, he does not disagree with James Mittelman's (1996) suggestion of economic accountability for what Kenichi Ohame (1995) called 'the end of the nation-state.' It is evident that the revolution in electronic telecommunications is advancing this relationship (Graham and Marvin 1996) by feeding into the resurgence of a monocultural world in which the market is empowered over 'politics, society, and identity' (Khan 1998). Globalisation is also encouraged by politically generated regimes like NAFTA, GATT, NIC, and WTO. Unions between some nations during the second half of this century like the European Union, Council of Gulf States, etc., have two major purposes other than military goals: to benefit their regional economic relationships and to construct a defensive bloc against the economic regimes of other Unions. In short, globalisation has been profoundly supported by cultural and political objectives, chiefly, to support economic policies.

Modernism is the other factor that is accompanied by and served by globalisation and has played a major role in Muslim cities losing their distinct image. Modernism does not have a special connection to a certain field of knowledge or profession, but rather has been considered as a contemporary demonstration of the Western thoughts. In the Western world many countries adopted demographic Islamisation, as a result of migration of Muslims to their countries. Muslims who subsequently returned to their home country brought some of what they have learned and embraced of ideologies (Mazrui 1998). In the Arab world, a market open to the West has been flooded with goods that were mainly produced to fit Western culture. The transplantation of these goods to the Arab world entailed an inevitable alteration in the social system with local cultures abandoning many values in favour of the possession of modern technology. The Muslim world, either through choice or by accident embraced Modernism unaware that the basic tenets of modernism totally contradict and transgress Islamic belief systems. This conflict is the result of mix up between two ideas:

i) Modernism: which is a new cultural movement that encourages the rejection of religion, inherited values, and bequeathed traditions to free society from all forms of control in all fields of life.

ii) Modernity: is the incremental updating of principles, concepts, and ideas that follow social, cultural, and technological change over time. The continuum of time is an important factor in the concept of modernity by which the new is based on the old (Rowe 1993), rather than eradicating the old to form the modern as modernism suggests. This concept originated in Europe at the time of the
renaissance (Townsend 1996), without creating conflicts with the common values and historic traditions.

Raf’aat al-Jadirji (1999), a popular Lebanese architect, recalls that the embracing of modernism in Arabian cities has resulted in an architectural chaos that came as an inevitable outcome of denying the role of history in the definition of the urban landscape. He argued, in ancient traditional cities, artisans derived their design ingredients and ideas from the community. They were able to infer what the community needed and intuitively understood and therefore act as an agent of users of the urban realm. Modern artists including architects nowadays invent their own ideas and programs. The community, in many cases, can not cope with such products until sometimes in the future when familiarity gradually leads to acceptance (Lynch 1988). Even when the community accepts what does departures from historic social and cultural values, another problem persists. In such cases, the community would over time learn how to perform some changes and adapt to what initially were considered environments alien to their needs, but the result in most cases is an urban chaos. In the past, invention in the profession of design was a result of mating needs of the community with perfection of the artisan’s skills. In modern Saudi Arabia, invention is governed by the designer who himself is driven by the nature of the market. In other words, designers and/or importers of goods nowadays invent and/or import what the community does not necessarily need and introduce it to the market in which consumers learn how to manipulate a need to fit such a product.

The market is an extremely effective force that has the power of changing public taste and behaviour (Papanek 1974). The example of international ‘fast food’ consumption demonstrates this. The victory of ‘American taste’ over ‘Saudi taste,’ in food for example, has guaranteed the former business in the Saudi market. Not surprisingly, this internationalism approach is supported by a transportable production technology and a changeable public taste. Despite its mere economic objective, this approach has created many conflicts most of which overlap with issues related to the natural environment (Agwan 1993). The waste products of the fast food industries, for example, is an issue of investigation in many fields of studies in the United States. In Saudi Arabia, waste products of food industries was a minor problem until the invasion of fast food industry into the Saudi restaurants. What make the problem worse is that when the market has created an international product followed by international acceptance, which collectively generate international kind of problems, which then have to be resolved locally. Waste management in Saudi Arabia, for example, is not governed by rigorous legislation as in the United States, nor is it recognised by the public as an essential device that serve multiple-objectives, i.e. economic, environmental, etc.
Another facet of the internationalist problem is the dramatic change in the landscape caused by new developments that are inconsistent with its historical background. This results in alienation and a loss of sense of identity. Ibrahiem Sieda, (1989) commented upon this point when he visited Medina and said ‘mosques embraced splendid Islamic architectural styles, decorated by elaborate patterns and furnished with the most fancy rugs and delicate light features, no wonder I could not find Medina with its rich and deep history for these elaborate styles are alien to Medina traditional landscape.’ In Medina, very few historic sites have been preserved, not because people are more interested in experimenting with the future rather than experiencing the past, but because importing alien design schemes is easier than establishing modern schemas based on a historic heritage of architecture and landscape. The neglect of the whole history in favour to the modern exotic schemas has cost the city its unique identity.

In other particular situations, modernity has placed man in positions against nature. Modern planning schemes have created a cultural landscape that does not necessarily please nature. In the American landscape for example, Meining (1979) affords a brief view on the way American landscape has worked against the patterns and forces of nature. He said:

‘... in modern America, buildings and streets and highways appear more often to be sited in utter disregard for the contours of nature. A rigid linear geometry has been set discordantly but relentlessly upon the varied curves of nature. ... the weather is no longer very important, for man lives increasingly indoors in carefully controlled atmospheres. So comprehensive and powerful has been man’s role in changing the face of the earth that the whole landscape has become an artefact’ (Meining, 1979).

William Champers (1723-1796) suggested in his “Dissertation of Oriental Gardening,” saying:

"It is indeed true that novelty and variety may both be attained by transplanting the peculiarities of one country to another; by introducing rocks, cataracts, impending woods, and other parts of romantic situations, in flat places; by employing much water where it is rare; and cultivated plains, amidst the rude irregularities of mountains: but even this resource is easily exhausted, and can seldom be put in practice, without a very great expense"

(Hunt 1993).

This author proposes that "variety and novelty" are values of beauty in nature that cannot be realised without exerting alienation in shaping the natural landscape. In fact distinction between beauty and ugliness is an unattainable task since it is a value concept that differs from culture to culture. Justifications for forging new design ideas are most compelling when they imply environmental, social and cultural significance. In addition, inserting exotic material, flooding dry lands, levelling lines of nature, as Champers suggests for the sake of producing variety and novelty, are bold
examples of utilising natural forms for purely ornamental purposes. Such an approach adds less to the art of design, but rather reflects an anthropocentric attitude. There are many ideologies in landscape design, however, not all of them can be considered as art. To be considered as art there must be sources of inspirations, rules for guidance and criteria to control and sharpen thoughts. Although art typically lies outside prescribed instructional methodologies and usually finds more opportunities in freedom from conventions. From an Islamic perspective, art is defined in its application of wisdom and conformation with Islamic rules and regulations. The form that could be inferred from nature itself rather than those that contradict with nature which has been called "artful naturalism" (Moore et al 1993). According to the Islamic definition of art, art which does not have the capability of enhancing life, or which leads to the destruction of simple ecological system within the Divine creation, could not be claimed as an art.

In modern Saudi literature, expressionist poetry has embraced a new trend of poetic documentation that focuses upon contemporary socio-cultural conflicts such as globalisation and modernism. In response to the modernisation dilemma in Saudi culture, poets identified a new dimension to the modern movement of literature called ‘the intermixture of home and poetry’ (Al-Baze’ei 1991). Al-Baze’ei (1991) refers to this trend as ‘the expatriation from home to within home.’ He explained that modern Saudis are now unaware of the ‘intrinsic meaning and reality’ of home and consequently have been alienated from their home while they are physically in home. The poem of al-Khabat, by Ali al-Damin, is a discourse between the poet and Turfah ibn al-‘Aabd (a pre-Islamic poet) comparing two situations and two cultures within one environment at two different times. He said:

You have never abandoned the honour of the cattle
You have never traded the she-camel for a goat

In the back street, I faced the camel
Sniffing a dried ārafajah (dried and empty frond of dates)

Stray in the labyrinth of the city
Craving refuses of the city.

Oh clan’s camel
Is it a shoot germinating?
Or is it an alienation decaying?
Is it you came searching for a corpse?
Or is it you are digging the road so the soul can escape?

6.4. Historic and contemporary Arabic perception of authenticity and historic preservation.

In England on 11 June 1709 John Vanbrugh stated ‘Reasons Offer’d for Preserving some Part of the Old Manor’ at Blenheim.’ In his introductory paragraph he elaborated the value of history and the noble justification of preserving historic sites. He said:

‘There is perhaps no one thing, which the most polite part of mankind have more universally agreed in; than the value they have ever set upon the remains of distant times nor amongst the several kinds of those antiquities, are there any so much regarded, as those of buildings; some for their magnificence, or curious workmanship; and others; as they move more lively and pleasing reflections (than history without their aid can do). on the persons who have inhabited them; on the remarkable things which have been transacted in them, or the extraordinary occasions of erecting them’ (Vanbrugh, 1709).

Arabs were also known for their keen affection toward their original homeland and historic places. Most poems deal with this subject, the desert landscape is mourned as well as the ruins of homes and pastures. The vast proportion of this poetry is replete also of situations in which poetic manifestation of positive preference for desert environment in comparison with temperate environments was expressed. Maysoon al-Bajdaliah is one of the most famed poet who followed this trend. She was housed by her husband Mua’awiah bin-abi-Sufian in a palace in al-Ghoutah in Syria which is a relatively temperate environment. She chanted yearning to here homeland in Najd (the Middle Region of Saudi Arabia):

A home (in desert) but full of life,
Is more lovely for me than a lofty palace.
Wearing a gown (of a desert woman), but feel comfort,
Is more lovely for me than wearing the translucent (silk or a like).

... ... 
To eat a crumb in a corner of my home,
is more lovely to me than eating a loaf of bread.
The sounds of winds at every ravine,
Is more lovely to me than the beating of the tambourines.
And a dog barking at night's hammerers,
Is more lovely to me than a fluffy kitten.

Arabs had also shown a remarkable disapproval against the destruction of historic sites. A poem for Abi al-Ala al-Meari, cited in a manuscript titled 'Hullat al-Ebriez fi Rehlat Balabak wa al-Biqa al-Aziz' (not dated), express how Arabs were remarkably sensitive toward the destruction of historic sites. The poem reads:

Astonished I was when passed by the folks at the dawn,
Squalls were revealing from the smashing axe on the stone.
The muscular arms relentlessly worked toward fatal,
As if time introduced them into a Wael-like Great Battle
Deconstructing it, wish you’d lost your arm,
Couldn’t you leave it, for a contemplator passing by, with no harm.
The homes of the folks talked of their tales,
Would there be a wiser than revealing such squalls.

Another poet, using the same criticising attitude against destruction of historic sites, said:

How can a structure reach its completion,
If you build and else prompts demolition.

Another form of expressing affinity towards historic sites can be found in one of the most voluminous poetic trend in which Arabs yarn to ruins and nostalgia. Abu-Tammam (cited in ibn-al-Najjar 1996) said in his poem upon remembering the ruins of palaces on wadi al-‘Aqiq in Medina.

Neither the built locale of Mayata in which Ghailanu freely roam,
Is gorgeous to me than the ruined locale.
Nor the cheeks, even when bleed of shy,
Is appealing to my sight than its dusted cheeks.

The Prophet Mohammed (pbuh) had showed several examples in which He reflected on how he discouraged the abandonment of homeland even for religious reasons. Anas ibn-Malik narrated that the people of Bani Salamah planned to move closer to the Prophet’s mosque but Allah’s Apostle (pbuh) disliked that and said: ‘oh people of Bani Salamah! Don’t you think that you will be rewarded for your footsteps, which you take towards the mosque?’ so they stayed at their old homeland’ (Khan 3, not dated).

9 The first Caliph (602-680) and the founder of Umayyad Dynasty in Damascus, Syria in 661AD.
Muslims thereafter had shown similar attitudes towards abandonment of places, culture, and tradition. One of the early examples that showed how Muslims had notable consideration for historic preservation is expressed in narratives related to destruction of early structures. Zayd ibn-Thabit, who was in charge of the Prophet mosque redevelopment project at the time of Othman bin-Affan (644-656 AD, the third Caliph of the Wise Caliphate Dynasty), was sensitive in tracing the old layout of the old mosque where he placed the new stone columns in the place of the old palm trunks (al-Samhoudi 1945). Ataah al-Khurasani, during the Ummayid Caliphate narrated ‘I witnessed the bulletin of the Caliph al-Walid bin-abd-al-Malik (668-715 AD) while being announced. The bulletin announced the containment of the Prophet’s rooms in the extension project of the Prophet Mosque. At that day, I have never seen such a grief for the people cried in the mosque until the have wetted their beards’ (cited in ibn-al-Najjar 1996). Umran bin-abi-Anas narrated ‘I have been in the mosque at a time full of the Prophet’s companion mourning the demolition of the Prophet’s rooms. Abu-Umamah bin-Sahal interrupted the aggregation saying: ‘I wished they left the Prophet’s rooms for people to learn how ascetic was the Prophet in His buildings construction’ (cited in ibn-al-Najjar 1996). Saied bin-al-Musaiab said in the same occasion ‘I wished these rooms remained for future generations of different locales and visitors to learn how things must look like’ (cited in ibn-al-Najjar 1996).

Arabs were also opposed to dramatic changes that in most cases contradicted their Islamic and historic values. In the third expansion of the Prophet mosque, al-Walid bin-abd-al-Malik (668-715) ordered his governor in Medina Omar bin-abd-al-Aziz (682-720) to re-build the mosque. When al-Walid visited Medina, after the completion of the work, Omar toured the Caliph around the mosque showing the new construction. At the end of the tour, Al-Walid looked toward Aban bin-Othman bin-Affan and said ‘there is no place here for a comparison between our construction and yours, i.e. the re-construction conducted at the time of Aban’s father.’ Abban said ‘we built it the way mosques ought to look, but you built it the way temples looked’ (ibn-al-Najjar 1996). It has been reported that al-Walid’s extension of the mosque was the first Islamic building in Medina that involved alien ornamentation that included mosaic paintings, coating walls with marble, carving Quranic verses on the Qiblah wall, using elaborate material in building construction like gold and

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10 His father, Othman bin-Affan (575-656) is the third Wise Caliph who in his time the prophet mosque was reconstructed for the second time.
11 Al-Walid sent building material and labour from Syria when Damascus at that time was the capital of the Islamic territory.
12 Qibla wall is the most important side of the mosque centered usually by the mihrab (nich of prayers leader) which faces Makkah.
Ibn-Khaldoun (1981) attributed Al-Walied bin-Abd-al-Malik seeking of building expertise from outside Medina to Arabs when had no sophisticated techniques in monumental kind of architecture at that time which in most cases contradicts Islamic style that approve simplicity.

Strict attitudes to conservation had its historic roots in the Prophetic period during. Jabir bin-abd-Allah, for example, narrated that ‘a woman of Al-Ansar came to the prophet and said ‘my son is a carpenter! can I ask him to make you a minbar (pulpit),’ the Prophet replied: ‘if you wish’ (al-Bukhari 1991). Sahal bin-Saad added in another Hadith narrated by abi-Hazim that ‘the carpenter made the minbar of three steps and a seat using wood of Tarfat al-Ghabah (Tamarix wood ‘Tamarix aphyl Ila’ from the Medina forest’ (cited in ibn-al-Najjar 1996). When the caliph Al-Mahdi in 161H (783AD) visited Medina he sought advice from Anas ibn-Malik upon retrieving the minbar to its original shape of the prophet time. Malik said ‘the minbar was made of tarfah, and such restoration work would ruin it for its wood is strong and nails could hardly be pulled out of it. Musab bin-Thabit narrated that ‘we investigated the wooden rod placed in the mihrab of the Prophet mosque. No body had the story except Moslim ibn Saeb who sat with Anas ibn-Malik and the later told him the episode. He said ‘it is the rod of the Prophet stolen after His death (pbuh) and caliph Omar bin-al-Khattab (586-644) found it with one of the Ansar (the advocates of Medina) in the Quba area. The person who stole the rod buried it until it was decaying. Omar hollowed the rod, placed another rod inside it, fastened it with threads, and placed it back in the mosque. Omar bin-abd-al-Aziz (682-720) placed it in the mihrab.’ Moslim ibn-Khabbab said ‘the rod was made of tarfah wood of al-Ghabah” (al-Samhoudi 1945).

In modern practice, in the Muslim world, the contribution in saving of historic sites from demolition, neglect, or unsympathetic development, is tiny compared to the massive scale of destruction of historic districts and areas in Muslim cities. Justifications for such a deplorable situation ranges from a lack of financial resources and heavy reliance on modernisation. On the

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13 The Prophet called People of Medina Al-Ansar (the advocates) for the reason they offered refuge for the Prophet and His companions at the time He (pbuh) immigrated from Mecca.

14 Al-Ghabah or (the forest) is a forest of athl and tarfah (Tamarix arabica and tamarix aphylla) historically known for its dense naturally growing athl and tarfah. It lies in the north of Medin in an area called al-khelail.

15 One of the most popular and knowledgeable Muslim scholar at that time. He is one of the four Muslim scholars who established the four Sunni madhahib. His books in Fiqh are considered the main references for researchers until now.

16 at the time of the Umayyad caliph Muawiah, he ordered Marwan ibn-al-Hakam to raise the minbar a bit more. The minbar was raised six more steps and covered by a new qibitia (black silk gown ornamented by gold).
other hand, in the academic domain, research on the necessity of preservation and rehabilitation of historic sites in the Muslim world are still going on. Local authorities are in most cases do not act as advocates for preservation. Historic sites nowadays are seen as the bleakest part of the city.

The main problem with the rehabilitation projects of historic sites, as Stephano Bianca (1984) highlights, is initially ‘to overcome the prevailing prejudice that historic areas must necessarily look shabby and that they should be abandoned altogether in favour of modern redevelopment.’ Secondly, an objective of a rehabilitation must clearly be drawn in order to determine the feasibility of such an act. In the modern pragmatic world, an objective like ‘to preserve or regenerate the pleasure that historic sites delivered in the past suggest frivolous sentiments that turn such rich historic sites into an open museum of antiquities inside the city. Such clichéd objective that lead solely to the enjoyment of the state of antiquity of a place has had little success in encouraging history to be seen as a source of inspiration for modern developments (Farahat 1984). Neither would it alert the profession against larger scale endangered themes like a decaying cultural belief or tradition. To re-erect a ruined historic site, is possible, however, the re-birth of a cultural tradition in the society is much more difficult. On the other hand, an objective that facilitates a functional approach that aims to extract what can be invested of valuable design principles in the modern life and re-allying them with the design process of modern places seems to be a more pragmatic and fruitful objective.

In Medina, the loss of natural desert and cultural resources have never been considered as a problem from the perspective of historic preservation. Despite a long history of sympathetic attitude toward preservation of historic culture and artefacts, as stated in above examples, no attempts have been pursued to consider the historic value of vernacular urban and suburban images of Saudi cities in which the desert landscape was an essential constituent. In rehabilitation projects of historic buildings, for example, concerns are always given to the architectural parts, with no significant consideration accorded to the historic landscape of the project (figure 6-4). Another major problem in the field of historic preservation is that old techniques are thought of as vestiges of the past that are still in the hands of the elderly and have not yet been considered as part of the modern art education programs from which students can learn from techniques to develop and apply in modern works (figure 6-5). On the other hand, we see a new generation of students visiting a local Museum of History (al-Masmak in Riyadh) while wearing ‘western style’ T-shirts and head-caps instead of local costume (thoub and koufiah) (figure 6-6).
6.5. Modern Attitudes Toward Saudi Desert Landscapes.

6.5.1. Environmental Protection.

In 1986 the National Commission for Wildlife Conservation and Development (NCWCD) was constituted as a timely response to the alarming deterioration caused to the natural environment from excessive hunting, range grazing, uncontrolled wood cutting, extensive exploitation of resources, un-managed sprawling urbanization, and illegal wastes dumping. In 1987, NCWCD developed a plan in which 103 sites were proposed as nature reserves, eight of
which have now been established covering an area of 51,000 km². These 103 reserves cover 172,400 km², or about 8.1% of Saudi Arabia which is less than what IUCN recommendations on protected area. A. Abu-Zinada justified the need of aiming for a larger coverage of environmental protection in Saudi Arabia to the fact that dry lands are among the least protected environments in the world, and the need for environmental protection increases with aridity (Abuzinada, et al 1991).

At the institutional level, Islamic laws on the management of natural resources and sensitive ecological areas has not been brought in to practice in Muslim cities. At the practical public level, such concepts are vestiges that remained as an idea from history but have no contemporary application in cities. NCWCD categorisation of protected Areas in Saudi Arabia are as follows:

1. Special Natural Reserve: Areas of great ecological significance, fully protected from grazing and conflicting land use. Managed by NCWCD.

2. Natural reserve: Areas of ecological importance or small areas of ecological significance protected from conflicting land use. Administered by NCWCD or a delegated authority.

3. Biological Reserve: Generally small areas, for preserving local propagules (seed stock) or other conservation purposes. Managed mainly by local authorities.

4. Resource Use Reserves: Large areas, where resource use is regulated by the NCWCD in consultation with appropriate government agencies and local resource users.

5. Controlled Hunting Reserve: Large areas, in which the NCWCD is solely concerned with the management of hunting in liaison with local people.

The Ministry of Agriculture and Water (MAW) is another governmental institution that maintains an active role in monitoring, conserving, protecting and developing natural habitats and resources. In 1999 the Prime Minister commissioned MAW to design an executive plan that aimed to protect, develop, revitalise, and enhancement natural resources in general and plant cover in particular (al-Sharief 2000). The ministry thereby developed many programs that target various environmental challenges in desert landscapes, e.g. desertification, extinction of some desert plant species, stabilisation of sand dunes, enhancing and restoring some of the pastoral plants, etc. Some of the major efforts the ministry developed include the following:
Figure: 6-7, in the past excessive hunting brought much wildlife to extinction, the depletion of wildlife habitats has resulted in disappearance of many birds and mammals like the Medina nughri, mjabiah, drumbah, etc. Desertification is a major challenge that face the efforts of NCWCD and MAW, for which projects like the establishment of reservation areas, wild plants’ seeds bank (in the photo, bottom left, seeds of Accacia ehrenbergia), and research centres to monitor environmental changes.

1. The establishment of a comprehensive data base on derelict lands, naturally deteriorated desert landscapes, sensitive and endangered ecological biomes, areas susceptible and threatened by desertification, etc.
2. The formulation of laws and regulations that ensure the conservation and protection of renewable natural resources.

3. Re-establishment of desert woodlands in different areas of Saudi Arabia.

Although projects established by NCWCD's and MAW were successful to a great extent in maintaining the survival of natural habitats and wild life in many areas pronounced as Hima (the traditional cultural conservation system), or under other conservation category, the scope of their work is restricted to the countryside only. On the other hand they lacked collaborative co-ordination with Municipal authorities that might have resulted in the constitution of an Urban Development Act that would consider the development of native desert landscape in place of exotic green landscapes. In addition, most efforts are focused on monitoring, managing, and developing natural, but not cultural resources. Due to their natural-resources-based-investment and traditions, rural people, are often very critical against NCWCD's environmental protection programs. The consideration of traditional desert-cultural resources could have alleviated confrontations between such conservation institutions and the public. One of the major tasks these institutions lacked is identification, evaluation, protection, and enhancement of significant historic cultural traditions emanated in desert landscapes. This role aid and promote scientifically based explorations of traditional cultures in a way that develop societal behaviour rather than enforcing acts and laws of environmental protection.

6.5.2. The attitudes of modern landscape professionals toward desert landscape.

Ellen Churchill in her opening lines sixty five years ago of her monumental 'Influences of Geographic Environment' said: 'Man is a child of the earth, dust of her dust; the earth has mothered him, fed him, set him tasks, directed his thoughts, confronted him with difficulties ... given him problems ... and at the same time whispered hints of their solution...' (cited in Meining, 1979). The literature of environment and behaviour in general suggests that the natural environment has a significant influence on man's culture, which in turn contributes remarkably to shaping man's perception of his natural environment. We find, for example, that Arabians can list fifty names for a camel and a palm tree and Eskimos can list about the same number of names for ice and snow (al-Takriti 1994). We see also how a substantial design trend has emerged in which the natural environment informs the cultural landscape. Denver, Colorado architect Curt Fentress, asserts that 'buildings should grow from their surroundings' (cited in Dietsch 1995). In her description of the National Wildlife Art Museum on the drive from Yellowstone National Park to Jackson Hole, Wyoming, Deborah Dietsch (1995) said 'although the museum reflects the local vernacular only in
its log-supported entrance canopy, its low, naturalistic profile bows to one of most beautiful landscapes in America.' Prince Sultan bin Salman in his Introduction to William Facey's 'Back to Earth,' (1997) said '... a need emerged for new, forward-looking thinking regarding the importance of tradition and its relation to human progress. This thinking values the balance between man and his environment.' In modern times, American architects extol, even, desert landscapes and hold a reverential attitude toward reflecting such landscape in architectural design. Tate & Snyder Architects created a contradictory alternative to air-conditioned Las Vegas, as Barreneche (1995) commented, in which 'the firm designed its new studio in a Las Vegas suburb near Lake Mead to reflect both local nature and artifice' where their emphasis was on passive cooling system (emphasis added). Taliesin West in Scotsdale, Arizona by Frank Lloyd Wright is one of the most pioneering examples of architecture which, as Wright says, come 'out of the desert.' One of the dominant design concept that had been appropriated in all different parts of this place is the way they complement the surrounding desert landscape in different ways (figure 6-8).

In modern urban developments in Saudi cities, few projects have facilitated such substantial understanding of the local environment. Rather, most urban projects have been developed in a way that controverts its surrounding natural setting. Saudi Consult with Mona (a landscaping firm) in 1990, for example, produced a Landscape Redevelopment Plan for the campus of King abd-al-Aziz University (male section). The whole scheme shows no consideration of the surrounding native desert landscape, nor considers the possibility of involving such a scheme in parts of the campus. The Golf Resort in Riyadh (a city in a sand desert) has not only obtained a western desert name, i.e. 'Arizona,' but the whole site has
been designed to depict an Arizonian natural as well as cultural environment (figure 6-9). Ironically, the long history of imposing diverse western images onto Saudi cities has not been immune against, even, the desert landscape of the western world. Riyadh is one of the Saudi cities that has its own rich cultural heritage in architecture (surrounded by Nofoud in the north, Dahna in the east, and Empty Quarter in the south), yet the designer opted to forge another desert natural and cultural environment in preference to the local desert landscape of the area. The club’s logo, street signs and names, the planting material, the water features, and the street furniture are typical of suburban resorts and lodges in Arizona.

![Arizona Golf Resort](image)

Figure: 6-9, Arizona Golf Resort in Riyadh is one of the recent examples that depict the unwise copying of the western natural and cultural landscape. The sign in the second image from the left reads ‘Santa-fe Trail, pointing to the left and Pecos Trail, pointing to the right’ (a city and a village, respectively, in New Mexico, USA).

Diana Bell (1985), a senior landscape architect working on the development of the Arabian Gulf University in Bahrain explained the final scene they were creating for the campus, ‘a dramatic impression will be created by dropping this jewel-like oasis into the expansive desert scenery... due to the general shortage of water in Bahrain it was decided to use treated sewage effluent to irrigate the plants... water brings tranquillity to the top garden before cascading down the zigerrat to a pool at ground level.’ In her presentation of the planting design approach, she has not mentioned what she had already highlighted of clumps of acacia groves, the sandy nature of the site, limestone walls, etc., and how such landscape features could be integrated in the design program to serve particular environmental and cultural objectives, rather than being replaced and screened by lines of *Delonix regia, Ficus nitida*, etc., as she suggested. The whole theme, with the exception of the desert park the designer suggested on the edge of the campus, was a translation of her perception of the desert landscape on which she said ‘the natural landscape of the Middle East has a quality of sheer and stark drama, often unappreciated by the western eye used to more subtle, Arcadian landscapes.’ Such irony is all too evident in landscape design in modern Saudi cities.

In Medina, the total area of 32 designed parks and gardens is 5,050,000 m² (Shaieir 1991a) making 4.71% of the built-up area (107,430,000 m²) providing the population of 405,358 persons with 12.5 m²/person. Sustainable design formulas have never been adopted as a landscape planning and design methodology in the any of designed parks and gardens of Medina. In the study of Shaieir
a random social sample was surveyed to target local recreational needs and aesthetic expectations of designed urban landscapes. The results showed that the public were not concerned about the lack of vernacular or native landscape content. In answer to the question 'what images would you expect to see in urban designed landscape in term of plant material,' indigenous landscape was simply not part of expectations of the respondents. Cary and William (1996) summarised cultural limits that bias creating sustainable landscape in areas that possess high proportion of natural constraints i.e. desert landscape, as follows:

1. Landscape preferences are frequently attached to stereotyped utopian landscape e.g. stretching lawns sprinkled with widely spaced trees penetrated by a water feature if possible.

2. The desire for an Ideal formal environment i.e. a park-like landscape full of colourful foliage, dense and textured vegetation.

3. Opposition to ecologically sound and biologically diverse landscapes. Such environments are generally perceived as messy, frowzy, and inhuman.

4. A general distaste for arid landscape dominated by open, rough textured and sparsely leafy trees with a pale coloured understorey.

Given the predominance of these aesthetic paradigms, it is difficult to attain ecologically sustainable and affordable landscape in desert environments. The public desperately need to understand how an ecosystem works before they think how a landscape would look. This kind of education is an imperative prelude to the process of implanting practical aesthetic appreciation toward values like maintaining a landscape ecosystem and sustaining the ecological value of that landscape. It would also lead to a tutored taste that values whatever a designed local environment can sustain, rather than merely, an unsustainable, traditionally idealised scenic landscape (Gobster, 1995). The choice lies with two opposite strategies, to work through 'how things ought to look' (Lowenthal, 1968) or how to acknowledge what exists in the landscape and work with it.

6.5.3. The formation of culturally alien landscapes in Medina.

Any landscape is a production and reflection of its societal values and ideologies. Distinct ideologies produce distinct landscapes manifestations. In ideal cases these landscapes live as long as these ideologies are not abandoned (Meinig, 1979). The change in the landscape therefore means an inevitable change in ideologies that created that landscape. Or in other words, the consequences of alterations in the landscape entail 'far-reaching alterations in social' and behavioural systems (Meinig, 1979). The long history of culturally formed landscapes that once represented their builders' and societal preferences have been brought to a halt in many parts of the world. The world-wide trend of internationalism is nowadays dominating the making of the urban image of
modern cities and informing the cultural definition of places. Western planning and design theories and standards have been understood as applicable to all modern urban environments around the globe. In Saudi cities, these standards have contributed greatly not only in the formation of the urban image, but also to the creation of compatible social behaviour and landscape preference. A great proportion of contemporary society has been tutored through its modern urban environment into a new urban life system in which intimate knowledge, values and ideas related to the natural environment has been trivialised. When the author, for example, asked the question: ‘does any one of your children study or work in a field related to nature such as agriculture or gardening? ’ to twelve elder farmers in Medina gardens, one answered positively, when the other eleven farmers stressed that none of their children work in these fields (the total number of children is 89). One of the interviewees had his answer as follows:

‘No, my son, none of my children work in such fields, they should not suffer as their forebears did. By the will of Allah, all my children work in high ranking positions as officials in various governmental agencies in Riyadh, Khubar, and Medina. These jobs were for us in the past when we used to irrigate earth by our sweat, we had no education but we learned about our land so that we can establish our gardens.’

Another interviewee said:

‘Without doubt, no. Children of today are not like the ones of the past, they have new opportunities in the modern developed fields of our country. These ancient jobs were for us when we had no modern technology.’ We had no other source to live on except earth: the soil on its top and the water in its inside were by the will of Allah the only two sources we depended on after the grace and the blessing of Allah. Our forebears taught us how to hold the axe and cultivate the land. Nowadays, you do not need to learn this to live, you study in schools to sit in the office not to spend your day under the sun.’

Despite the way interviewees talked proudly about their desert gardens and the affection they have toward their profession, their words give the feeling that gardening and farming is an old profession connected with backwardness and the past. The desert environment and the attached notion of uncivilised and primitive societies that for long has been a cliché in western writings and cartoons is still a powerful idea in desert cities of Middle East and elsewhere. It seems that desert environments regardless of their geographical location evoke this impression to people of temperate environments. In a study conducted by Jackovics and Saarinen (1978), an interviewed student said:

17 Landscape as a profession had intentionally not been included in the question for this profession is not well known in Saudi Arabia.
‘People around the country, including California as well as the East,’ of the United States ‘have this absurd concept of the desert and Arizona. They marvel at the fact that we do indeed have paved roads. You can feel this urge in both cities to stand up and shout, ‘look here! We are just as civilised as other cities. We do not ride horses to school.’

Unfortunately, this attitude toward the past in which nature was a major and extolled component resonate dramatically also in the way the modern society in Saudi Arabia conceive nature in visual terms. After frequent encounters with Saudi paintings titled ‘nature’ in which nature was represented in green lawn centred by a cottage with a background of capped mountains and a brook running through the scene (figure 6-10). An experiment was conducted in Medina by the author to examine the way the society identifies ‘nature’ visually and verbally. In this experiment, ninety students in secondary and high schools were asked to draw ‘a natural scene. The students were given no further information, but allowed to use whatever medium they preferred. The final results were conclusive. The drawings were categorised under four major categories, which are: i) unaccepted; ii) coastal view in sunset; iii) English rural landscape; and v) local desert landscape. Thirteen drawings (14.4%) of the total number of the drawings (n= 90) were not accepted for that their creators either misunderstood the requirement or had a strange definition of nature for their drawings ranged between clusters of houses, ruins, streets, camel racing, etc. Eighteen drawings (20%) expressed nature as a sunset in the middle of the sea The idea behind this group of drawings was somewhat confusing as Medina is 150 km away from the sea and the closest coastal city is 250 km away from Medina. Thirty-seven drawings (41.1%) have expressed nature in the clichéd English rural landscape which has been described above (see fig 6-10). Although twenty-two drawings (24.4%) included a palm tree, which is part of the local desert landscape, the tree was drawn in a context that does not reflect desert environment. For the second and third groups of drawings (55 drawings, 61%) the idea of nature was inspired by the idealised scenic temperate landscape that has been transported from Euro-American culture in the form of decoration, whether original or replicated copies, of classic paintings, wall paper, and TV programs. In the second part of the experiment, the students were asked to express their idea of nature through their drawings. Unfortunately, the response ranged between giving a title for the drawing, explaining the way the student drew his drawing, and misleading interpretation of the context of the drawing. On the other hand, there were a few exceptions of which one student wrote:

18 The reason participants were selected of this range of age is that there were already data collected from students’ painting exhibition (students of the same level) in Tucson Arizona, in which one of the major subjects was ‘nature.’ The data was intended to be compared with the one of Medina.
Figure 6-10, the western landscape has been dogmatically idealised in the Saudi children understanding of outdoor spaces. In the drawing of nature (upper drawing, by students in al-Khalidiah community centre in Medina, lower drawing obtained from a competition on children drawing titled 'natural scene'), as well as in garden, the typical western style house, brook, the lawn, large green trees, the mountains in the background are the common ingredients of both drawings. Meanwhile, palm trees, the most common native tree of the country has not been associated in either drawings.
Figure: 6-11, examples of Tucsonan school students' paintings through which their envisaged natural scene is strongly informed by the local natural desert environment.
'I see nature in palm trees which sometimes delight us by its spread shade, sometimes by its fruits, and sometimes by its view under the sun that give life to the whole universe'  
(Mamdouh abu-Qarn, secondary school, second level, 1999).

In sharp contrast, students in Tucson, Arizona expressed the title 'nature' visually in their drawings of saguaro and ocotillo trees, yucca and hedgehog cactus, sand mounds, rocky desert floor, and desert birds and lizards. This data was collected from an exhibition that took place in the Tucson Shopping Mall spring 1999. The entire drawings in the section called 'nature' were inspired by the local desert environment of Tucson and depicted the real colour pallet of the desert (figure 6-11).

6.6. The role of Various Forms of Art in Shaping Saudis' Relationship with Desert landscape.

6.6.1. The Role of Literature in Shaping Medina’s Early Culture Against Westernisation.

The warning against literal imitation of other cultures has its root in history since the late eighteenth century in Hidjaz (the western province that include the cities of Medina, Jeddah, Makkah, Yanbu, and taif). Between 1875-1975 (the fourteenth century of the Hijratha) the Hidjaz witnessed a profound change in most national affairs. Not only politically, by al-Ashraf being dethroned and al-Saud taking-over the rule of Hidjaz, and economically by the discovery of oil in the Saudi desert, but also culturally and intellectually. A brief review of the literature of this time would evidence a substantial transformation in the whole cultural formation of the society. One of the most distinctive initiatives of this intellectual phenomenon was the revolutionary call to overcome ignorance and illiteracy. Names like Mohammed Jamiel Hassan, Hamid Ka’aki, Abdulwahab Aashi, Mohammed Hassan Awwad, Mohammed Umar Arab, abd-al-Wahhab al-Nashar, Mohammed Surour Sabban, Ahmed Ebrahiem al-Gazzawi, Mohammed Sobhi, Abd-al-Qadir Othman, Mohammed Saeid al-Amoudi, Mohammed Saeid abd-al-Maqsoud, and abd-al-Qodous al-Ansari were the enthusiastic promoters of this movement. They woke up to the fact that Hidjaz was culturally and intellectually far behind the rest of the civilised world (Al-Maghrabi 1985). At that time newspapers and magazines were used as educational and communicational tools with the public at a time when the press had no electronic rivals like radio and television. Political news was a minor part of the Hedjaz’s media, whereas intellectual articles on literature, history, and sociology were the dominant writings. Al-Maghrabi (1985) beheld that Hidjaz’s mass-media in the early twentieth century was a mere journalism of literature and culture. In contrast to the al-Qiblah
newspaper that represented al-Ashraf rulers of Hijaz at that time, Sawt al-Hijaz 1927, al-Madinah al-Munawarah 1933, um-al-Qura, at the beginning of the Saudi ruling, newspapers and al-Manhal magazine 1934 were the active media that conveyed the mission of those who wanted intellectual change in Hijaz. They had successfully facilitated this mass-media, i.e. newspapers and magazines, to transmit their ambitious thoughts aiming to revitalise Hijaz status within the Arab world after ten centuries of decline (Al-Maghrabi 1985).

In 1921, a group of books that popularised the same mission were published by intellectuals of Hijaz in the hope of expediting what have been initiated by the mass-media. Adab al-Hijaz (literature in Hijaz) and al-Ma’arad (the exhibition) for Mohammed Surour al-Sabban were published in 1921. Adab al-Hijaz aggregated all intellectuals’ writings of Hijaz who wrote for the sake of the revival for Hijaz in one volume edited by al-Sabban. ‘Al-Marad’ (the exhibition) concentrated on literature and Arabic as a language, but followed however the same track of opposition against the westernisation trend that plagued the local culture and literature such as the works of Mikhaeil Naaimah. Mohammed Hassan Awwad, for example, was very conscious of the negative cultural consequences of imitation of other cultures as an escape from and a cure for what had been ignorance and underdevelopment. He argued that ‘another form of ignorance is to assimilate the western model instead of ascertaining what ideas, conceptions, notions, views, and intellect are derivable from the local civilisation.’ He said also ‘contemporary definitions of freedom cannot be found in being ‘western’, neither to embrace the repugnant inertia that kept us behind. To gain freedom and modernity we have to start from our locals, from our cities, we need to investigate the vestiges of our heritage for the essence of prosperity, to study the autobiography of the early men who guided the knowledge in art, poetry, politics, geography and other areas of knowledge’ (Awwad 1921). Mohammed Omer Arab in a later stage, when imitation had found easy prey in the local culture, wrote in an endeavour to awaken the public against the approaching threat of losing local Hijazi identity. He said ‘between the rustling of desert trees and the fragrance of the mountain flowers I saw the bride of the dawn . . . I invited my people to give them a ceremony about the easy life of our gardens, to recite the poetic song I heard from the bride of the dawn. For my surprise, they were deaf to my speech, alienated to my taste. For my surprise, I found them listening gleefully to the cawing of the ravens, submitting appealingly to the sounds of serpentine hurricanes’ (Arab 1921). Abd-al-Wahhab al-Nashar was rather plain in his language, direct in his expression, and frank in his claim. Similar to other writers of that period, he was after change that would guarantee progress and offer a release from the perpetual import of technology

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19 Hijrah is the Islamic calendar that its commencement mark the immigration of the Prophet Mohammed (pbuh).
associated with alien cultures. He wrote in his ‘When it is Due for a Vigorous Revival:’ ‘it is too frustrating that we are not as serious as other nations. Plenty of questions remain unanswered for the reason we still admit the false argument of false progress: where is this revival at a time we still import the needle and the buttons’ (al-Nashar 1921). Mohammed Surour al-Sabban was another leader in this movement in Hidjaz at that time. He expressed opposition to dependence on blind import of ideologies in all of life’s affairs in most of his writings. In his ‘No Emendation is Possible with Hypocrisy,’ he said ‘Where are the people, the wise men of Hidjaz? Is there knowledge, education, journalism, art and literary and religious clubs in Hidjaz? There is nothing in Hidjaz.’ He ended his series of rhetorical questions and answers that were implicitly full of advice and suggestions by saying ‘There would be no chance for reformation and emendation to supersede ignorance and dependence on the outer world except if we left hypocrisy and, rather, evoked our heritage of knowledge and looked upon the embalmed civilisation of ours. We need to have faith in what we inherited of knowledge and in what we have been bequeathed with of culture in order to develop and progress’ (al-Sabban 1921). In 1922, Mohammed Hassan Awwad published his book ‘Khawatir Musarraha’ (announced thoughts) to ratify the movement of Hidjaz toward the new age of modernity. He was criticised for his aggressive writing style (Maghrabi 1985) but was however, was very successful in highlighting indignation against the local cultural and intellectual situation, eager for change and looking forward to having a better future.

The group of intellectuals who embraced this writing trend took a rigorous ideological position against ignorance and backwardness, meanwhile they were also very keen to sustain the local character of Hidjaz. They proclaimed how important it was to catch up with development simultaneously expounding the negative consequences of transporting a new culture through importing ideas and thoughts blindly from beyond Arabia. This enthusiastic ambition for development and revitalisation of an embalmed civilisation was advanced enormously in the Saudi era. It has been enlightened by the consecutive advice of King abd-al-Aziz al-Saud who, for example, once said in one of the early issues of al-Manhal magazine: ‘we should not ignore the fact that we need to catch up with modern life, however, without contradicting our Islamic doctrine’ (al-Manhal 1937).

Although desert has not inspired the modern urban and suburban landscape of Saudi cities, it is becoming a major subject in contemporary literature. ‘Ashbah al-Sarab’ for abd-Allah al-Nasir (1999) is a collection of fictions, some of which are well facilitated to restore the natural aesthetic prestige and romantic image of desert in Saudi perception. The author says in one of the stories ‘the
cool desert breezes prevail, the perfumed scent of the desert shrubs and wild herbs saturate the
diaphanous breeze, which vibrated the yearning and the nostalgia in his soul . . .

6.6.2. The role of Islam as a religion on Muslim's perception of desert.
In numerous verses in the Quran makes it clear that secular and metaphysical wisdom and
knowledge are initially of His, and He reveals this wisdom and knowledge to whom He will,
(see the Holy Quran, al-Baqarah 31-33; al-Qalam: 5). Muslims accept what Allah destined
for them of knowledge and appreciate His creation on the basis of both forms of knowledge;
the revealed and the un-revealed. Thus, the justification of harsh destinies such as having to
inhabit desert landscapes is not a matter for controversy, since there is always a divine un-
revealed wisdom. This contradicts early Anglo-Americans' reluctance to embrace the desert
which was based on their humanistic mode of thinking. As a result they theologically
questioned the presence of desert: 'if God was good, and all-powerful, why had He made such
a mess? Why deserts?' (Limerick and Southall 1992). According to the Islamic doctrine to
concede to the principle that every creation, whatever, has its own revealed or un-revealed
wisdom of being, desert was accepted by Muslims (al-Turki and al-Arnaout 1987).

We find also how the Quran and Hadith influenced perception of desert landscape positively. The
Prophet (pbuh), for example, taught His companions how to perceive the harsh environment of
desert in general by setting Medina's desert environment as an example to be followed. He said in a
Hadith narrated by abu-Hurairah:

'who ever exercise patience against Medina's scalding heat and harsh environment, I will be
his intercessor between the hands of Allah in the day of Judgement.'

Another example is the Mountain of Auhud in Medina of which the prophet said:

'Auhud is a Mountain we love as it like wise does' (al-Bukhari 1991).

Although Mountains possess no sacred status, (as it is the case with other natural terrestrial forms,
and designed landscapes, with the exception of mosques), the affection of the Prophet (pbuh) for
the Auhud mountain gave an example to Muslims how desert landscape can be liked even though it
has no obvious aesthetic quality, i.e. the mountain lacks any form of remarkable vegetation cover.

The story of Abraham and his wife Hajer in the Quran is further evidence that perceiving desert
positively was an outcome of faith in Allah's un-revealed knowledge and wisdom. Allah says in
Surat Abraham in the Holy Quran:

'Oh my Lord, I resided part of my family in a sterile valley so they can cause to worship you,
oh my Lord, so let some people come to them.'
In this verse, Abraham in complete compliance to the divine command transported his family from the moderate desert environment of Palestine to Makkah which is as described by the Quran as a ‘sterile valley.’ The Quranic selection of the term ‘valley,’ which is usually expected to possess a more life supportive environment than other terrestrial locations, to describe Makkah’s landscape is to depict its extreme condition of sterility. Nevertheless, Abraham’s horror of this extreme desert environment was overcome by the mere belief in the divine metaphysical wisdom. From a religious point of view, the justification for these two stands against the two desert landscapes in Medina and Makkah is implied in Surat Ibraheem, in which Allah declares:

‘And remember your Lord caused to be declared (publicly): If ye are grateful, I will add more (favours) unto you; But if ye show ingratitude, truly my punishment is terrible indeed’
(The Holy Quran, Ibraheem: 7).

6.6.3. The role of art in tutoring Saudi public perception of desert landscape.
Artists possess the faculty that enables them to locate the aesthetic dimension of a landscape and then draw their own visual interpretations from the landscape and convey those interpretations through the visual medium they use to lay-people (Golt 1980). Their major role is to make these aesthetic values visible and possible to be appreciated by the public in the actual landscape. Such a process of informing societal perception of the natural landscape is evident in what Muhammed Omar Tawfiq (1984), a popular tourism-writer in the Saudi Airline’s magazine and a previous minister, said about the intellectual as well as emotional necessity of reconstructing nature in various forms of art. In his brief article titled ‘the original is rather more influential than its shadow,’ said ‘every form of art that expresses a grand piece of landscape is not but a medium that teach our passions, where, what, and how to appreciate the original natural landscape.’ In this study, the author argues that art performs a substantial role in tutoring the public taste of beauty in general and natural landscape in particular.

A brief glance at two different schools of art in Saudi Arabia would explain the idea: how art can be an influential tool in tutoring public taste in a way that re-affirms positive perception of the local desert landscape. As an example, the difference between the two sets of paintings in (figure 6-11, 12 and 6-13, 14), is that they represent two different attitudes to painting. In (figure 6-12, 13), paintings gesture to some ideas and events rather than the physical details of the actual scene. The artists here employed their intellect and imagination to produce a composition that capture both, the ideas and characteristics of events mingled with the personal imagination of the artists. In this attitude, such paintings adhere to the notion that works of art are a creation of their artists rather than merely replicas of what they are painting as it the case in (figure 6-14, 15) which are concerned with
the actual traits of the scene. In the first two sets, the most obtrusive role of the artist is to utilise their imagination, whereas the third set is more concerned with the artist's perfection in capturing the details of the event. The difference between the two trends is the degree of facilitation of creativity and imagination in the painting. The first set of paintings can be interpreted on the basis of what Henry Ward Beecher (1813-1887) said 'every artist dips his brush into his own soul, and paints his own nature into his pictures.' The Swiss artist Paul Klee (1879-1940) justifies such a notion more precisely by saying 'art does not reproduce the visible, it makes it visible.' Following Klee's quotation leads to the conclusion that artists do not only transplant particular compositions and events from their initial home grounds to other grounds where the public can encounter and learn from, but also bring such compositions and events into the level of easier admiration and marvelling. For example, for a lay person walking through a historic, yet decaying Asirain house may provoke particular feelings of dislike. An artistic representation of the same composition drawn by a creative artist would highlight certain architectural values, which have the capability of bringing this setting into a higher level of appreciation. This level of appreciation develops what most research asserts to be a significant role in cultivating positive perceptual experience, or familiarity. This factor might contribute to reuniting the society with some of its abandoned values in a way that could inspire present and future cultural and natural environments.

It was not until the 1960s that fine art in Saudi Arabia became an accepted formal cultural expression. Safeya Binzagar, for example, was the first Saudi female artist at that time followed by Monira Mousley who met her in Cairo’s College of Fine Art. Safiah Binzagar (1979) described her situation as an artist of that time on which she said: 'art was not accepted by society or by my family as a proper pursuit especially for a woman, who was only permitted self-expression within the confines of the family home.' Safiah Binzagar, however, was fascinated by the cultural formation of the Saudi traditions, custom, and architecture. She has successfully devoted her career in art to the documentation of Saudi culture through her, and according to numerous critics, striking paintings (6-16). In Medina, artists like Siam Mohammed Siam were concerned with calligraphy, paintings of historic sites and others are more concerned with subjects of international nature, e.g. still life and natural looking green temperate landscapes.

Social traditions, costume, and architecture have been a remarkable focus for Saudi painters since the economic boom in the 1960s. For most painters like Fawzia abd-al-Latief, Fuad Mgharbil,
Figure: 6-12, Arab Village and Qasimi Door for Nancy Steinke. In both paintings we see how the artist facilitated her interpretations of the village and the door and expressed them via colours to form an artistic version (rather than life painting or precise copying from reality) of historic entities.
Future: 6-13. A Jizani (southwest city of Saudi Arabia) lady (1), a walking girl (2), three Asirian dancing girls (3) by Judy Laertini. It seems clear here how the artist created fashionable portraits of particular cultural events that do not exactly match reality. The lady in painting (1) suppose to be a Jizani woman, yet she looks as a Victorian English lady in somewhat Arabian dress. In the second, the woman walking is unexpectedly unveiled in Asirain-architecture inspired fabric coloured garb in painting (2), in the third painting behind non-Saudi veils dance 3 girls in an Indian fashion in painting (3). On the other hand, this art has a significant role in bringing such largely unknown traditional social and cultural events to the level of admiration evoked by the imagination of the artist and revealed in her interpretation rather than reality.
Figure: 6-14. A photograph of two ladies fighting against the wind by Abdullah al-Dobais (1), a lady with ornamentation by Judy Laertini (2), Hamdah sits in the court of al-Badiah Palace 1937 by Harold Dickson (3). In this genre of art, paintings (2,3) is almost doing what a photograph (1) does. They document the actual setting, figures, costumes, and all forms of embellishments whether architectural or humanistic accessories. Such paintings and photographs have profoundly highlighted the undiscovered forms of beauty of traditional and historic artefacts. By cropping such patches of history and reforming them in an artistic format, such compositions become familiar to the public and would tutor their taste and inspire the present and future shaping of indoor and outdoor urban environments.
Mohammed Rasim, Monira Mousley, Nawal Musali, Safiah bin-Zagar, Salma al-Kathiri, and Siam Mohammed Siam, these subjects are disappearing cultural artefacts, yet can be documented visually. Contemporary Saudi artists like Fawzia abd-al-Latief and Safiah bin-Zagar aim not only to preserve pristine Saudi cultural identities, but more importantly to revitalise and inspire various intellectual, professional, and economic classes of the society with glimpses and images of the past (figure 6-17), to encourage the public to regain its taste and appreciation toward local culture. Fawzia abd-al-Latief (1984), for example, said ‘art for me is an amalgam of the documentation of the past and the expression of the present to serve social and cultural objectives.’ Although this artist’s work has received a significant acceptance from the public since 1968 (when Safia bin Zagar had her first exhibition and found that ‘most admired paintings were those depicting desert and everyday life in Saudi Arabia,’) the impact on the public has not been as great as it might. Art in Saudi Arabia in contrast for example to the case in European countries and America, has not yet become a cultural focus for the public (Dia 1984). On the other hand, big companies and corporations in Saudi Arabia like Riyadh Bank, Saudi Airlines, Dallh for Saleh Kamil, and national carnivals like La-Jinadria have recently become an important medium through which art and artists have found access to the public.

Another reason why art has not successfully facilitated a change the public’s taste for art in general and natural local desert landscape in particular, is that for most artist this objective is not yet clear.
Figure: 6-16, one of bin-Zagar’s imaginative painting of one of Jeddah’s social events. This trend of art bring images of the past to the modern society that rarely have any sort of documentation for such part of their history.

The efforts in this field are fragmented in contrast to the case, for example in Arizona where all forms of art allied to educate the public how to appreciate the local desert landscape (as will be discussed in the forthcoming chapter). Saudi artists, despite their exposure to various schools of world art, have not yet developed what can be called a local school of art that has its own criteria, vocabulary, style, values, and objectives. We still, for example, read broad impressions toward paintings like what Safiah bin-Zagar said describing her interpretation of her painting Zabun ‘I like the colours, the style, and feel relaxed when I look at it’ (bin-Zagar 1979). Another example can be found in what Fawziah abd-al-Latif said in her response to the question: ‘how do you describe your feelings when you draw and how long would take to produce a painting in al-Manhal magazine (1984). She said: ‘each painting has its own nature and other factors that sets it distinctive from other paintings such as subject and size...’ In another place she said ‘it is essential that we value paintings in term of its subject and trend, but spectators and critics hold a major role in promoting success of a painting by understanding the subject, and indulging in its relaxing colours.’

Not all early Saudi artists have grasped the natural beauty of the Saudi desert. Olfet binzagr, in his introduction to Safia Binzagr’s album (1979) said ‘the Arabian Peninsula is under the influence of a vast hostile terrain and an unforgiving desert.’ Western travellers like Ibrahim Burckhardt who roamed the Saudi desert had found no convincing material for art. He concluded, for example, that ‘the order created by art is opposed to the chaos inherent in the nature of desert’ (Burckhardt 1984b). In contrast, Modern Saudi artists like Nasser al-Refaai, abd-al-Aziz al-Riefij, Mohammed Jabr, Mohammed Fadul, etc., have realised great success in identifying desert landscape as a new subject for painting. On the other hand, the motif they developed to celebrate desert’s various forms of beauty are always interpreted from a nostalgic perspective, yet can be oriented toward a
schematised approach that serves practical objectives such as re-joining the society with their desert native landscape.

In (figure 6-18), despite the nostalgic nature the painters of both paintings were trying to provoke, it is worth mentioning here that early urban landscapes in the Saudi desert have activated the fascination of Saudi artists. In these two particular examples we see how they depict two different urban landscape forms, the flat-low urban masses stretching through the scene of the bare desert landscape versus the confined inner-organic spatial compositions penetrating through these masses. For the public, such places have been for long been considered hostile-worthless ruins. For local artists, such places have been of great interest and have documented these decaying and disappearing landscapes. Although the intention had not been to serve educational purposes, as was the case in Arizona, paintings of this fashion have received a remarkable degree of acceptance from the public. What they aim beside the documentation of this landscape is to ‘treasure’ such art as a piece of history (Binzagar 1979), and possibly to work to reunite the local society with its original values and tastes. In contrast to paintings in (figure 6-17), life painting portrays images of cultural landscapes on the artist’s terms (figure 6-19). The paintings in an artistic and provocative way mate pieces of historic landscapes with contemporary taste. Although such trends can bring historic landscapes into a state of museum like artefact, however, this style can serve a substantive objective of familiarising modern society with its intimate legacy.

‘Qabl al-Šayd’ (Prior to Fishing) for Taha Sabban, (figure 6-20), is a Saudi artist who developed a similar approach to Judith Laertini. In his paintings, he mingle compositions of particular landscapes with forms, patterns, and colours of other landscapes. In this distinctive case, al-Sabban has creatively costumed the traditional fishing landscape of coastal cities with forms, patterns, and colours of the architecture of the hinterlands. He decisively avoided gradation of colours that would have been expected in such landscape, as is the case in the painting (al-Šayyadyín) for abd-al-Fattah M. Husain, on the right (figure 6-19), to enhance the idea of desert landscape represented by the colours of the desert architecture. ‘The Golden Sands’ for Salih A. is an example of ways by which art has signified the desert landscape view from the indoor space of the tent (figure 6-21). This combination between natural and cultural landscapes, suggest that desert can aesthetically be framed as a prospect.
Figure 6-18, 'Inspirations from al-Dereiah' for Mohammed Jabr on the left and 'Al-Qariah' for Mohammed Fadul on the right. Both paintings are a delivery of the art's ongoing 'back to heritage' movement.

Figure 6-19, Saudi ‘ardah (a traditional dance) on the left for Mohammed A. Syam, and min al-turath (from the local legacy) for abd-Allah M. Nawawi.

Figure 6-20, 'Qabl al-Sayd' (Prior to Fishing) for Taha Sabban on the left, (al-Šayyadyīn) for abd-al-Fattah M. Husain, on the right.

Figure 6-21, 'The Golden Sands' for Salih A. al-Negaidan.
Paintings in (figure 6-22) are limited examples of the international mode artists in the Middle East are nowadays embracing. Plant forms, colour, structure, reaction to natural forces like wind, dryness, twilight, and sunlight, and spatial configuration in relation to the rest of the physical setting have been expressed in these paintings as tools of investigation for desert-beauty. This intention has apparently revealed other aesthetic values of desert landscape that lay-people might not have detected in the actual landscape by themselves. It can be argued here that there are evident initiatives of change in and artist's perception of desert that, if schematised within a public educational campaign, would have a positive impact on the
public. Figure (6-23), for example, show ‘al-Baramiel’ (The Barrels), a contemporary painting for Jamal Mkhaimar, on the left, and ‘search for oil,’ on the right, is one of the early, but rare, photographs that recorded the first phase of transformation the Saudi desert had experienced at the time. Despite the powerful gestures the painting offers, this form of artistic communication with the public was not very common during the early part of the twentieth century. On the other hand, such an image that, from a modern perspective, depict the negative facet of modernisation, Aramco, the Saudi Oil Company, awkwardly used this image to advertise in Thawrat al-Jazirah in 1955 for the ‘cheerful future’ oil companies would bring to society. Ironically, Wilferd Thesiger in 1959 wrote ‘today the desert where I travelled is scarred with tracks of lorries and littered with discarded junk imported from Europe and America.’ In Mkhaimar’s painting, the barrels, as gestures for oil and oil industry, have been piled up in the traditional courtyard leaving no space for a garden to prosper, except for a little herbaceous plant struggling on the down right corner. These two works of art depict how different attitudes have been in the past and in the recent history toward the natural desert landscape.

Photography in Saudi Arabia is very youthful, yet some prominent examples have found in the desert a subject to explore. An early photograph of Quba fortress in the background and a half dead palm tree in the foreground, (figure 6-24 left) gestures to the neglect of historic sites in Medina (buildings and gardens). Such art in Medina has not developed formally in the way that could have effectively highlighted such problems in the city, i.e. it is not very available to the public. Another subject in photography is the documentation of the pace of change and its impact on historic elements of the city. The photograph, (the ruined palm, figure 6-24 right), is one of the early works of Shokri that strikingly present an early depiction of the impact of the intrusion of automobile into the old city, on palm gardens in Medina. Images used in advertisements are also anticipated to influence the public’s perception of desert. In an advertisement for General Motors Agencies in Saudi Arabia, al-Tawkilat al-Åalamiah, Balbaid (figure 6-25 top), the image used in the advertisement show a new attitude toward desert landscape, i.e. in the past images used for such purposes were of western temperate landscapes. In another advertisement for ‘a picnic set’ (figure 6-25 bottom), the set was situated within a bare desert landscape, while a similar advertisement in the past would have used a forest-like landscape. Thus it is evident that people in this profession have recognised the beauty of desert landscape and such recognition can be conveyed to the public through such ads.
Figure: 24, ‘‘atlaf’’ (ruins, Anon), on the left, ‘the ruined palm’ for Hasan Shokri, on the right.

Figure: 25, advertisement of picnic set in diverse public magazines and papers. Source: (Asharq Alawsat 1999).
6.6.4. Westerners role in detecting the beauty of the Saudi desert landscape.

In the past, particularly during the oil discovery period, western travellers who roamed the Saudi desert were mainly concerned with the people of the desert more than the environment they lived in (figure 6-26). To the westerners who came from various European and American cities to work in oil companies in Saudi Arabia, the desert landscape shared the image that early settlers had for the Southwest of the United States. In 1959, Thesiger wrote his book ‘Arabian Sands’ describing one of the early journeys he performed in 1910 in the Saudi desert. Despite his comments in which he marvelled about his journeys in the desert, he also expressed anxiety about the harshness of the desert environment. One of the most became popular statements he wrote in this book reads: ‘a cloud gathers, the rain falls, men live. The cloud disperses without rain and men and animals die. In the desert there is no rhythm of the seasons, no rise and fall of sap, but empty wastes where only the changing temperature marks the ease’ (Thesiger 1959). In Dhahran in the eastern province of Saudi Arabia, Betty Nelson who accompanied her husband coming from the U.S.A. to work in a Saudi oil company, found that every house had white shells, which she didn’t like and replaced by a flower bed. She said ‘we had the only house in the desert with a flower bed and a palm tree in our yard’ (Simsons 1999).

In contrast, for others like Gene Lindsey, the desert was another form of natural beauty. He said ‘Saudi Arabia contains some of the harshest, bleakest desert and mountain terrain in the world. . . Yet despite its severity, it has a serene type of beauty: a timeless quiet in which the brightness of the sands is contrasted against the starkness of the mountains. . . ’ (Lindsey 1991). Desert lovers and photographers like, Earl Nelson, Aied al-Turki, Khalid Khidr, Sheila Collenette, Graham R. Lobely, Dennis Thomson, Rick Golt, and many others have been drawn to what for most of them is considered ‘grandeur desert’ (Golt 1984). Landscape architects like Kathleen Kelly is one of the rare professionals who perceived the beauty of desert in desert terms. She said in her preface to ‘Landscaping the Saudi Arabian Desert’ (1976), ‘the desert, any desert, is alien to all but those who, whether by birth or by affection, are wise in its beauty and its ways.’
Figure: 6-26, in most western travellers' writings and images, the desert was expressed in ironic manner: comparing traditional and modern worlds (1), concerned with the desert inhabitants (2), social structure and custom (3), and cultural traditions (4), with few exceptions, wildlife of the desert landscape was the focus of least interest to travellers.
Geographical background of Medina in Saudi Arabia.

Attitudes towards designed landscapes in two desert cities: Medina, Saudi Arabia and Tucson, Arizona.

7.1. History of the city of Medina.

Medina¹ was first mentioned in the inscriptions of Ptolemy Stephanus Byzantius under the name of Jathrippa, and referred to as Jthrb by the Mineans (Anon 1936). In the Quran it was referred to, among other names, once as Yathrib and four times as Al-Medina. Al-Madinah is a descriptive noun which signifies ‘the place of jurisdiction’ corresponding to the Aramaic medin/a. There has been an obscurity about the dating of the first settlement in the area, however, many sources indicate that the area was inhabited by Arabs from the Amalik (Amelek, bani-Taf and bani Matar tribes) before the arrival of the Arabian tribes of al-Aws and al-Khazraj who emigrated from South Arabia after the great flood and the bursting of the monumental Marim dam in AD 450 (al-Samhoudi 1945) (figure 7-1).

Yathrib was a name given to part of the Medina area that later on became the name of the whole city. The name Yathrib, as bin-Hajar (1986), al-Hamawi (1977); and al-Samhoudi (1945) documented, refers to Yathrib son of Qaniah, son of Mhayil, son of Aram, son of Sam, and son of the prophet Noah, the first person who settled in the area. Yathrib guided his tribe out of Babil in search of a new land. In the history of ibn-Khaldoun, al-Madina al-Munawarah (Medina) was built by Yathrib ibn Mehalaeil of the Amaliek whose name was given to the city until the time of Islam. Mohammed al-Batnouri (cited in Kamal

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not dated) proposes that Medina dates from 1600 BC. Archival studies support that the city was politically connected to the al-Maeiniah Kingdom (400 BC) during which the Babylonian King Nabunid settled in the city of Tayma (150 km to the north).

Ibn-Zubalah said 'Yathrib was the head of the townships of Medina' (cited in bin-al-Najjar 1996), for at that time (from Noah’s time until the Prophetic migration from Macca) Medina was but a group of villages scattered over valleys of Medina. He added, the explorer Tubba’a (a son of Noah) was sent to Yathrib to examine its life supporting amenities. In his report, he divided the area into three districts. He said ‘Qanat (north-east of Medina) is barley but not hay2, al-Harrat (the volcanic flows of the east and west of the city) is not barley and not hay, and al-Jurf (north-west) of Medina is barley and hay’ (cited in Shukri 1996). This evidence that Yathrib was developed first in the north of the city (the area where the three main valleys of Medina intersect to form the al-Hammad valley). Ibn-al-Najjar (1996) asserted that Medina at that time was the richest in trees and water in the Hidjaz region. When the Prophet was to immigrate to Medina he told His companions in a Hadith narrated by Rafie ibn khudajah:

‘I have seen the destination of your migration, a place of palms between two Harrat’ (al-Bukhari 1991).

Medina is the earliest city to emerge on the Arabian Peninsula, it is the birth place of the Islamic nation, and the home of the first mosque built in the Muslim world, i.e. the Quba mosque. When the Prophet Mohammed (pbuh) migrated to Medina in 622 AD, the tribes of al-Aws and al-Khazraj (the Prophet then called them al-Ansar, the auxiliaries or supporters), who moved to the area after the great flood of al-'Arim in Yemen in 450 AD, received Him in Yathrib. At His arrival, He changed the name of the city to al-Madinah al-Munawarah (the Illuminated City). The illumination here, rhetorically, refers to the religion of Islam as it came to lighten the righteous path for the Arabs after a long history of ignorance and arrogance. The Prophet Mohammed (pbuh) also gave some other names to Medina like Tabah, Taibata al-Taibah (the fine, kind, and generous city) (al-Hamawi 1977). Abi-Humaid narrated ‘in our way back from Tabouk, (a city 650 km to the north of Medina), the Prophet Mohammed (pbuh) said when he noticed Medina: ‘This is Tabah’ in other citations (Taibah) (bin-Hajar 4 1986). Zaid ibn-Salam narrated that the Prophet (pbuh) said: ‘Medina possesses ten names which are: al-Madinah, Tabah, al-Miskienah, al-Madri, Jabirah, Majbourah, Munirah, Yathrib, and al-Dar’ (Ibn-Shabbah not dated), when al-Hamawi (1977) named 29 historic names for the city (see footnote 1). From the time of the Islamic revolution in

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2 It meant the area is suitable for planting barely and can afford grazing cattle.
Medina, the city became the most cherished city in the Islamic world and attracted Muslims from all around the globe. Aishah narrated that the Prophet (pbuh) said:

‘Oh Allah, enshrine love in our hearts toward Medina as much as we loved Macca or even more, oh Allah, bestow your blessings unto its *sr’ a and m’dul* (units of measure of grains and dry goods’ (al-Bukhari 1991). In another Hadith narrated by Anas, the Prophet Mohammed said: ‘oh Allah! Bestow on Medina twice the blessings You (almighty) bestowed on Macca’ (Khan 3, not dated).

Through history Medina was known as a green oasis settled within a large low basin surrounded by two *harrat* (volcanic lava flows), one in the east known as *Harrat Waqim* and another in the west called *Harrat Wabra* The original oasis was situated to the north-west of the medieval walled town (al-Samhudi 1945). Historically, Medina as a city had never had a centre or what can be envisaged as a formal town in the pre-Islamic period. Medina was composed of several fragmented settlements penetrated and surrounded by palm orchards and agricultural fields in the middle of the desert. This scattered distribution of tribes and clans that worked mainly on agriculture was a response to the dispersed nature of abundant natural resources (al-Samhudi 1981). Although the location of Medina is of geographical significance in relation to the ancient Arabian caravan route that the Quran called ‘the winter and summer trip,’ Medina ancient tribes were not involved in commercial activities, as was the case in Makka (ibn-Shabbah 1979). The town functioned, however, as a rest place and caravan supplying centre. The shade of the desert palm gardens and the abundance of spring water were not the only attractions that gave the town the possibility of being a rest area, the welcoming hospitality of Medina people even during that period of *jahiliya* (the ignorance period before Islam) had also nurtured a character for the town as *nuzul* (rest area) along the ancient caravan route.

One of the reasons Medina lacked a formal town structure with a centre is that the location of the city as a rest area along the Arabian caravan route promoted a peripheral form of commercial activity around settlements. This unique placement of the *souq* (market place), on the other hand, allowed frequent tribal confrontations between settlements and encouraged nomadic raids as well. This defence problem was solved by allocating military forts all over the area to serve as observation points, places to retreat to, and symbols of power against raiders. Al-Samhoudi (1945) reported that there were about 72 *cadums* (forts) in Medina which grew to 127 after the arrival of Al-Aws and Al-Khazraj from Yemen.
The city developed a centre after the Prophetic migration to the town on the twentieth of September 622 AD. The centre of the city was formed by the construction of the Prophet mosque who, (pbuh), decided its location according to a divine command revealed through His naqah (she camel). The old city form of scattered settlements surrounded by commercial activities and guarded by numerous forts was abandoned when tribes and clans settled close to the prophet mosque. During the thirteen years of the prophet’s stay in Medina, the city developed a new morphology that inspired a new model for Muslim cities. What signified this new morphology was the creation of a cultural as well as social centre around which tribes gathered as one alliance, i.e. Islam over-rode all sorts of social segregation despite a long history of antagonistic political relationships between the al-Aws and al-Kazradj tribes, which continued for 120 years (al-Harigi 1989). On the other hand, the Prophet (pbuh) promoted the idea of developing nodes around the centre to serve a group of objectives, most of which were to do with defence and the enhancement of local cultures of remote locales. This physical transformation was accompanied by a cultural transformation by which the new society had to refer to, i.e. the Prophet defined a divine-religious rather than ‘duraf (inherited tribal traditions which was considered as religious) judicial system. This new Islamic judicial system included fundamental design and planning principles that laid a concrete base for Muslim cities thereafter (al-Harigi 1989). One of the most substantial principles is the Prophetic teachings that resulted in a major change in the local cultural relationship with nature. This new culture had created new fields of knowledge and inquiry most of which were to do with the desert nature of Medina. Most forms of this knowledge were titled by the Prophet name which included: al-filabah al-Nabawiah (Prophetic gardening), al-tib al-Nabawi (Prophetic medication, in which the Prophet had used natural desert herbs), al-Medina al-Nabawiah (Prophetic city, on which hundreds of writings have been produced on the virtues of the desert city of Medina), al-‘umarah al-Nabawiah (Prophetic architecture) etc.

We see for example how in al-‘umarah al-Nabawiah, the prophet upon His arrival in Medina had intentionally allocated the land among the Muslim tribes with no reference to their ethnic origin, wealth, and status. His focus was primarily directed toward the idea of one ummah (nation) by creating a powerful centre that symbolise the idea of one authority, i.e. religion as a source of knowledge and law, around which all wealthy and dignified as well as poor and humbled tribes of different ethnic origins come in one alliance. Yakut reported:

‘When the prophet arrived in Medina he allocated lands for building houses and quarters to the people of Al-Muhadjireen and Al-Ansar. He announced land for Bani Zahrah in the back

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3 In 1256, the city witnessed an aggressive volcanic eruption on the eastern side of the city during which the lava steamed toward the west, then headed north and continued for three months.
of the prophet mosque, He granted Abdulla and Utba the sons of Masud Al-Hudhali their well known land near to the mosque called Khitat, Al-Zubair Ibn Al-Awan a large parcel of land called Baky. Talha Ibn Ubaydulla the site of his house, Abu-Bakr Al-Sediek the site of his own house next to the mosque, ... ' (al-Samhoudi 1945).

It was obvious also that the mosque was not granted a sacred status that necessitated demolition of adjacent structures. The prophet, however, proposed an elaborate integration between the mosque and its surrounding land-uses such as housing areas, gardens, cemeteries, wild desert landscape, which exemplified the concept of one ummah (one nation). This new urban form stated a unique model that new Muslim cities like Al-kufa, Cairo, Damascus and Al-Fustat have followed.

The city after al-Khilafah al-Rashidah (the Wise Caliphates) continued to grow, however, at a slower pace due to the move of the Islamic capital to Kufah during the reign of Ali bin-abi-Talib (600-661), to Damascus in Syria in 661 AD., during the reign of Muawiya bin-abi-Sufian (602-680 AD.) of the Umayyad dynasty and back to Koufah in Iraq during the reign of abu-al-Abbas al-Saffah (722-754) of the Abbasid dynasty. The political star of the city faded gradually although its religious and cultural significance continued as a result of the Prophet's mosque and grave (Makki, 1982). The attention of the Muslim world was directed toward the mosque, not only as a prayer and worshipping place, but also as an educational and cultural centre. Malik Ibn Anas school was one of the most remarkable and popular schools in Hadith (prophet sayings and traditions). The devotion of scholars in teaching Quranic and Hadith knowledge was such that it gave the city a new entity that attracted students from all around the Islamic world.

The third century AH witnessed the bleakest period in Medina's history. Palaces and gardens along al-Aqiq wadi were abandoned, the city was walled against nomadic raids, and caravan routes were no longer safe. From that time until the tenth century, the city was part of al-Hidjaz under the ruling of al-Mamaliek and later on al-Hashimioun. In 1516AD., the Ottomans incorporated Hidjaz within their empire. During their four centuries of ruling the Hidjaz, they were able to restore the cultural and historic status of the city and regain security for the caravan routes. In addition, many civic projects were undertaken such as the re-building of the Prophet mosque and many other historic mosques, connecting the city with Damascus by a railway in the 1908, the construction of many schools, sabilks (public drinking fountains), asylums for the poor, widows, and orphans, and public paths by which the city gained a new entity. By the time of the First World War, the political power of the Ottoman empire was waning. At that time, al-Hashimioun fought the Ottomans and captured the city as well as the whole Hidjaz. In 1920, the Ottomans left the Arab world during the reign of abd-al-Majied II (1868-1944). In 1927, King abd-al-Aziz was officially proclaimed the king of a
new state named in 1932 'Kingdom of Saudi Arabia.' In 1938, the discovery of oil in the Saudi deserts in commercial quantities allowed rapid economic development and the country has undergone dramatic change. In Medina, the city wall was demolished, and the city witnessed a remarkable expansion in all fields of life.

7.2. The Geographical Location of Medina.

Figure: 7-2, location of Medina in relation to major cities in Saudi Arabia.

Medina is located in the western province of Saudi Arabia, between the longitude of (39 26 00 – 36 42 39) east and latitude (24 21 00 – 24 36 00) north at an altitude of 600m above sea level. Medina covers an area of 589 km², 296 km² of which is beyond the built up area. Medina is about 150km of the eastern shore of the Red Sea, 400km to the north of Macca and Jeddah⁴ and 850km to the west of the capital, Riyadh. The city of Medina lies in the middle of Hidjaz mountains that buffer Najd plateau in the east from Tihamah plain in the west of the Kingdom (Makki 1982). It contains the mountainous eastern edge of the Hidjaz massif, and in the east stretches over part of the high Najd

⁴ Jeddah is the pilgrims' sea and air gate to the two holy cities: Makkah and Medina.
plain. Medina district as defined by the Ministry of Municipal and Rural Affairs as administratively covering 92 towns and villages and more than 1,742 localities. This district stretches from Yanbu on the Red Sea in the west to 300km inland and from Tabuk in the north to 500km in the south.

7.3. The Social Setting of Medina.
Although the word al-Hidjaz is not in common use these days, it has its own history in representing the five major cities of the West coast, from south to north, Taif, Maccah, Jeddah, Yanbu, and Medina. Despite their remarkable different environmental settings, these five cities share similar social traditions, local Hidjazi accent, and architectural heritage. The common nature of Makkah, Medina, and Jeddah cities is that they have annually received and serviced a growing number of pilgrims for about fourteen centuries. During this long history and before Saudi Arabia was constituted in 1932, the majority of visitors to Medina who sought the neighbourhood of the Prophet mosque settled in the city and became Madanies. There is no accurate data available regarding the history of the social structure of Medina, however, it is historically known that the majority of the early population of Hidjaz were immigrants from other Muslim countries who came as scholars or students in the Prophet mosque or to live in the holy cities of Makkah and Medina. Others were early settlers who yearned to spend the rest of their lives in the holy lands and some of them got involved in the trade associated with pilgrimage (Haffidh 1996). Although the Hidjaz at that time was not as wealthy as after the discovery of oil, the economy was maintained by agriculture and the annual arrival of pilgrims that was sustained by the close proximity to Jeddah city (Zwemer 1900).

While Maccah and Medina are internationally recognised for their religious status, since 646 AD, Jeddah played an essential role in connecting these two holy cities with the broad Islamic world through its sea port and lately its airport.

The city of Medina has witnessed fluctuating population through history. From the time of the Prophet until the first population estimates by John Keane of 20,000 inhabitants in 1877, there had been no records for the population of Medina. From the time of Keane’s estimate until the national census undertaken in 1962, most figures were estimations (figure 7-3). Al-Batnouni (cited in Kamal not dated), for example, based his estimation of the population of Medina in 1903 (60,000) on the calculation of number of houses (12,000) multiplied by an average number of inhabitants of each house (5). Other estimates were based on the occurrence of special incidents like at the time when the Hidjaz railway was established in Medina in 1908, when the city was estimated to have the

5 During the reign of the third Muslim Caliph Othman Bin Affan, according to his command, the sea gate to Maccah and Medina was diverted from al-Shaiba to Jeddah in 646AD.
largest population in the Arab peninsula at that time period (Nabiel 1979) (figure 7-4). Medina nowadays is considered the fifth largest city in the country with a population of around 416 thousand inhabitants, however, its population reach its peak annually when 1.5-2 million pilgrims visit the city during the pilgrimage months of dho-al-Qiadah and dho-al-Hi4Jah.

**Figure: 7-3, Population of Medina**

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Source:
- Al Khazzoomi (1990)
- John F. Keme
- Mohammed Al-Badawani
- John Philby
- John Philby
- G.D. Lipisky
- National census
- Robert Mathew
- National census
- Shakir, Musali, and Mandhi
- Sha'ir and partners
- The Municipality of Medina

Figure: 7-4, the arrival of the train in Medina contributed to enlarging the population of the city. The city, which has been a destination for Muslims from all around the globe, has absorbed various cultures of those who sought the residence in the Prophet city. Despite sharp differences between cultures among new comers, that can be detected from the different costume of people in the photograph on the left image, the city somehow absorbed these differences and created a homogeneous, yet distinctive culture exemplified in various forms of art (eg. architecture, garden, poetry, and most surprisingly accent). On the right, the railway bridging wadi al-Aqiq, on the north-western side of the city.

The confrontation between man and harsh natural environments, has through history stimulated human intellectual and artistic faculties toward adaptation and appropriation of home desert landscape (al-Blaihi 1995). In Medina the open space system was composed of *ahwash*/*housh* (courtyards) and *aziggah/zugag* (alleys). In most cases, the connection between *ahwash* and *aziggah* was spatially marked by *saqaief* (plural of *saqifah* which was part of a house bridging the alleys) creating a gate for the *ahwash*. This open space system of Medina was designed in a way that responded to the hot arid environment and conformed to the Islamic social traditions of Medina (Bianca 1984). The *housh* accommodated most social and cultural activities such as daily neighbourhood meetings, afternoon sitting, the play of children and youths, livestock raising, wedding parties, funeral ceremonies (al-Hussayen 1992), and in areas around the Prophet mosque many *ahwash* worked as additional prayer areas during the peak religious seasons (Bianca 1984; Faraht and Alturki 1993). It has also been established that Medina historic open space system was efficient, socially and physically, and defensive against social offences and civic crimes (Saleh 1999).

In the old city of Medina, *ahwash* were not available in front of each individual dwelling. In such cases, *azigah* were the substitute that accommodated most social and cultural activities of the *ahwash*. The term *zugag*, as well as *housh*, is nowadays disappeared from the modern Hidajazi dialect with the disappearance of the *zugag* and *housh* themselves. As previously discussed, the word *zugag* means a narrow passage edged by houses open to it. Although *zugag* was a substantial kind of open space in historic Medina as it is the case with the *housh*, it has never been investigated as an open space in the literature of landscape architecture, history, etc. Like most Medina architectural units, *zugag* had manifold uses that accommodated some social activities like playing and sitting. Sitting in *housh* or *zugag* was another social activity that was popular in Medina during summer (figure 7-5). Evening time was the favourite time for Medina people to sit outdoors, prior to which a young member of each family would sprinkle the *housh* or the *zugag* with some water to alleviate the summer heat. In contrast to the *ahwash* which were usually shaded by a large cider or palm tree, the *azigah* were rarely planted for most were too narrow. Alternatively, plants in the *rowshan* (window) or in some private courts would provide some green in these narrow passages. Cooling the space was a shared community

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6 In the arid climate of Medina, sprinkling little water would cause remarkable drop in air temperature. Through transpiration process, the unpaved surface of the *zugag* covered with earth (the surplus clay of the building construction would be spread in front of the house and on the building edges to prevent water percolation to building's foundation (al-Turki 1998), would work better than paved surface for this passive cooling system.
task, where each household would do the portion in front of his threshold by sprinkling water, spreading fabric-sunshade, amending the rowshan with some hanging plants like sharah, narjis, hubbah, etc (al-Turki; Raffah; Sairafi 1998). The other place to be sprinkled was the hadjar (a geometric bench shaped out of granite)7 on which people would sit. Another use of sprinkling water was to stabilise the earth of the zugag or the housh. The water used for this purpose was obtained from under the ziers (a water vat made out of pottery and used to cool drinking water), i.e. water dripping from the ziers and excess water in the mughraph (drinking receptacle) would be collected and recycled in irrigating plants and sprinkling the zugag. Medina people were also used to perform wudhiia (ablution for prayers) in front of their threshold, so excess water would irrigate trees in ahwash and sprinkle the ahwash and aziggah. This open space service was not sustained only for the benefit of households overlooking the zugag, but also for neighbours and passing by pedestrians. This tradition had its historic background that refers to the Prophetic (pbuh) saying:

‘maintain the rights of the road.’ Another Hadith says: ‘the removing of the harm off the road is a charity.’

7 During day time, hadjar would heat up. In the evening time where objects re-radiate heat outward, water was used to accelerate this process and to cool the hadjar for sitting. Hadjar in front of some small dwellings would be installed mainly as indicators for the door steps. In such cases hadjar would take cylindrical form and two would be placed on both sides of the house’s threshold. For large houses, this hajar might extend to cover the whole front wall of the house.
Households consider this as part of their responsibilities as their houses overlook the zugag or the housh and if such service had to be questioned, they would respond:

‘hadha baâdka in yâier fi wadjhana’ (this then would be in our face, i.e. this would be shameful and bring us dishonour). (Raffah 1998). Sheikh Raffah (1998) explained that:

‘watering the housh or zugag was a common norm for Medina people that was maintained to gain some cool in which men congregate after âasir prayer (afternoon prayer) to relax and to chat with each other. At this time of the day, you would smell the wetted earth, which would enhance the feeling of the cool atmosphere. Within such sitting, tea perfumed by one of Medina herbs: hasawi mint, mughrahi mint, daowsh, ward, âit'rah, lammam, laimoin binzhair, etc., would be served and this would sustain the unique soothing environment, which I have never encountered since those days.’

The housh and zugag was an important constituent of the natural passive cooling system of Medina houses. The zigzag form of aziggah worked effectively to reduce the velocity of hot summer winds and allows gentle air movement to cool as it penetrated through shaded zugag (alleys) before it reach the housh. Three story buildings flanked by narrow aziggah, which are sometimes covered by saqaiej (part of the house bridge across the alley), allowed enough shade during the day time to cool the air in the zugag. Sharbat (plural of sharbah, pottery water ewers) in addition to plants pots placed in rowshans were another moisturising elements that through transpiration would sustain a remarkable drop in air temperature of open spaces. The stored cool air of ahwash and aziggah would penetrate through rowshans toward the inner rooms of the house to replace the hot air that ascend through the jila (the inner court yard of Medina house that centred stair cases) and sucked by the outer wind. In winter, the jila would be covered by gilå (a large and thick piece of fabric) to restrict the ventilation and therefore store the heat inward.

Ahwash and aziggah possessed names, which were famed over time giving a unique cultural character for Medina districts (see appendix 1). When people introduced themselves, they used to tell their names in addition to the name of the housh or zugag they belong to. For example, a person from housh abu-Shoushah would say: my name is Abid from housh abu-Shoushah or from zugag al- Towal, i.e. the housh or the zugag as a space was recognised as part of their identity. The other party would say: ‘wa-nniâim, khyirat al-nas fi housh abu-Shoushah’ (al-Turki 1998) (I extol, what excellent people of housh abu-Shoushah). This kind of identity gave people at the time the sense of responsibility toward their urban open spaces, i.e. to keep up with the tidiness, cleanness, comfortable environment, and reputation (Raffah
1998). When people happen to be in another howsh during a wedding, funeral service, or any other occasion, inhabitants of that howsh would do their best to show their howsh in its best.

Historic Medina had a unique open space system being comprised of many planning and design factors that mutually made this spatial structure fit environmentally, socially, and culturally. The city started to lose this integrated spatial structure around the 1950s, when automobiles were first introduced, and consecutive master plans failed to separate pedestrians from vehicle traffic (figure 7-6). What made the problem worse, is that master plans considered the integration between the historic urban fabric and modern urban needs as impractical. The decision was accordingly made to clear the lofty historic layer and create a new modern layer from scratch.

Figure: 7-6, the city has gradually lost its unique urban fabric since the intrusion of the automobile, which broke through the old city rupturing most social, cultural, and design values that were created by the historic spatial system of the old city. The Prophet mosque, for example, lost its spatial integration with the one of the city, as the mosque itself was isolated from the urban fabric by one large, homogenous in many aspects, open space.
7.5. History of Medina master plans.

In 1844, the city of London upheld a new Building Act which comprised a group of regulations which came as an immediate response to the fire hazards of dense urban fabric, low illumination level in both indoor and outdoor spaces, and low ventilation that led to health problems and uncontrollable crime at that time (Davidge cited in al-Hathloul 1981). The main objective of this Act was to palliate the over dense urban fabric of the city. It mandated that area of private homes to be of not less than 100 square feet. Another Building Act subsequent to the first one was released in 1894, which brought the idea of set backs into building development. The counterpart of this act in New York was more complex as it was related to cities’ rate and size of development. The 1913 buildings law in New York addressed the problem of high-rise buildings (which had been imposing their shadows on urban low-rise areas) by formulating a height-setback relationship:

\[
\text{setback} = \frac{1}{4} \text{ increase in prescribed height} \] & \text{[Building height} < 2 \times \text{(width of the street)]}
\]

The model was duplicated over almost all American cities who were seeking to achieve urban conditions in which public health, safety, morality, and general welfare are maintained. In the early 1970s for the first time Saudi Arabia deployed a building law upon urban development in all cities. Urban development consultant firms like SCET International were responsible for introducing such buildings regulations to Saudi Arabia. Subsequent consultants like Saudi Consult: Shakir Musali Mandili, Doxiadis, Sir Jackson, and Shaer and Partners had, from a practical point of view, approved this urban system in all desert Saudi cities regardless of environmental, social, cultural variations (al-Hathloul 1981). This new urban setting had created what became the typical Saudi residential unit, the ‘villa.’ Despite the rich history of villas in the English literature (often associated with a genre of gardening (Castell 1993), Saudi villas were stereotyped, but compromised to fit into the dimensions the master plan proposed for parcels of development land that had no adequate space for private gardens. The other major problem that resulted from this series of master plans was the disconnection between natural and urban environments in different areas of the city. This problem is a common flaw in most Medina’s master plans in which one model of compact residential subdivisions is applied all over the city, i.e. the inner city, suburb, and rural urban environment all follow the same urban form. This has led to two major problems: i) the city lacks a sense of space and ii) most ecologically sensitive landscapes were seriously damaged. Wadi courses, for example, are submerged under city major roads when they could have been designed in a way that fit ecologically, culturally, and physically. What consecutive consultants ignored were variations among different landscape areas of the city as a result of the undisciplined local and historic human-nature relationship in the planning profession in Saudi Arabia. This might
be due to the fact that most consultant offices rely mainly on city planners, transportation's engineers, and urban designers, while landscape and regional planners are not associated in such major tasks. The proposed consultant's staff in the contract between Shaeir and Partners and the Municipality of Medina 1991, for example, does not include landscape, ecological, regional planners, and/or environmental engineers (see Shaeir and Partners contract 1991). Even with city planners and other non-environmental specialists, none had any level of experience of work in desert cities. The final result was a typical contradiction between what the consultant presumed of objectives related to the natural environment and the final master plan, that have been found in all previous master plans.

During the last three decades, research on Saudi urban and natural environments have developed spontaneously with the more intense relationship between urban and natural environments. The common shortfall in this research are early aerial photographs and maps that support what is argued in the text. Nevertheless, the juxtaposition of inaccurate early travellers' hand-drawn maps and new aerial photos of Medina have made it clear that more than 75% of these palm gardens have dried up and have been turned into housing development areas (figure 7-7 & 8). Master plans of Medina have documented this decline but have developed no practical strategies that might resolve this problem. In the discussion panel chaired by the author in The Saudi Umran Society, Medina (1998), the problem of disappearing Medina desert gardens and issues related to the widening the gap between natural and urban environments was a central focus.

Figure: 7-7, most historic gardens in Medina, on left, have been replaced by residential subdivision and exotic landscape materials.
Figure: 7-8, (1) palm gardens of the Qurban area. (2) The gardens are flanged by a 50m wide road, underconstruction. (3) palm gardens bordered both sides of the road are to be replaced by residential-commercial buildings and exotic plants will adorn side walks just like the one on the foreground of the third image of Qurban road. (4) a new subdivision replaced a massive area of palm gardens on one side of the road.
7.6. The Natural History of Medina.

Ibn-Zubalah, two centuries after the Prophetic migration to Medina (621 AD.) wrote the first book on the history of Medina ‘Tariekh al-Madinah’ (History of Medina, 820 AD). Omar ibn Shabbah (789-875) around the same time wrote his ‘Tarikh al-Madinah al-Munawwarah: Akhbar al-Madinah al-Nabawiyah’ (History of Medina: Tales and News of the Prophetic Town). From that time until 1317 H (1893 AD), another 30 books have been written on the history of Medina. During the last century, however, hundreds of books, dissertations, thesis, and papers have been undertaken on the history of Medina. Most of these studies dealt with Medina’s history, people, events, art and architecture, social ethos, and lifestyle. On the other hand, little interest has been shown in the natural history of the area. On rare occasions, writings on the natural history of the area can be found within writings on other, unrelated subjects.

In the literature post the discovery of oil, very little can be found on local cultural-natural relationships. The study of G. and S. Jellicoe (1995) traced a wide range of cultural-natural relationship in different landscapes, (Cary and Williams 1998) but ignored the Saudi Arabian situation. In most classic literature of western travellers and geographic explorers, the Saudi desert is wrongly imagined as empty wastes of ocean of sands (Thesiger 1959), inhabited by a primitive society captive to religion and traditions (Stoddard 1922), that has recently boomed economically by the possession of oil generated capital (Mowat 1958). In other early literature that broadly and in detail overviewed the natural history of Saudi desert environment, the relationship between the desert environment and its inhabitants has never been perused. Most western travellers were overwhelmed by the change they faced between their homeland and local desert landscape. They saw the desert only through the threat of death by thirst. Their curiosity was primarily based on adventurous challenges like crossing the desert as Bertram Thomas, John Philpy, Wilferd Thesiger, and many others who travelled through the Empty Quarter.

Studies dealing with the Medina natural environment are not extensive. Makki (1982) refers this to the traditional geographical methodology these studies have embraced which concentrates on the listing of names of various natural phenomena, plants, and animals of the area. On the other hand, some academic institutes, governmental agencies, and consultant offices have produced literature that covers some parts of the natural environment of Medina. This limited literature is the only available and reliable sources on aspects of the natural environment of Medina.

7.6.1. Climate:

Medina is about 275 km away from the Red Sea. This distance combined with the mountain range that runs along the shore of the Red Sea minimises the coastal effect on the cities climate. The city
possesses a continental climate characterised by extremely hot-arid summers and mild to cold winter. The summer lasts from June to September, whilst winter extends from December to February. The rest of the year fluctuates between mild and warm weather. Although air temperature of summer days might reach up to 47°C, nights are relatively cold with at least a 15°C drop in average temperature (figure 7-9 & 11).

The rainy season in Medina is winter and spring. The amount of rain fluctuates from season to season (eg: the annual total rainfall of 1962 was 11mm, but was about ten times this amount in 1971 (103.8mm) (figure 7-10). The erratic nature of rainfall forces farmers to depend on ground water rather than rain. In most seasons, rainfall is accompanied by severe thunderstorms caused by air depressions in the Mediterranean attracting air masses formed in the east and middle of Europe, where the humidity and the temperature of its lower air layer increases, causing rain to fall in Medina. Despite its short duration, Medina rain usually come in a destructive volumes that most of the times result in crop damage and flood destruction. In summer, it rarely rains (rain is usually stimulated by the south-western seasonal winds) (figure 7-12), however, when it does, it often causes further crop damage.

**figure: 7-9, Average Air Temperature in Medina**

<table>
<thead>
<tr>
<th>months</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average high temperature</td>
<td>23.2</td>
<td>26.6</td>
<td>29.9</td>
<td>34.7</td>
<td>38.9</td>
<td>42.2</td>
<td>41.2</td>
<td>42.1</td>
<td>41.4</td>
<td>36.2</td>
<td>29.6</td>
<td>24.5</td>
</tr>
<tr>
<td>Average low temperature</td>
<td>11.6</td>
<td>13.5</td>
<td>16.8</td>
<td>20.8</td>
<td>24.7</td>
<td>27.3</td>
<td>28</td>
<td>28.3</td>
<td>27</td>
<td>21.6</td>
<td>16.9</td>
<td>12.7</td>
</tr>
</tbody>
</table>
Evapotranspiration

Rainfall

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evapotranspiration</td>
<td>17</td>
<td>20</td>
<td>60</td>
<td>111</td>
<td>185</td>
<td>220</td>
<td>300</td>
<td>210</td>
<td>169</td>
<td>116</td>
<td>55</td>
<td>21</td>
</tr>
<tr>
<td>Rainfall</td>
<td>6.4</td>
<td>.9</td>
<td>8.4</td>
<td>12.2</td>
<td>5.8</td>
<td>.5</td>
<td>.4</td>
<td>.4</td>
<td>.1</td>
<td>1.6</td>
<td>2.8</td>
<td>2.9</td>
</tr>
</tbody>
</table>

figure: 7-11, Evapotranspiration in Medina
The Prophet Mosque

Cool wind prevail from north-east and north-west
Mild wind prevail from east and west
Hot wind prevail from south-east
Hot-dusty wind prevail from south-west

Number of arrows indicate number of months in which the wind prevails.

Figure: 7-12, Wind Direction in Medina.
Source of all climatic data: Medina Municipality annual reports.

7.6.2. Soils:
Data on Medina soil is very limited. All of the soil maps that have been produced for the kingdom are at large scales. At such scales, the whole city of Medina is shown as a small sub-category in a larger category (Ministry of Minerals and Petrol 1981, (figure 7-12). This scale offers insufficient details on Medina’s soil to be able to unravel changes in the historic development of land uses of Medina in relation to soil. In this study the source of soil data was collected from interviews conducted with senior citizens and site visits in Medina. Site visits were accompanied by the interviewees. The final product does not come in map form for there are no precise limits for each soil category. Rather, the data collected conveys a description of soil where soil categories for the five major districts of Medina. This data generally gives sufficient detail for Medina’s soil to be used in justifying the historic allocation of land uses. This data was also confirmed with Makki’s book titled ‘Medina: a Geographic Analysis of the City and Region’ (1982) which is the only literature that covers Medina soils in any detail.

Medina is historically known as a peninsula of fertile oasis surrounded by lava flows from three sides and embraced by two large mountains Auhud in the north and Eir in the south. The city can be divided into five zones in regard to soil types. Following the historic map of the city that shows
agricultural land uses tells which part of the city has fertile soils. The northern and southern part of the city can obviously be stated as arable lands where the areas have been historically ploughed for generations. The east and west is occupied by harrat of Waqim and al-Wabra (lava fields) which comprise an ocean of sharp black, light in weight, fragile, and very organic rocks. The two harrats join in the south where the area becomes more rugged and dangerous to walk cross. Although the lava basalt cover fluctuates in depth between shallow in some areas (25cm) especially in the southeast and west, other areas in the south are very deep (200m) and considered un-developable areas (Makki, 1982). Medina harrat is the northern end of the Harrat Rahat basalt plateau that runs from near Makka in the south at a fluctuating elevation of 650-750m (Ministry of Petroleum and Mineral Resources 1981). The 13th century witnessed the last volcanic eruption in the area as documented by many historians like al-Qurtobim, al-Qastalani, Rabi ibn Bishr, al-Salami, al-Samhudi, and al-Abbasi (Makki, 1982).

In the southern part of the city, soils are defined as Heavy Argillaceous. This kind of soil is saline, however, it can be easily reclaimed (Makki, 1982). This covers the Quba, Qurban, and al-Awali areas which are historically popular for desert gardens of Ayan of Medina (popular wealthy personalities of Medina). In the north, Yellow Argillaceous soil covers al-Eioun and Sayedna Hamza area. These areas are also known for their fertility and suitability for agricultural land uses. To the far north west of the city, rough soil is formed mainly of gravel and large sand particles. For this reason the Abar-Ali and Sultana areas have no agricultural uses except for some patches of alluvial soil deposited by floods in some large depressions. Other exceptions are around flood courses like Erwa and al-Aqiq in the west and al-Aqou in the far east area where floods feed the area yearly with alluvial deposits. Whereas palm gardens of the south start right from the area bounding the prophet mosque district, eg: al-Safiah, al-Katbiah, al-Hajjariah, and al-Salmiah, the saline soil in the northern areas adjacent to the mosque reduced any chances of having such green areas from the northern side up to Tarsis castle in al-Eioun area. This saline soil was formed in the low area between north of Sil’a mountain and southern part of al-Eioun area. Water ponds for a short period after rain, and percolates down to the surface but before it get deep enough in the ground it percolate up by capillary action and high evaporation. Water evaporates depositing the dissolved salts on the surface turning the area into non-arable land. This saline soil is also found in some small areas in the south especially between Qurban and al-Awali, which local people call it sabakha. In some low areas, such kind of soil with the accumulation of rain water during rainy season creates what Medina people call jussah (water logged soil) on which no agricultural development can be undertaken. These patches of jussah are dispersed over the southern part of the city.
Figure: 7-12, Medina Soil. Source: Kingdom of Saudi Arabia, Ministry of Petroleum and Mineral Resources Deputy Ministry for Mineral Resources. Geologic Map (GM-52 C), of the Almadinah Quadrangle, Sheet 24D. (for map legend see next page).
### Sedimentary rocks, volcanic and metamorphic rocks

<table>
<thead>
<tr>
<th>Layer</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qa, Q, Osb</td>
<td>Sand, gravel and silt deposits in wadis. Slope scree, terrace, fan and dune deposits. Sabkah and khobrah deposits; silt, clay, salt.</td>
</tr>
<tr>
<td>b6, b4, b3, b2, b1</td>
<td>Quaternary basalts. Trachyphonolitic volcanic rocks (tr). Tertiary basalts.</td>
</tr>
<tr>
<td>Ocs</td>
<td>Cambrian-Ordovician deposits. Sandstone, conglomerate, clay.</td>
</tr>
<tr>
<td>Fd, Q, Fq, Fm</td>
<td>Furayh Group. Dawnak formation-sandstone, graywacke, conglomerate, siltstone, marble. Qidirah formation-Andesite, basalt, volcanic breccia, tuff. Detrital sedimentary member (qs)-Conglomerate, epiclastic sandstone, graywacke, ardoise, siltstone, mudstone, marble. Murayr formation-Conglomerate, sandstone.</td>
</tr>
</tbody>
</table>

### ALAYS GROUP
- Difarah formation-Rhyolite, ryholitic tuff, graywacke, sandstone, chert, andesite.
- Urayfi formation-Epiclastic sandstone and breccia, tuff, reworked tuff, mafic to silicic lava.
- Detrital sedimentary member (us)-Sandstone, graywacke.
- Rhyolite-ignimbrite member (ur)-Rhyolite, ignimbrite, rhyolitic breccia and tuff.
- Farshah formation-Andesite, basalt, tuff, subordinate epiclastic rocks.

### HULAYFAH GROUP
- Nuqrah formation-Rhyolitic tuff and breccia, andesitic tuff, tuffite, arkose, schist, marble.

### UNCONFORMITY, INTRUSIVE ROCKS
- Adamellite, granodiorite, tonalite, diorite.
- Granodiorite, Gabbro.
- Musarjid complex, Gabbro, pyroxenite, troctolite.

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**Legend of Medina Soil Map.**

- The white square indicates the urban area of Medina including the major natural recreational of al-Baida and um-al-Doud areas in the north and al-aqwil in the east.
7.6.3. Valleys and Water:
The two arms of harrat: Waqim and al-Wabra, divide Medina’s catchment area into three major zones. The area between the two harrats (south of Medina, Erwa, Quba, al-Awali) is drained by Wadi Bathan, part of al-Sha'aiba, and al-Ranona which join before it reaches the Quba area to form Wadi Abu-Jida that run along the south-north axis of the city until it intersects with the other wadies in the north. The western area forms the largest catchment which is drained by Wadi al-Aqiq, considered the largest valley in Medina. The Wadi runs southwest-northeast until it passes the area between al-Jumma mountains and the northern tip of the western harrat where it runs along a south-north axis of the city to join the other wadies in the north. In the eastern area, Wadi al-Aqoul prevails between the northern edge of harrat of Waqim and the southern side of Auhud mountain until it attains its south-north direction at al-Shohada area to become wadi Qanat. These three major wadies meet at the area of Said al-Shohada to form wadi al-Hamd that runs further north passing by al-Ghabah (the forest) and al-Baida area and move toward north-west with the same name (figure 7-13). Medina historic gardens followed these wadi courses and developed around their major tributaries (figure 7-14).

No city in Saudi Arabia is water-rich, nor can it be dependent only on ground water. In the past Medina relied on natural springs like ain al-Zarqaa (in the Quba area, to the south of the city), first supplied the city during the Ummayyad caliphate (661-680 AD) (Mustafa 1981). In the recent history, Medina had 26 ain, 35 khaif (underground manmade streams that connect wells), and 19 wells for domestic use only (see appendix 1). In 1957, modern machinery was used to drill wells for both domestic and agricultural use. In 1966, thirty wells were dug in Quba and Qraidha areas to pump out 20,000 cubic metres of water daily for domestic use, and 230 wells were dug for agricultural use (Hafidh 1996). The extensive use of groundwater dropped water table from some 10-20m to 60-100m. Medina nowadays face a dramatic increase in the water demand. In 1984, Medina was, first, connected to wells dug in Abiar al-Mashi (a small village 30 km to the southwest of Medina) (50,000 m³/day) and secondly to Yanbu seawater desalination plant (76,000 m³/day in 1980) (Hafidh 1996) and (80,000 m³/day in 1998) (Foaad 1998). Thus, Medina receives 130,000 m³/day. In 1996, the Ministry of Agriculture and Water indicated that the average rate of water use/person/day in Saudi Arabia is 233 litre/day. That is to say, Medina total consumption of water is 94,365,000 l/d or 94,365 m³/day.

The total area of the built up area of Medina is 293 km², which is 49.75% of the total area of Medina (589 km²). Planted areas in 1995, which is 58% of the city area, are as follows
(public parks and gardens = 975,889 m², central medians = 618,259 m², and municipal nurseries = 92,300 m²) total 1,686,448 m². In 1995, plant water consumption was 97,384 m³, which is about 10 times the amount consumed five years earlier (10,295 m³), and about double the amount of tap water the wells of Abiar al-Mashi pump to Medina daily (50,000 m³) (Table 7-1). In order to cover the shortage in water for irrigation, municipalities use ground water (a total of 40 wells distributed within the vicinity of Medina area are used from which water is transported by trucks).

Table: 7-1, Plant related water consumption in 1990 and 1995.

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>1995</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Water consumption Litre/day</td>
<td>Water consumption Litre/day</td>
</tr>
<tr>
<td>Number of public parks and gardens</td>
<td>33</td>
<td>46</td>
</tr>
<tr>
<td>Total area of public parks and gardens in m²</td>
<td>749,535</td>
<td>975,889</td>
</tr>
<tr>
<td>Area of loan in m²</td>
<td>441,085</td>
<td>581,259</td>
</tr>
<tr>
<td>Number of trees</td>
<td>136,000</td>
<td>749,369</td>
</tr>
<tr>
<td>Number of exotic palms</td>
<td>986</td>
<td>11,832</td>
</tr>
<tr>
<td>Number of native palms</td>
<td>1,000</td>
<td>1000</td>
</tr>
<tr>
<td>Number of shrubs, hedges, etc.</td>
<td>365,443</td>
<td>632,153</td>
</tr>
<tr>
<td>Area of planted medians m²</td>
<td>10,700</td>
<td>6,321,530</td>
</tr>
<tr>
<td>Number of trees in medians</td>
<td>16,000</td>
<td>923321</td>
</tr>
<tr>
<td>Number of shrubs, hedges, etc., in medians</td>
<td>112,000</td>
<td>64,632,470</td>
</tr>
<tr>
<td>Total Water consumption Litre/day.</td>
<td>-</td>
<td>97,383,886</td>
</tr>
</tbody>
</table>

During its early history, Medina was blessed by regular floods. Historic documentation show that the frequency of severe floods is one approximately every about 400 years (Table 7-2). In the past, the depth of ground water was much shallower compared with contemporary depths (Table 7-3). Other data inform us that Medina received a higher intensity of rainfall. The sahn (court) of the Prophet mosque during the Abbasid period was drained by sixty four outlets made of stone. These outlets were connected and opened to the sail (valley course), which according to ibn-al-Najjar (743AD) ran to the eastern side of the mosque.

Table: 7-2, History of Great Floods in Medina.

<table>
<thead>
<tr>
<th>Date</th>
<th>Flood incident</th>
</tr>
</thead>
<tbody>
<tr>
<td>1334 AD.</td>
<td>wadi Qurat flooded over Sa'idah Hamza area in north of Medina.</td>
</tr>
<tr>
<td>1582 AD</td>
<td>a destructive flood dilapidated 'Ein al-Zarqah in Medina.</td>
</tr>
<tr>
<td>1910 AD</td>
<td>a very destructive flood covered all Medina</td>
</tr>
</tbody>
</table>

8Medina Central Park, (4.3 km²), designed as exotic green landscape, is not included for the park is not yet open to the public.
9The calculation of water consumption was based on the data obtained from the Ministry of Agriculture, branch of Medina, (trees = 13 l/d, exotic palms = 12 l/d, shrubs = 10 l/d, lawn = 8 l/d, native palms = 4 l/d).
Figure 7-13

The Prophet Mosque

Wadi Bathan has been submerged at Qurban area.

Al-Hammad Valley

Al-'Aqoul Valley

Al-'Aqiq Valley

Sail Abu Jiedah, the original course has been diverted to wadi Bathan.

Source: developed from group of Maps obtained from Medina Municipality.
Figure: 7-14


Source: developed from group of Maps obtained from Medina Municipality.
Table: Depth of Medina's Wells During the Early History of Medina.

<table>
<thead>
<tr>
<th>Name of wells</th>
<th>Depth of wells in dhira = 1 yard</th>
<th>Depth of water in wells in dhira = 1 yard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Romah</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>al-Bussah</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Ghars</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Buda'ah</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Aries</td>
<td>14</td>
<td>2.5</td>
</tr>
<tr>
<td>Haa</td>
<td>10.5</td>
<td>.5</td>
</tr>
</tbody>
</table>

7.6.4. Topography:
Thirty-five million years ago, the Arabian Peninsula split from Africa forming a long narrow trench which is now the Red Sea. As the Arabian plate separated it drifted north-eastwards, colliding with Asia: the Zagros mountains of Iran and the Hajar range of Oman were the result of the violent clash. As the Arabian plate began to slide under that of Asia the entire Arabian landmass tilted. In the west, the rising edge of the plate formed a 1000-mile wall of the Sarawat escarpment and the mountains of the Hidjaz and Asir, sometimes described as the spine of Arabia. Arabia can be envisaged as an enormous tilted plate, exposing along western edge an escarpment wall which runs for 1500 kilometers. Behind the mountain wall lies a vast volcanic moonscape of ancient lava flows. The volcanic sheets that encompass the Medina area from the east, west and partially from the north is derived from the most recent eruption 600 ago. Hafidh (1996) dated this eruption to 1256 AD.

Medina is located on the lowest area of a large basin at an altitude of 598-620 m sloping gently toward north. The highest area along the basin's edge is in the south-east part of the harrat (lava flow) which lies at an altitude of 1,100 m above sea level (Makki, 1982). The far south-west of the harrat is on the other hand the lowest part of the basin's edge despite the fact that the western harrat is generally higher than the eastern one. Although the city is relatively flat, it contains a group of mountains that lies on the periphery of the city except for Sela mountain which lies in the north-west corner of city centre (about 600 m from the prophet mosque). Although the al-Awierah mountain has the highest mountain top in the city (1500 m above sea level), the most conspicuous mountains in the city are Auhud in the north (1087 m above see level) and Eir in the south (1024 m above see level) for the reason they are the closest to the city, 4 km and 8.5 km respectively (Shaer, 1991). The two mountains gained historic significance from the time of the prophet Mohammed who used them to mark the haram (sanctuary) boundary of Medina. Auhud mountain covers a large area (14.4 km²) between the two northern fertile fingers of the city, al-Eioun and al-Aqoul areas. It is red in colour, rugged in most areas and steep in some areas, especially the north-east facet. Eir mountain runs from the north-west to the south-east which make it parallel to Auhud mountain. It is almost of an
equal area of Auhud mountain (13km²), black in colour, smooth in texture with very steep slopes. In between these two mountains and toward the west lies the al-Jummah mountains, (al-Jummah east and al-Jummah west, 966m and 944m above sea level respectively). These two mountains are relatively small, if compared with Auhud and Eir Mountains. Al-Jummah east borders the al-Aqiq valley at the north-west and east bank in an area historically known as Erwa. From the city, the tops of remote mountains, especially in the north and north west, can be seen as Kinanah in the north, al-Hamra, Aumm Nathila and al-Asmar in the south, Gharieb, Sahlouje and alAzirat in the east, and Gharb, Mahlouje and the two Jummahs in the west. In the north-east corner of the city lies the highest mountain top in the city, that is al-Waeira mountain (see Table 7-4).

<table>
<thead>
<tr>
<th>Name of mountains</th>
<th>Distance from city centre (the Prophet mosque)</th>
<th>Height</th>
<th>Location in relation to the Prophet mosque.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sela</td>
<td>1</td>
<td>681</td>
<td>North-east</td>
</tr>
<tr>
<td>2. Auhud</td>
<td>4</td>
<td>1087</td>
<td>North</td>
</tr>
<tr>
<td>3. Gharieb</td>
<td>4</td>
<td>933</td>
<td>South-west</td>
</tr>
<tr>
<td>4. al-Jummah east</td>
<td>4.5</td>
<td>966</td>
<td>West</td>
</tr>
<tr>
<td>5. al-Jummah west</td>
<td>7.5</td>
<td>944</td>
<td>West</td>
</tr>
<tr>
<td>6. Al-Waeiraib</td>
<td>8</td>
<td>1500</td>
<td>North-east</td>
</tr>
<tr>
<td>7. Eir</td>
<td>8.5</td>
<td>1024</td>
<td>South</td>
</tr>
<tr>
<td>8. Sahlouje</td>
<td>13</td>
<td>891</td>
<td>South-west</td>
</tr>
<tr>
<td>9. Kinanah</td>
<td>14</td>
<td>936</td>
<td>North-west</td>
</tr>
<tr>
<td>10. Gharb</td>
<td>14</td>
<td>830</td>
<td>West</td>
</tr>
<tr>
<td>11. Aumm Nathila</td>
<td>15</td>
<td>762</td>
<td>South</td>
</tr>
<tr>
<td>12. al-Hamra</td>
<td>16</td>
<td>916</td>
<td>South-west</td>
</tr>
<tr>
<td>13. al-Asmar</td>
<td>18</td>
<td>1078</td>
<td>South-west</td>
</tr>
</tbody>
</table>

Source: (Shaer 1991).

7.7. Medina Native and Exotic Vegetation.

In Saudi Arabia, the coming together of three bio-geographic formations of African, Eurasian and Indo-Malayan affinities have produced an interesting native flora. Amy Austin (1997) wrote in the Associated Press: ‘the barren appearance of deserts’ in Saudi Arabia, ‘leads many to believe they are lifeless, however, this is far from the case. Whenever rain does fall, wildflowers and grass quickly bloom. Also scrub and thorn bushes that exist all year long provide shelter for insects, reptiles and mammals, such as gazelles, wildcats, and leopards. Native plants are not yet, however used as Austin described in the urban landscape of Saudi cities. Just as in the case of modern Saudi residential architecture, which reflects the local vernacular only in arches and domes awkwardly
integrated into an architectural style adapted from the west (abd-al-Wahid al-Wakil cited in Steele 1988). The modern Saudi landscape profession reflects indigenous vegetation only in palm trees, *Phoenix dactylifera*. Even in situations where attempts are made to involve the native palm trees in the design of modern urban facilities, no critical investigation seems to be undertaken. Palm trees, the most common symbol of native landscape material, are commonly standardized in size although they are historically found in gardens or in the wild in different sizes and in clumps rather than individually as it is the case in modern plantations. Other native plants are not considered in landscape design schemes, whether in urban, suburban or rural landscapes. The on-going design scheme aims to forge a lush green image for the city, as it is the case with many other Saudi cities, although such schemes suggest a false image of a more temperate environment.

The battle over native and exotic plants has been, for long, a ground for diverse arguments that polarise people between the two groups. One group presumes ‘native as good and exotic as bad’ whilst others find no reason to banning exotic plants from coexisting with native plants within the geographic vicinity. Kendle and Rose (1999) provide arguments why exotic plants are not ecologically, culturally, and aesthetically inferior and should cease to be used in favour of native plants. On the other hand, such argument might be of virtue in the case when ‘native and exotic’ definition of plants are determined by political borders. However, it can not be considered solely true in the case when ‘native and exotic’ definition of plants are based on environmentally defined locations or habitats. For example, using a native French tree in England is much less bold than introducing an Arizona saguaro (barrel cactus) into an English garden. Similarly, it could be argued as odd in relation to Medina’s ecology, culture, and aesthetics to see, for example, *bazromia* trees with its lush bright rich green foliage along most streets and roads while masses of acacias and palms are stretching just beyond the developed part of the city. It would also look impractical to see vast areas of green lawns in gardens designed in an English style in an area that reach 45°C during the day for most part of the year and receive less than 12mm of rain annually. One of the serious problems that can be associated also with the importation of exotic plants is the problem of transporting plants’ pests and diseases. Indigenous plants are often naturally tolerant to local pests and developed innate immunisation against local diseases.

Ironically, intuition suggests Medina people are proud of their local environment and cultural heritage, and yet grow a thick wall of bazromia trees, masses of *Canna indica*, arise out of broad areas carpeted with *Cynodon dactylon*, while native trees, flowering, and groundcover plants are only a few metres away. Architects, landscape architects, and the horticulture industry have conveyed the idea that native plants are weeds and should not be used in urban landscape design.
Native desert plants are well adapted to the harsh environment of the desert. They often avoid heat and efficiently utilise water by becoming dormant during hot seasons, or in the case of some salt tolerant plants, crystallising salt particles on various parts of the plant to reflect solar radiation, or minimise exposure to sun by developing tiny leaves or abandoning them during drought seasons. Some compete with other species that do not become dormant in summer by emitting toxic substances to the soil. Some other desert plants, which grow in masses are found spaced equally in the landscape to allow an equal rainfall catchment area among the plants. Succulent desert plants have developed the process of Crassulacean Acid Metabolism to avoid opening their stomata during the day. Some desert plants release certain types of acids to dissolve minerals around its roots to improve access to water, others grow deep and wide networks of roots that in some cases reach the aquifer. Succulents and cacti have a special response to water in wet seasons, instead of searching for water, they store water in their leaves (Olin 1994, Rose 1981, Adams and et al 1978, Kathleen 1976).

On a comparative basis, Medina is considered more naturally rich in native flora than other Hidjazi cities with the exception of Taif on the northern end of Asir mountains. Compared with other regions in Saudi Arabia i.e. Central, Eastern and Southern parts of the Kingdom, Medina’s natural environment is the least botanically explored area in the Kingdom. As has previously been mentioned, one of the reasons is that Medina is a haram (sanctuary) and is restricted to non Muslims. Other regions like the Empty Quarter and Asir Escarpments have been points of attractions for English members of political, geographic, and health expeditions since Pehr Forssakål’s journey to the South in 1775 (Miller, Cope, and Nyberg 1996). Although travellers and plant collectors have studied the Arabian flora and produced several publications, Blatter’s Flora Arabica (1919-1936) is considered the only work that has covered most of the region. In 1939 Schwart’s Flora des Tropischen Arabian was the new addition that covered the South Region of the Arab Peninsula. From that time until the 1970s, ‘there has been no comprehensive inventory of the plants which are indigenous to Saudi Arabia, although fragments of such an inventory appear in UN studies (Kelly 1976). From that time on, publications like Sheila Collenette’s ‘An Illustrated Guide to the Flowers of Saudi Arabia,’ Migahid Hammouda’s ‘Flora of Saudi Arabia,’ and Betty Vincett’s ‘Wild Flowers of Central Saudi Arabia,’ and lately the Ministry of Agriculture and Water Resources’s ‘Encyclopedia of Desert Plants of Saudi Arabia,’ demonstrate a new interest in research on native plants of this area. According to Miller, Cope, and Nyberg (1996), ‘these publications are primarily a checklist containing only few descriptions of new taxa.’ In addition most of these publications have covered botanical, ecological, aspects of plants of different regions, however, none has considered the cultural and ethnobotanical aspect of these plants. These
publications are, without doubt, of enormous importance to the field of landscape architecture and other areas of related studies. On the other hand, the growing awareness in the importance of applying sustainable approaches in urban development, planning and design has not yet increased interest in the practicality of using native plants. On the other hand, using native plants in the urban areas without considering historic and contemporary cultural perception toward desert native plants might eventually lead to a predictably negative reaction.

Most contemporary city residents are not aware of differences between native and exotic plants (see chapter 10). They consider all plants located on street central medians and public gardens as local or ‘native.’ This is not only because of the Arabic common names these plants possess, but also because some have been used for decades. From the beginning of the massive urbanisation process that accompanied the economic boom of the 1970s, streets and public open spaces of cities have only accommodated exotic planting material. Streets, public parks and gardens, areas around institutional buildings have formed green displays of exotic plants (figure 7-15). In Hafidh’s survey (1955) that aimed at examining the public’s opinion regarding modern policies of development in various fields in Saudi cities, Ibrahim al-Hadj al ‘Eitaiwi\(^\text{10}\) said: ‘... to develop a landscaping program that aims to define recreational gardens for the public and decorating streets and open spaces by harvesting and hybridising trees like al-saro (cypress) and al-sunoubar (pines),’ (plants native to areas like Lebanese temperate forests), ‘which are commonly used for these purposes...’ On the other hand, early scholars realised the importance of practicality in avoiding impractical ornamentation as Ibn-Khaldoun (1984), the Arabian historian and philosopher (1332-1406), for example, said: ‘when the city is extravagantly planted with naring, alliem (Azadiracta indica), al-sarow (cypress) trees, the city would eventually decay and ruin.’ In his justification he alleged that Islamic cities should avoid all signs of luxury that contradict with the basic principles of Islam. In his example, planting fancy exotics that do not produce fruits and need much of maintenance are signs of hedonistic luxury in a desert environment.

On the other hand, and during the early days of the economic boom in Saudi Arabia there were few designers who promoted the use of desert urban landscape in Saudi cities. Kathleen Kelly, was one of those who expressed this idea as early as 1976 in her ‘Landscaping the Saudi Arabian Desert.’ She said, ‘the development now taking place in Saudi Arabia must also adapt to the desert and give

\(^{10}\) Ibrahim al-Hadj al- ‘Eitaiwi is an early architect from Medina.
In the 1960s, Medina witnessed the initial transformation in its urban landscape. Lawns, exotic perennials, and evergreen trees covered most squares, open spaces of large projects and urban institutional buildings.

A tiered form of planting structure, (i.e. flowers in the foreground followed by large shrubs before large green dense trees) had been idealised as the favourite green structure in private and public gardens. Dense flowering perennials of various colours have dictated the modern cultural configuration of beauty in the landscape. This new concept has become the general and basic design formula for planting design called 'ornamental planting.' This concept has been over-generalised all over major streets, public parks, and gardens.

Saqifat bain-Sa'edah was one of the historic sites of Medina that has its history background to the Prophetic time. The actual building was replaced by a modern garden in 1960, in which the planting scheme of al-Manakha street was facilitated in the garden creating a forest of Ficus altissima in the city centre. The garden's master-plan, on the right, show the cliché garden design adapted from western models regardless of scale. The garden contained a water body in the middle, a terrace looking over the water body, lawn carpeting the garden floor, a kiosk, and sites for municipal facilities that have never taken place. It is obvious that the master-plan lacked the planting design, symbolised by flimsy circles, for this part of the design was left to the contractor who would place plants on the basis of plant availability in the municipal nursery. Another apparent flaw in the garden design is the lack of consideration of the historical significance of the site.
Figure 7-15 (continue), early modern gardens of Medina were densely planted with exotic plants, an objective designed, during the early stages of the national urban development to produce large masses of green foliage. Although all exotic trees were and are evergreen, they did not include native plants as a possible alternative to exotic plants.

Figure: 7-15 (continue), left: Quba garden was the first modern garden developed in Medina in 1962. The garden through its multitude planting designs over the last 38 years had not adopted any native plants including palm trees. Right: a small garden in front of Omar mosque in the city centre constructed in 1964. The garden’s planting scheme is a continuation of al-Manakha street’s planting scheme, which used mature *Ficus altissima* trees to create a massive stripe of dense green foliage all along al-Manakha street (removed during the construction of the underground pass).

The urban Saudi the means of adapting to the desert in the city.’ Her proposition dispute Buckminster Fuller’s argument that proposed a full abandonment of the idea of adapting to the desert environment, and to create rather totally artificial environments.

The intrusion of the non-indigenous lifestyle during the 1970s also had had its negative impacts on the urban image of Saudi cities. Landscape design was one of the practices by which the cities’ local tradition of garden design was replaced by exotic design concepts and culture. Like all products of an international nature, exotic plant materials found a rewarding market in Saudi Arabia. City ornamentation through exotic planting became part of municipal responsibilities. Design firms with their landscape architects, horticulturists and gardeners hired from neighbouring countries often lacked experience of desert landscape. The result was replication of stereotyped ideas of western gardens better suited to more temperate landscapes like in Egypt, Turkey, and Syria. Most parks
and gardens were designed as either jigsaw puzzles or geometric pattern to satisfy the basic design program of a garden. Chaotic urban open spaces were shaped by amalgam of diverse landscape styles that cannot be categorised as ‘Saudi landscape style.’ The most persuasive justification for such architectural and landscape chaos was the lack of a thoughtful definition of modernity that suited local culture and natural environments (Serageldin 1980).

Landscape management and maintenance was, in addition, undertaken by unqualified labour who turned most gardens into mazes of geometrically chipped foliage (topiary gardens) (figure 7-16). Municipal planting is, in most cases and locations, a function of plant availability in the numerous Nurseries of the Medina Municipality (total area 92,300m²). Large, green, fast growing and low in maintenance were the main criteria that directed the designers’ selection of planting material and planting patterns.

Figure 7-16, most plants in Medina are geometrically chipped, such as in mosque garden top left, public garden top right, central median bottom left, and along streets bottom right.

At the public level, local residents seemed to accept the new landscape style as part of the modernisation process the whole country was involved in. The public, as Makki (1982) described, has dogmatically embraced the idea that city development must be assessed in terms of the western city with wide streets, tall buildings, and large parks. Even senior citizens whose ancestors were familiar with and affectionate to desert native plants, have abandoned their traditions, early
experiences and intimate knowledge of native plants and adopted modern gardens in the front yards of their villas (al-Turki and Raffah 1998). When they abandoned their historic gardens to the modern city, they followed the municipalities approach of landscape design and selection of planting material. The segregation between what is perceived in cities as sedentary and what is perceived in desert as nomadic is one of the illusive modern concepts that has a negative impact on planting design and selection of planting material. Plant material beyond the city limits is called Sahrawi (an adjective of desert) and could not be considered for use in the city. On the other hand, plant material of the urban landscape has spilled into rural areas. Driving from city centre to the suburb and up to the rural areas it is evident that urban landscapes do not respond to the variations of the natural and urban setting of these contexts (figure 7-17).

Figure: 7-17, top left, typical street planting structure on central medians. Geometrically clipped tree foliage topping unremitting lines of hedges and stripes of lawn is typical even to plantation scheme along highways, top right. Middle income, bottom left, as well as high income, bottom right, neighbourhoods are similar in term of using geometrically chipped exotic plants. Such planting structure is merely ornamental and may have limited environmental payoffs. Bottom, private gardens (in setbacks) of typical middle class residential units make a limited contribution in shaping a local urban landscape due to limitations in area, use of exotic plants, and poor maintenance.
Medina, as with many other large cities of Saudi Arabia, has developed no local urban image in terms of vegetation. The city that was once forested with desert gardens and native plants, is today becoming one of the least environmentally sound cities in the kingdom. The efforts the municipality undergo to regain the urban desert-forest of old Medina does not follow a strategically designed program. Neither is it committed to a professionally designed scheme that could have responded to the local natural and cultural context, nor bounded within a large-scale agenda that might show progressive change over time. While it has been agreed that private and municipal planting contributes to the establishment of distinct image to the city (Kennedy and Zube 1991), the form and structure of Medina's urban vegetation is not a product of personal preferences expressed in yards and private gardens. This is largely due to the limited areas of private gardens, which is imposed by the local building act, which otherwise could have accommodated a appropriate planting scheme.

The fostering of exotic landscape schemes in Saudi urban open spaces, on one hand denies the desert setting (Kennedy and Zube 1991), and on the other hand contradicts historically established values and traditions. Water, for example, as a valuable resource in a desert city like Medina is used to irrigate vast areas of lawns and lush landscapes and used lavishly in water fountains and massive artificial cascades (figure 7-18). Such scheme distort the recreational behaviour and expectations of the public. It seems that the public's definition of a garden has been lost within the newly developed forms of designed open spaces. The common presence of lawns and streetscape in all public parks, gardens, and urban open spaces have somehow instructed the public that such spaces are useable as public parks. Open spaces around monuments, plazas, and lately sidewalks, which have never been designed to accommodate families' recreational activities, are today functioning as a congregational kind of sitting areas the media ironically called 'muzhat al-arsifah' (picnic on sidewalks). The mere 'sitting' on lawns or paved open spaces became a recreational activity by itself. Such a dramatic change in the recreational behaviour of Medina people is a result of compromising social needs in 'public parks' and 'gardens,' i.e. privacy (Hammadi 1993; al-Shahrani 1992), personal spatial comfort, aesthetic expectations, culturally accepted recreational facilities, etc. In a study of the recreational preference of Medina people (Municipality of Medina and Dar al-Handasah 1991) it is evident that street related activities are among the most preferred recreational activities in Medina. This study highlighted that driving is the most preferred recreational activity in Medina. The last two decades, have seen a transformation in Medina citizens' perception of recreational spaces. This is evident in emerging, and often awkward recreational behavior.
Even institutional buildings that have been professionally designed and well constructed under the supervision of its related governmental agency do not add to the city’s distinctive image and sense of place. Plant material and planting design seems to be the least important task in such projects, whilst follow a stereotyped planting model. We see such situations, as an example, in al-Miqat Mosque on wadi al-Aqiq along the al-Hidjrah express way. Although situated within ‘the blessed’ valley, i.e. wadi al-Aqiq, this locality does not inform the planting scheme, rather the design concept contradicts the basic understanding of planting selection in relation to the local environment. This

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11 Al-Miqat mosque is one of the second large mosque in Medina after the Prophet Mosque. The importance of the mosque came from being the Miqat of pilgrims of Medina residents and visitors, i.e. before going to Maccah to perform Hajj or Umrah, pilgrims must pass by this mosque to do prayers and convey the resolution of performing the Hajj or Umrah.
misunderstanding is depicted in plant selection in relation to the various types of open spaces of the mosque, i.e. the controlled space of the mosque, the courtyard, and the north side of the mosque is planted with native plants whereas lush exotic vegetation have been used in all areas on the southern side, with the exception of three existing wild cider trees that have been preserved (figure 7-19).

Another example is the Quba mosque\(^\text{12}\) named after the most popular suburb of Medina, known for its historic and finest palm gardens. The open space on the eastern side of the mosque is designed as an open air prayer area as an extension for the mosque. This major open space in addition to other minor open spaces have been designed in a way that do not interact with the adjacent historic landscapes. The mosque was isolated from the once embracing palm gardens within an island of paved slabs dotted by old palm trees on a of 12m grid. Most of the palm trees have been replaced by new ones because they were transplanted in an unprofessional way. Others are hardly growing with flimsy branches and partly stripped and tilting trunks, creating a poor landscape scheme (figure 7-20). On one hand these palms are not adding to what is already considered to be an unsuccessfully designed spatial structure (see for example Bianca 1984; Farahat and Alturki 1991). They also distort the history of the city, which for long has been known for the finest palm gardens in the Kingdom.

Another example is the new extension of the Prophet mosque in Medina. Stephano Bianca (1984) indicated that green areas within the city, once representative for al-Madinah’s character as an oasis, have disappeared at an alarming rate, with the effect that hardly any trees are left in the central area which used to be full of palm gardens.’ According to the final model of the Prophet Mosque extension project, the u-shape plaza created around the new extension\(^\text{13}\) was to have been dotted with palm trees, massive light posts replaced palm trees in the final project (figure 7-21).

Al-Udhaibat, in Riyadh, is one of the most prominent developments that has been considered in the literature to have been successful in establishing a model of rehabilitating historic sites in rural areas.

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\(^{12}\) Quba mosque is the first mosque built in Medina. When the Prophet Mohmmed (pbuh) arrived in Medina (622 AD), people of Quba received him with a great deal of hospitality, and He built His first mosque at the first suburbia he arrived in (Quba is the first mosque built by the Prophet (pbuh) in Medina, however it is not the first mosque in Medina for al-Ansar built their mosques after had embraced Islam and before the arrival of the Prophet’s (pbuh) arrival in Medina (al-Samhoudi 1945). The importance of the mosque, which has been reported in both Quran and Sunnah made the mosque one of the heavily visited religious and historic sites in Medina.

\(^{13}\) Bianca (1984) noted that ‘in the eye of the Muslims,’ who come from the furthest parts of the world in thousands yearly, ‘the structure of al-Madinah was traditionally determined by the image of a sanctuary embedded in the cluster of surrounding houses.'
like the farmhouse near al-Diriyyah. On the other hand, the landscape design of open spaces does not relate effectively to the rest of the project’s atmosphere. In contrast to the immediate background rendered by a desert-like greyish palm garden, the planting design of al-Udhaibat’s courtyards and open spaces do not look distinctive from other open spaces in the city centre of Riyadh (see figure 6-4 in chapter 6).

Figure: 7-19, left, drought tolerant native palm trees planted within the protected space of the courtyard of the Miqat mosque while open spaces of the southern side of the mosque are forested with lush green exotic plants.

Figure: 7-20, left, Quba mosque before the addition of the surrounding designed open spaces and car park. right, the mosque after the addition of the car park and the front plaza. It is evident that what once were embracing palm gardens have not instructed the design of the mosque’s open spaces, but further detached the architectural volume of the mosque from its surrounding historic palm gardens.
Figure: 7-21, left, part of the architectural model of the new extension of the Prophet mosque, designed and constructed by the Bin-Ladin Construction firm, with palm trees dotting the vast u-shape open space around the mosque. Top, the u-shape open space around the Prophet mosque after implementation. Massive, but fancy light posts replaced what was initially intended to be palm trees. During peak seasons, that sometimes come in summer, and when number of pilgrims exceeds the designed capacity of the mosque, this area accommodates thousands of pilgrims and visitors in which they would find it uncomfortable walking or praying under the sun.

7.8. The Negative Aspect of Introducing Exotic Plants to Desert Landscape.

From an economic perspective, Medina is losing one of its major economic resources by giving up traditional gardens and historic recognition of its native desert landscape\(^\text{14}\) (Hough 1983). In the past palm gardens penetrated through the urban fabric of Medina. Today, the city is permeated by hundreds of kilometres of streets centred and lined by strips extravagantly covered by exotic water demanding grass, trees and colourful understory perennials (a total area of 58 hectare). From 1991 to 1995 Medina greened open spaces (including public parks and gardens grew from 75 hectare (Sha’eir 1991) to 100 hectare (Municipality of Median 1995). In these central medians and public parks, native and food producing plants are not used. The growth of Medina, as well as of many other Saudi large cities, is due to the alarming rate of population growth. According the United Nation’s census, Saudi Arabia is among the countries that have a very high rate of population growth.

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\(^{14}\) Michael Hough (1983) gave many example that depicted new approaches in landscape design, one of which is drawn from China. He said ‘China produces, within urban municipalities, at least 85% of the vegetables consumed by city residents. It is reported that fishponds in Shanghai’s parks generate income to finance the parks system.’
growth\(^ {15}\) (see footnote 14) (United Nations 1995). On the other hand, this increase in population and urban growth is paralleled by descending household income. In 1981 the average income of the Saudi household was 37,000 Saudi Riyal ($9866.6), while in 1999 was 6,000 Saudi Riyal or ($1600) (bo-Hlaiqah 1999). Such a change in the economy suggests an inevitable change in the consumptive behaviour of the society. From this one might conclude that attitudes to urban landscape planting design in Saudi cities would involve more sensitive consideration of economic factors both from the public and governmental agencies. John Rahenkamp (1983) asserted that modern cities have to face the problem of abandoning traditional way of life dominated by agrarian culture by conferring rational uses of the land in a way that maintain productivity with minimal impact on the natural environment. Kathleen Kelly (1976) wrote about the hazardous environmental impacts of long and broad streets in desert cities, which led him to the conclusion that ‘a normal grid system is often dysfunctional’ if not modified to suit desert conditions. Palms trees are economically valuable trees\(^ {16}\), but should not monopolise native landscape design schemes for other native desert plants are also valuable culturally, economically, ecologically, and aesthetically.

There is a growing consensus that desert native plants cost less in comparison with exotic plants used in desert urban landscapes. The replacement of flower beds and vast areas of lawns by indigenous desert native plants would be economically advantageous. On a comparative basis with exotic lush landscape, desert landscape settings require less water, maintenance, and with careful design could give similar effects to that produced by exotic plants. Mohammed Salama (1990) concluded in his study that native plants are considerably less water consumptives in comparison with exotic plants (table 7-1).

\(^ {15}\) In 1974, the total population of Saudi Arabia was less than 7 million inhabitants, 13.6 million in 1987, 16.9 million in 1992, 19.9 million in 1999 (Saudi Arabian Information Resource 2000). In comparative basis with the United States and the United Kingdom, rate of population growth of Saudi Arabia is rather remarkable, see the below table:

<table>
<thead>
<tr>
<th></th>
<th>1950</th>
<th>1998</th>
<th>Growth rate</th>
<th>2050</th>
<th>Growth rate</th>
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<tr>
<td>America</td>
<td>157,813,000</td>
<td>274,028,000</td>
<td>73.6</td>
<td>349,318,000</td>
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</tr>
<tr>
<td>The United Kingdom</td>
<td>50,616,000</td>
<td>58,649,000</td>
<td>15.9</td>
<td>56,667,000</td>
<td>-3.4</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>&lt;8,000,000</td>
<td>20,181,000</td>
<td>188.3</td>
<td>54,461,000</td>
<td>169.86</td>
</tr>
</tbody>
</table>

(Hafidh 1955)


\(^ {16}\) Palm trees planted in urban open spaces including parks, gardens, and central medians of Medina are selected as males to restrict dates collection, as such activity has caused traffic conflicts on arterial roads planted with female palm trees, i.e. people cross the road to get to collect fruits. Nevertheless, this conflict should not be over generalised all over different categories of open spaces as the problem was found uniquely on arterial roads.
Table: 7-1, A comparison between water requirement of native and exotic plants.

<table>
<thead>
<tr>
<th>Plants’ types</th>
<th>Native species litre/week</th>
<th>Exotic species litre/week</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>winter</td>
<td>summer</td>
</tr>
<tr>
<td>Grass</td>
<td>nil</td>
<td>7</td>
</tr>
<tr>
<td>Shrubs</td>
<td>nil</td>
<td>3</td>
</tr>
<tr>
<td>Succulents and ground cover</td>
<td>nil</td>
<td>Nil</td>
</tr>
<tr>
<td>trees</td>
<td>nil</td>
<td>15</td>
</tr>
</tbody>
</table>

Source: (Salama 1990).

From a psychological point of view, the use of exotic plant material in extreme desert conditions like Medina defeats the atmosphere which naturally exists just few kilometres away. Another negative emotional feeling that is provoked by the extensive adoption of exotic plants is that the urban realm has been amended by lushly planted gardens and central medians whilst the nearby wild desert-landscapes are left scared and endangered by further degradation.

From cultural perspective, lawn has become an established tradition in the modern urban and suburban landscape (Yungman 1977). Grass, on the other hand, was historically considered as weed that Medina people tried to eliminate from their gardens in the past. This unique historic attitude toward a particular design principle is a trend that can be enhanced and developed in a way that creates a unique culture. The mere ‘uniqueness’ of a, trivial or extraordinary landscape scheme is a value by itself. Emphasising this uniqueness is an approach that is central to the field of landscape design. From a design point of view, the deserts unique character can be enhanced rather than veneered to create a clear identity for the city. Jackovics and Saarinen (1978) indicated that ‘to create or preserve the distinctive character of cities, planners and designers must understand the unique qualities which combine to produce the local sense of place.’ Designers on the other hand also need to explore what the public like and dislike in their surrounding landscape (Meinig 1979). Meinig (1979) said:

‘Is the propaganda tract featuring the worst to be seen in the real landscape, that of the designer, is the plot plan, the sketch, the perspective of the imagined landscape when improved by his application of art and technology? Such design specialists are not alone in imagining ‘improved landscapes,’ they are in fact far outnumbered by those who see.’

From an ecological point of view, the introduction of exotic plants such as grass has a long history of negative impact on local landscape. The introduction of exotic annual grasses such as red-brome in Arizona, for example, has contributed to increasing the occurrence of devastating fires. The grass has spread all over the desert, carpeting vast stretches under trees. When dry it burns readily
spreading fire over larger areas and in less time than if it was not there. These fires have a significant influence on the whole landscape. A study of a 1979 fire south of Florence, Arizona revealed that at least 68% of saguaro cacti had eventually died, but the author estimated the ultimate loss to have been 85% (Tract 1999). As saguaros take 30 years of growth to produce their first seeds, fires occurring more frequently in a certain area will eliminate the plant.

On the other hand, municipal efforts within Medina to regain the ‘historic forest image’ of the city makes it important to consider the type of forest that can be established. Desert forests could simultaneously recall the historic image of the city and suit today’s natural and cultural context of Medina. In addition, the generous budget the local authority has designated for landscape development projects could be re-oriented towards the re-establishment of the desert culture in Medina.


Mohammed Kibrit Al-Madani (1997), one of Medina early historians during the 16th century, said al-Ghabah (the forest) is a wet area in which all valleys of Medina congregate in its middle. Abu-Airwah in al-Qamous indicated in one of his legends that lions were present in al-Gahabah at the time of the Prophet. In recent history, photographs were taken for hunters standing next to their kill of a mother cheetah with her cub. Most writings on the history of Medina indicates a richer desert landscape in Medina (Silim 1997) than now exists. Excessive livestock and overgrazing, deforestation for firewood and charcoal production, uncontrolled hunting (Mowat 1958), dumping of urban refusal, recreational traffic, (Thomas and Middleton 1994), over pumping of underground water, diverting ravines and wadies, and soil transportation (Alturki 1993) have brought the desert, ‘in a country where nature is considerably more sensitive than it is in Central Europe,’ to a level beyond repair (Bodeker 1989). Ironically, 0.1% of the total area of the country, which is occupied by urban settlements cause the dereliction and destruction to 99.9% of the country dominated by desert fragile biomes (Jacobs 1989).

Despite all efforts to protect the fauna, large numbers of desert animals are on their way to extinction. Institutions like, the National Commission of Wildlife Conservation and Development (NCWCD), and Meterology and Environmental Protection Administration (MEPA) have contributed to restoring wildlife in some areas by designating areas as nature reserves, applying anti-hunting laws, re-introducing rare animal like oryx, gazelle and bustard to the wild. Despite their valuable accomplishments, these programs are still conservative and with such policies, chances are slim to cover the whole wilderness of the kingdom. Of the one hundred nature-reserves in the
kingdom, for example, none occur in the Medina region.

One of the major factors that has contributed in intensifying this problem is the evacuation of the desert of its people. This demographic movement contributed in shaping a new life style in the rural landscape, which has greatly changed the social structure and culture of these areas. In cities, the increase in population has had an impact on the desert related trades, i.e. the demand for cattle, firewood, and building materials have intensified. The nomadic self-sustained life style of rural people have been transformed into urban consumptive life style. The intimate nomadic culture that for millennia has had a traditional relationship with its desert landscape had faded away and has been replaced by alien, more destructive culture. Another important aspect of this social and cultural conflict is that transformations in the nomadic life style have triggered a dramatic change in nomadic perceptions of beauty of desert nature. Desert people who once had a sentimental and affectionate relationship with the desert, have become alien to the desert landscape and most have lost their desert knowledge. Despite some examples that reflect a casual approach to the protection of natural resources, i.e. early people of the Saudi desert, for example, shared with Arizonan herders the need to control predators that threaten their domestic livestock, nomads historically shown a substantial knowledge and respect toward their desert landscape (Allen 1980).

Beyond the irrigation canals of Medina gardens, the desert seems to have had an array of means by which life could be supported. Desert dwellers learned where and when they find pastures for their livestock. In Medina gardens, people used to cultivate forage for their cattle, in the desert, pastoralists used to travel continuously in search of good and new pastures. Despite the clear Islamic injunctions that regulate humans utilisation of pastures, pastoralists took advantage of seasonal rainfall to feed their flocks. In modern times, the impact of pastoralism is more severe. Two of the reasons for this are as follows:

i. Technology provided pastoralists with means of rapid transportation and tele-communication enabling them to locate lush pastures and transport their cattle to those patches. This generated expanding numbers of cattle and more pressure on pastures. Pastoralists nowadays are accompanied by cellular phones, four wheel drive trucks, and are connected by networks of expressways all around the country. The news of a good pasture or rain in an area in the north of a particular region is passed to friends and relatives in the south by phone calls and the cattle are transported to that area. The major problem in doing this is the consumption of desert plant cover is greater than can be sustained naturally. Another problem consecutive to the first, is that grazing of desert plant cover before seeding time reduces seed production necessary for the next generation.
11. Dramatic growth in population naturally regress an increase in demand for goods. In Saudi Arabia, local cattle are the most preferred source of meat in comparison with that imported from Jordan, Syria, Egypt, Somalia, Sudan, Australia, and New Zealand. Traditionally this was the reason for local cattle to be as much as three times the price of imported cattle. These two social and economic factors encouraged pastoralists to enlarge their business to the extent of seeking subsidies from the government that come in the form of cash, trucks, forage, scientific advice upon increasing numbers of breeding animals. This increase in cattle number has burdened desert pastures more than they can support, leading in many areas to permanent ecological damage.

iii. It has been widely agreed that the last three decades were the most driest of the driest century on record for Saudi Arabia. Low intensity of rainfall during this period promoted the rate of desertification. Excessive grazing makes the problem much worse, to the extent of bringing desert plant species in particular areas of the country to extinction (Filor 1988).

iv. Vegetation type and density, the basic ecological aspects of vegetation, and structural change are controlled by both natural and cultural forces. In Medina for example, acacias, tamarexes, etc., grow in the wild landscape possessing no particular form because of natural forces such as wind direction, rainfall intensity and depth of water table and many other ecological and climatic conditions. Grazing camels contribute remarkably to the shaping the final form of the trees. On the other hand, cultural forces are more intense and destructive. Medina people consider the versatile use of these woods as part of their un-negotiable local economic resource that facilitated ceaseless cutting activity. This long history activity distorted forms and sizes of trees in the wild. Although such trees are tolerated to various soil types and show surprising presence at different landscapes of ranging degrees of aridity and soil salinity, forests of acacias, tamarexes, etc., trees are disappearing from the most common anticipated biomes. The use of technologically advanced heavy machinery encouraged these activities and yielded further destruction in the wild landscape causing dramatic changes in the scenery of areas known for its scenic beauty.

7.10. The Problems of Medina Urban Landscape.

7.10.1. The Neglect of Simplicity as an Islamic Design Value. One of the most significant reasons for moves to re-accept desert landscape in the urban domain is the need for simplicity, which is one of the abandoned Islamic design values. Islam has always called for simplicity and fought against luxury and signs of unnecessary extravagance. The first
example of simplicity in design was first recognised in the architecture of the Prophet’s (pbuh) house. It has been narrated that “Ataa al-Khurasani said:

‘I was there when the book of al-Walid bin abd-al-Malik was read in Medina in which he had his command to include the rooms of the Prophet’s wives in the new extension of the mosque. I heard Sa’eid ibn-al-Musaieb saying ‘I swear God that I wished they left them as they were, for me I presume new generations would come and remote visitors would arrive and I would like them to learn how was their Prophet humble in his life’ (cited in Kamal not dated).

Quran and Prophetic Hadith are replete with examples that stress the application of this design value in various fields of life. Abd-Allah narrated that the Prophet said to um-Salamah, a wife of His (pbuh):

‘oh um-Salamah: the inferior money a Muslim would spend is the money to be spent on luxurious buildings’ (ibn-al-Najjar 1996).

In another situation, His daughter (Fatimat al-Zahra) fixed two silver door catchers on her house’s door, He said (pbuh) while showing signs of wrath on his face (pbuh), ‘the life of this world would has never been meant to be of Mohammed, neither of His kin’ (inb-al-Najjar 1996).

Ibn-Khaldoun (1981) asserted that Islam advised against luxury in building construction. When people of Iraq asked Caliph Omar for a permission to build la-Koufah city he said ‘.... keep up with the Sunnah (the Prophetic tradition) and you would find us extremely supporting your efforts, .... do not build over the Qadar,’ they asked what is the Qadar, he said ‘the limit that if you do not approach, it would not indulge you in luxury, but would satisfy your crucial objectives.’

Legends on the recent history written by travellers has also revealed similar examples that show how local people were serious in applying Islamic principles in design. Upon his entry to the court of the Governor and Viceroy in Makka, Sayid Idris Shah (1957) commented: ‘I was impressed by the amazing simplicity in the luxury of the place, which was housed in a modern Hidjazi style building’ (quoted with some changes in structure). When Mustafa Nabel (1979) arrived in the area around the Prophet mosque, which was partly cleared of historic districts, he said: ‘the Prophet mosque stands to solace the loss of Medina traditional architecture reputed for its simplicity and intimacy.’ Most historians came to the conclusion that early Arabian cities were a virtual exegesis and application of Quranic verses and Prophetic Hadiths and a practical understanding of the geography of the landscape (Saidawi 1992).

Sharab (1985) concluded, in general Arabs had shown less interest in luxurious life styles compared with other nations such as Persians and Romans. That little remains of ancient Arabic architecture
suggests that Arabs were modest in their design. When Islam came, Arabs were attracted to the call for austerity and simplicity in the life of this world. We find also, as Sahrab (1985) noted, that Arabs used poetry to document their fine deeds and to eternalise their names through time. After Islam, good deeds, useful knowledge, righteous sons, and long term charities were a compatible additions to poetry in eternalising names rather than luxurious palaces and graves. Muslims beyond Arabia produced palaces and other institutional structures that are evident of different culture (Sharab 1985).

Medina, as well as other Hijazi cities, was not historically renowned for the beauty of its urban image, as much as it was appreciated for the harmony it possessed with the natural setting of its environment (Bianca 1984) and the cultural values that has developed within that urban environment which included simple life (Maghrabi 1985). This harmony was the substantial keystone in the aesthetic scenario of Medina architecture and urban landscape. Excessive reliance on a technological approach (Allen 1980; Croome 1991), on the other hand, deprived the city of the unique character it had retained through its history (Filor 1988). Hasan Fathi diagnosed this modern problem as being due to a lack of experience. He said, ‘having no experience of it, people today cannot imagine what made up the qualitative content of traditional ‘leisureliness’ nor the manner of ‘dreaming’ of men of olden days; instead they content themselves with caricature, which is much simpler and is moreover demanded by an illusory instinct of self preservation’ (cited in Steele 1988). Youngman (1977) in his forward to ‘Landscape Design for the Middle East’ highlighted that abandonment of this experience was conjured by the society when choked by modernity. Instead of enhancing and/or developing, their architectural heritage through modernisation, it has been changed to fit the modern world.

7.10.2. Modern Saudi Urban Landscape.
The Egyptian Minister of Public Works in 1888 wrote:

today people have abandoned old ways in construction in favour of European style because of its more pleasant appearance, better standards and lower costs’ (cited in Asfour 1998).

In Medina, Ali Hafidh (1996), who was the head of Medina Municipality during the 1960s, in his ambitious writings on issues related to development, had frequently extolled the replacement of old districts of Medina by what he called ‘modern concrete architecture.’ Abd-al-Basit Badr (1993) saw the historic urban fabric of Medina as an incompatible chaos with what the modern life style
required of new road system and high rise buildings\textsuperscript{17}. What such positions of thought see in the inevitability of following the western model in the field of design was diagnosed by Khaled Asfour as a ‘cultural Crisis’ (Asfour 1993). He said:

‘For the first time in the Arab world, a process of ‘cutting and pasting’ was introduced as a cultural mechanism. The process involves cutting ideas from its original cultural field, the European, and pasting them with their logic in the new field, the Arabian.’

It has become apparent that within this influence of modernisation, Saudi cities have received a great deal of westernisation process depicted in various fields of urban life. The urban landscape has unceasingly adopted landscape design concepts, techniques, and materials from all around the globe. ‘This unmitigated ‘progress' has resulted in an almost uniform adoption of the International Style, with global monotony and dressed up in varying degrees of local and ethnic cosmetics’ (al-Wakil cited in Steele 1988). Numerous studies argued that ‘when the economic boom happened in Gulf States, Arabs knew almost nothing about town planning and modern architecture, so they looked to the west and they looked at a time when architecture had reached its worst stage in history’ (Adam not dated). It was a time Hackney (1988) argued to has been shaped by Le Corbusier motivated by the spirit of ‘mass production’ and independent motif of art.

One of the major conflicts that have not been recognised in this field is the impact of such drastic change in the urban landscape on the Islamic community. In the past, people understood the substantial difference between borrowing ideologies and philosophies from other cultures and borrowing building techniques and materials in the field of art and design, i.e. garden and architecture. With the first one, early architects for example, knew that borrowing ideologies would contradict issues related to faith and cultural conventions that are prescribed by Islamic law. On the other hand, borrowing building techniques and material are subject to availability, affordability, and preference, if by doing so Islamic law would not be violated, (e.g. excessive exploitation of natural resources, like soil stripping, is an obvious transgression of an Islamic law). This basic understanding has not been outlined as a foundation for modern urban development in Islamic cities. The replacement of historic urban fabric that supported Islamic ideals, for example, maintaining neighbour’s rights, has been impaired by modern imported subdivision systems has dilapidated such ideal. Although the mere borrowing of the idea of subdivision systems is not unlawful, the application of the system led into the abandonment of one of the substantial traditions in Islamic culture. Similarly in the field of gardens, the importation of the idea of western style

\textsuperscript{17} The author discussed this point with Dr. abd-al-Basit Badr (the head of Medina Research Centre) and he explained that what he wrote was from the point of practicality not from a design or historic point of view. He
public parks and gardens does not contradict with any Islamic law directly. On the other hand, this replacement has alienated many Islamic traditions that were once carried out in Medina gardens, e.g. charity, endowment, *Ihia al-mawat*, etc.

Another problem the westernisation process yielded is the loss of local identity in the urban image. The fact that Medina as well as Makkah, the two holy cities of Islam, are home to and the destination of all Muslims around the world, gave mosques and other institutional buildings like endowments and *sabiel* (public drinking fountain) the chance of borrowing from other Islamic styles of art. In contrast, residential and other secular architecture as well as gardens had been developed heterogeneously within the local culture and traditions which gave them a great deal of uniqueness. Despite this historic uniqueness, the urban landscape of Medina, as well as of many other Saudi large cities, was turned into a mosaic of international styles (Mofty 1989).

One of the prominent problems in urban development in Saudi cities is the vigorous embrace of modern technology (Asfour 1998; Youngman 1977; Kathleen 1976). The industrialisation of agricultural fields, for example, relied solely on the latest technology in this field. Problems of such policy do not only emanate from the fact that such change have replaced traditional gardens, but also razed a historic gardening culture and turned gardens into industrialised fields that lack artistic and cultural dimensions. The industrialised gardens and transported countryside has led to a loss of a pastoral aesthetic among the public as well. In the United States, Schauman (1998) highlighted that in the American countryside, ‘the American public has diminishing opportunities to experience an actual agricultural landscape. More and more of our citizens know less and less about the agricultural countryside.

James Rose (1961) advised that ‘a solution cannot be bought or transported successfully. It must be elaborated on the home grounds, so to speak, until something appears that could not possibly fit any other place in the world because it so perfectly belongs right here and right now.’ This is what Jamiel Akbar (1992) highlighted in his ‘Building on Earth in Islam,’ that without re-rooting the knowledge and re-inventing a successful model in the heart of the society, little success could be expected in revitalising local identity. This model, as Usamah al-Qaffash (1996) alleged, should not take the form of blind transplantation of objects, but rather an illuminated transplantation of epistemologies, values, and virtues. Al-Wakil concluded the concept of designing in conformity with traditions as follows:

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added that the city is challenged by a constant ascendance in the number of annual pilgrims and visitors that force the need for practical resolutions.
'designing within a tradition is not a pretence for repeating the old. It is not a mere act of imitation; for mimicry destroys the whole significance and meaning of the repetition of archetypes. . . Authentic traditional design is a complex process of careful adaptation and assimilation in an act of gestation. This ritual revitalises the spiritual identity of the community through the proper act of building, and the masterpiece is created by the faith of the artist in his tradition more so than in the arrogance of his revolt. . . The pursuit of novelty and the disregard of traditional norms and principles bring forth the loss of identity because the tradition is always greater than the individual architect; his true identity lies not in his alienation from but in his alliance with tradition' (cited in Steele 1988).

Another substantial problem is that changes in society experienced over the last four decades require a cultural transformation that would tolerate the alienated perception toward the authentic urban image. Mohammed Saleh (1998) highlighted the feasibility of educating public perception in order to promote the sense of intimacy between the community and its heritage of art. He advocated the idea of symbolising historic architectural styles in sculptural forms to 'beautify and amend central medians of streets' and to educate and therefore regain the public taste toward its history. At the first glance such a stand suggests that Saudi inherited arts and the modern culturally-changed society would go two separate ways; Saudi historic art would become museum like antiques in central medians and modern society would proceed in its craving for modernisation while extolling its history by marvelling at replicas of its history in sculptural forms. To make sure that history would not be turned into antiquities and mere symbols, people involved in the planning and design profession need also to re-establish traditional design principles in modern cities through physical engagement of such principles in modern urban development projects (Asfour 1998).

One of the conflicts in this problem of importing has greatly influenced the profession of landscape design. Most designers in Saudi cities have mistakenly gained the idea that the landscape profession aims chiefly the creation of scenic landscapes in both urban and rural setting. 'Nice view' obsesses most landscape design schemes leading to the stereotyped idea of creating 'nice views' dogmatically composed of carpeted ground, centred by flower beds, bordered by hedges, and cornered by large trees. Sultan al-Thaqafy (1991) in his survey on parks and gardens in three Saudi cities of Makkah, Jeddah, and Taief, stated the objective of such green open spaces as 'to help beautify the city and to provide sites for relaxation.' In modern times, such a concept is outdated and has been extensively criticised. Allen Carlson criticises scenic approaches toward the natural environment for the reason it limits humans concern with the natural environment to one cultural interest, which is visual interest (cited in Saito 1998). Kathleen Kelly (1976) indicated 'judgements
on the quality of the design of desert projects should be based not on how lush the gardens are or on how the problems of building a skyscraper have been solved, but on how well the designer has understood and used the desert to advantage, in addition to the standard criteria for good design’ (Kathleen 1976).

7.10.3. The Role of Change

In Islam, ‘change’ in general has a history of negative connotation, which relies on the strictly prohibited concept of bidāh (heresy which includes: innovation, alteration, or change in the Islamic traditions, rituals, laws, or rules). In Sunnah there are many Hadiths that forcefully state the degree of interdiction of bidāh. The Prophet (pbuh), for example, used to have a standard address in His sermons in which He, as narrated by Jabir ibn-abd-Allah, used to say:

‘... The finest words are the ones of the book, the righteous course is the one of Mohammed, and the worse of all matters is the invented manners, every invention is a bidāh, every bidāh is a delusion, and every delusion would lead but to Hellfire’ (Sahih Moslim 1435; Sunan al-Tirmithy 1560; Sunan abi-Dawoud 1560. See also Sunan ibn-Majah 205; Sunan ibn Dawoud 3996).

On the other hand, many Hadiths state it clear that the prohibited bidāh is not a universal verdict upon all forms of bidāh. The story of the Prophet with the tawbier al-nakhil (fertilisation of palm trees), cited in Sunan al-Termidhi, demonstrates clearly that bidāh can be considered lawful in cases that do not form any contradiction with any Islamic law. Abd-Allah ibn-Umar narrated that

‘I was the company of the Prophet (pbuh) when we passed by a group of farmers fertilising palm trees. The Prophet (pbuh) said ‘it could have been wiser if they leave it to the natural way. At the summer of that year, He passed by that garden and saw how bad was the produce of the palms. Allah’s Apostle (pbuh) asked ‘what happened to these palms?’ one of the companions replied: ‘oh Allah’s Apostle you said so and so and the farmers followed your advice.’ The Prophet said ‘this is your world and you are knowledgeable more than any others, do the best for your world.’ This Hadith declares that Islam does not make a fanatic stand against ‘change’ if it aims at lawful social or economic payoffs.

Design and history are two professions who possess various forms of concern for the future of natural environment that involve tradition and culture (Sandström, 1975). Culture, in its broad definition represent ways a particular society deals individually or as a group with different aspects of life that are relatively unique in pattern and form and are informed by the knowledge its society hold (Kluckhohn 1972). Linton (1945) added to uniqueness and knowledge, the aspect of
inher. **Thus, each society does not only possess a unique culture derived from its knowledge, that vary at various degrees with other, geographically, nearby or remote cultures, but also it has the mechanism of bequeathing this culture to their descendants. The other characteristic that a culture possesses as a definition is the possibility of development and change. Although development and change are two different actions a culture could experience, they equally have a particular reaction to the type and intensity of circumstances that cause such alteration. Each culture, for example, articulates a unique idea of nature that conforms with its knowledge, beliefs and values and work compatibly with its societal goals (Evernden 1992). On the other hand, the exposure of a culture into causes of alteration would inevitably lead into two results: i) a development of the culture or ii) a decline in particular fields in that culture. What decides the result is the coincidence or contradiction between the receiving and the influencing culture. Meanwhile interactions between contradicting cultures could also pertain into positive development, however, it necessitate a careful selection of what can be accepted, which would enhance, rather than change the original culture. Thus, acceptance and refusal of change is relative, but depends on careful predictions of future consequences and compatibility among immediate and long term objectives of the two cultures.**

In the planning and design profession, the city is ever changing, and when it is changed, people’s experience of it are changed as well (Burgess 1996; Hough 1996; Wood 1988; Spirn 1984). Gibson (cited in Sell and Zube 1985) defined sense of change as ‘awareness of actual past loss of place or fear of future change or loss.’ With few exceptions, the modern approach in new urban landscapes eradicates inherited genuine characteristics in favour of continuous urban acceptance of ephemerality, fragmentation, discontinuity, and chaos (High 1995). Abd-al-Wahid al-Wakil explained that ‘change sanctioned by tradition has never destroyed the unity of traditional architecture, but the notion of unremitting ‘progress’ which has been so dominant in the last thirty or forty years, has not only succeeded in destroying the unity and integrity of traditional ways of building, it has imposed the exact parody of unity, that is to say, regimented uniformity’ (cited in Steele 1988). Lowenthal (1979) asserted that the suppression of the past in cities does not only deny sense of continuity, but also dilapidates the identity of places and societies. Isolating a society from its past ‘leads in turn to ambivalence and uncertainty in the community’s identity: the alienation of people in their own home is alienation in its most extreme form’ (Sultan bin Salman cited in Facey 1997). The twentieth century was marked by the intrusion of Western culture to the Middle East which was considered as an interruption to a well established form of urban pattern (Thorpe 1988; Lawless 1980).
On the other hand, such advocacy against ‘change’ should not deny the possibility of attaining positive changes. City life style nowadays is, for example, rethought. ‘Urban life, with its horizons obliterated by high-rises, billboards, smog and apartment towers, causes one to focus inwards on the teeming rush of traffic and swells of people. The rapid pace of urban life tends to be reinforced by the closing in of open space and the compression of the visual landscape’ (Drew 1995). Tuan argues that the West nowadays seems to show a good deal of movement from the city as ‘rationalist-economistic, impersonal and technocratic’ to the city as ‘humanistic and socially sound,’ within a process Nicholas Entrikin called ‘the betweenness’ (Tuan 1992). In the interest of creating contemporary place, multiplicity is required in ideas and tools of applications to maintain this betweenness that lies in the embrace of simultaneous thoughts and diverse products (Entrikin cited in Tuan 1992). In the modern world, movement toward naturally and socially sound, as Coffin and Lipsey (1981) indicated, is one of the most the prominent trends that developed simultaneous thoughts, but diverse products. We see for example how modern society has justified its escape from city life to rural areas in, as Coffin and Lipsey (1981) concluded:

i. Suffering of over crowding and congestion.
ii. The desire to live close to nature.
iii. The dislike of the quick rhythm of city life style.
iv. To be self sufficient.
v. To have larger plots of land where they can own large gardens.
vi. To exercise better control over their lives.

In other words, what modern society is after in the selection of the modern urban environment is the appropriation of sense of place (Lynch 1988), that satisfies societal desires. These desires commonly share the idea of being as close to nature as possible, i.e. the natural environment conforms with most of Coffin and Lipsey’s reasons for escaping city life. Such presumed positive change does not have a direct conflict with Islamic doctrine, indeed ideologies, such as the ‘back to nature’ movement, should also be articulated within an Islamic scenario (Bokhari 1982).

In the case of Medina, change came in many forms, however, changes have always been judged on the basis of compatibility with Islamic judicial rules. Cemeteries are one of the most evident examples that show Saudis rejection of change in cases which directly conflict with religious rules (figure 7-22). On another level of rejection, there are many examples that demonstrate clear testimony that although Saudis accepted changes in their indoor and outdoor living environments, they maintained particular cultural norms and behaviour that have religious implications. In contrast, there are many examples that show how major changes have been accepted that have not been investigated in relation to religious principles.
Among these changes are those associated in the natural-cultural relationship. These changes have been grafted onto the Saudi perception of nature but are often flawed resulting in landscapes that contradict Islamic principles yet are generally accepted (see figure 7-24).

Figure: 7-22, Cemeteries in the Saudi urban landscape have passed through dramatic changes. Islam came to prohibit the erection of shrines on top of graves. This firmly established rule has been challenged through history in various forms. Old images evidence that the simple grave form (1), which aimed at equality among Muslims who are advised against segregation on the basis of wealth, was first topped by gravestones (2), and later in history elaborate shrines were built for Muslim scholars like Othman bin Affan (3). During the Islamic revitalisation during the Saudi era, Islamic rules have been restored in cemeteries and graves brought back to the simplicity Islam called for (4). This defeat of this non-Islamic trend, which was resisted by some Muslim sects, exemplify how religious rules are a major governing factor in the problem of accepting change in Saudi culture. This rejection of change happened also at a time other Muslim countries still accept changes in this kind of landscape such as in Egypt (5), and others who initiated the idea of embracing western morphology for cemeteries by turning their cemeteries into green areas such as in Kuwait (6) 'Kuwaitis will turn their cemeteries into green areas.'

Figure: 7-23, Although Saudis have experienced great deal of change in their indoor and outdoor urban environments, they still maintain traditional norms that have religious roots. Sitting on the floor in gardens whether in historic palm garden or in Regent Park in London (1); dining on the floor (2) whether in a traditional house 40 years ago or in contemporary elaborately furnished room is typically the same irrespective of time and place. Sitting on the floor reflects the Islamic call for humbleness expressed here in being close to earth of which Quran says 'From the (earth) did we create you, and into it shall we return you, and from it shall we bring you out once again.' Privacy, which was fulfilled as an important design criterion in historic architecture of Medina solved by rowshans is still a substantial requirement for modern houses and private gardens although often solved awkwardly by surrounding private gardens with 4-6m high wall of steel sheets that are susceptible to wind destruction (3).

Source of images: (1: left) al-Thaqafiah (Rabie-Jumad 1997), (1 right) Golt (1980), (2 left) Aramco World (Jan-Feb 1999); (2 right) Gordon (1979).
some of the prominent changes that bear witness the changes that plagued the natural-cultural relationship in Medina are found in many parts in the city for different purposes: (1) creating faked water falls on mountain slopes expressing un-wise use of water, (2) painting a mountain top ‘green,’ resonating the al-Andalus temperate landscape in un-effective way (the place is called al-Andalusia Park and Restaurant); (3) leaving quarried mountain slopes un-cured.
7.10.4. Medina Suburbs.

Even in the 20th century ‘villages and countryside,’ as Tuan (1992) indicated, ‘still enshrine traditional ways as opposed to ‘technocratic’ cities that possess ever increasingly extravagant lifestyle.’ Sell and Zube (1985) described the countryside as ‘landscapes valued as natural and unchanged wilderness, repositories of agricultural productivity, and communities adapted to stable ways of life and traditional values.’ In American culture, the countryside is romanticised and sometimes mourned as a place of simple life being replaced by new developments. Contemporary city settlers often do not have access to the ‘green,’ ‘peaceful,’ and productive’ (Schauman 1998) countryside. In the United States, 1.5 million acres of productive farmland is removed annually from the countryside for urbanisation (Rahenkamp 1983). Kathy High (1995) says in her remembrance of her childhood experiences in the countryside:

‘The landscape images of, say for example, my grandparents’ old farm (now sold and only existing to me in photos) invoke aesthetics and memory: how I remember and want to remember certain land shapes, the garbage pit, burned-down barn, flocks of guinea hens, and ways my grandparents struggled to keep the farm together. And how do I fill in the details in the years to come’ (High et al 1995).

The American suburb was conceived as a step toward a more-environmentally-benign lifestyle (Coffin and Lipsey 1981), modern Medina suburban lifestyle, in contrast, are identical to those of urban centres. Both have an equal rate of zero adaptational response to the surrounding natural desert environment. Public gardens in Medina suburb, from an ecological point of view, are typical to the ones of urban centres in the following respect:

i. The use of exotic planting materials in both areas.

ii. The soil of gardens of both areas are replaced by wadi soil brought from a nearby wadi courses.

iii. All gardens of Medina, whether in the inner city or in the suburb are regularly irrigated by pumped underground water.

iv. The ratio of paved versus planted area of gardens of both areas is the same, although parks of the suburb are larger than those of the inner city.

v. Size and intensity of water features of parks and gardens in the suburb are larger in number and size than those of the inner city.
vi. Permeability of pavement. The pavement material of all Medina gardens are almost the same regardless of ecological factors.\textsuperscript{18}

It can be concluded that most Medina public parks and gardens have given no consideration to significant differences in the local ecological setting of different areas in the city. Kennedy and Zube (1991) indicated that environmental considerations like water, soil and local plant availability, simultaneously with global concerns like urban heat islands, consumption of natural resources, and cultural values toward nature must feed into the decision making of planning and design of different categories of green open spaces in desert cities. It is important to recognise the limited natural resources and fragility of the natural environment of desert cities.

7.10.5. The Influence of the Market.

A simple glance at the international market would support Simmons’s (1993) contention that ideas of the west are paramount today to the extent that what is produced in and for the West is feasible for the rest of the world. It might also confirm his conclusion that ‘the world will all,’ eventually, ‘convert completely to the western world-view’ (Simmons 1993). In the modern world the markets are not restricted by any sort of borders. In Saudi Arabia, for example, the market is receptive to all international brands from all around the globe (Gordon 1979). On the other hand, the way people learn from the market, i.e. the dominant model available in the market, is a function of what products’ designers introduce to the market as the ‘Art News’ claimed in its election of ‘The Most Powerful People’ who were solely selected from the world of design (Anon 1993). In the modern world, products are not only artefacts that please people, do particular jobs, and serve several objectives (Latour 1987), however they also instruct people how to deal with issues of daily life according to their rules, instructions, and specifications (Papanek 1982; Rose 1994). Whether these products are exhibited in museums, presented in galleries, shelved in department stores, or even installed on a sidewalk, they fashion public taste.

In Saudi cities, this influence on the public taste, in most cases, had not been a result of changes on cultural values as much as the vendibility of products at a time the local traditional market was overwhelmed by modern and to some extent exotic products including landscaping material. The aesthetic qualities that once characterised Medina urban and rural landscape have been superseded by the newly arrived exotic materials known as ‘modern.’

\textsuperscript{18} (This data is based on site visits in the summer of 1998 to Medina public parks and gardens; reports of Medina Municipality on Gardens and Gardening 1991; 1992).
This pursuit of the possession modernity should not be exploited as justifications for an anti-historic design approach. We see successful examples of al-Wakiel’s designs implemented in the different Gulf States that relied heavily on modern building technology, which exemplified a benign integration between technology and traditional design schemes (Adam 1999). In some large national projects, Sturdy and Lancaster in "Gardens" (1991) commented on the successful integration between historic cultural and natural landscape and modern Saudi life style in what they called ‘large civic schemes.’ On the other hand there are other examples which went beyond interpretation of history to literal copying of past models. The ‘Bedouin Dream’ palace in Riyadh designed by Kenzo Tange (Quigly 1999), and other similar projects of the same fashion are unsuccessful examples. Such projects involve stereotyped ideas such as replicating a romantic tent form in an architectural structure in a way that does not address the surrounding natural desert landscape. This is due to the segregation the designer applied between the architecture and the natural landscape of the area. Such conventional approaches can not set an effective model for the public.

To elaborate on this argument, Javier Barba’s philosophy in the design of Tsirigakis’s house might be quoted here to represent an alternative thought to Tange’s approach. Barba said about the mountainous site on Mykonos, Greece, where he was commissioned by Akis and Molly Tsirigakis to build their island retreat house:

‘the question was not How do I get rid of this rock? But rather, How can I incorporate it, draw strength from it, embrace it? It is better to work with nature, draw from it and let it enter our living spaces in a positive, even poetic way” (Shrady 1999).

Such spirit is also found resonating in the ‘Mirsal Recreational Village’ in Jeddah, Saudi Arabia. Mohammed Omar Wali, the chief architect of this project expressed the basic philosophy between his project;

‘you cannot resist the natural landscape you are working in, however, you find yourself adapting your program to the inspirations the natural landscape imposes’ (Anon 1999).

It is worth mentioning here that the public has perceived Mirsal as a successful manipulation of the indigenous natural environment and a delicate abstraction of the architectural heritage that was blended well with a contemporary vocabulary of modern life style (Anon 1999). In both, Wali’s and Barba’s philosophy, the recycling of history is not only facilitated by the architectural heritage; the practical recognition and acknowledgement of the natural indigenous landscape is also a central issue in the design. The Diplomatic Quarter in Riyadh is one of the pioneer examples of a successful hybridisation of designed desert landscape and modern urban setting (Baer 1989; Taboroff 1989; Filor 1988; Waller 1988)
As previously stated, in recent history, Saudi governmental agencies concerned with issues related to culture and history have noted the urgent need of revitalising aspects of historic values embodied mainly in various forms of art like architecture, fine art, traditional crafts, and folklore performances. The response to these challenges has come in different ways, many of which involved formal seasonal carnivals. Examples of these projects included the al-Jinadria Annual National Carnival in Riyadh, Abraq al-Righamah monument in Jeddah, al-Edhaibet village in Riyadh, Dar al-Mebarrah in Jeddah (private project), etc. The National Jinadria Annual Carnival in Riyadh is a gross cultural celebration that was designed mainly to promote efforts to re-establish the bequeathed heritage of art in a way that could inspire the modern style of Saudi urban life. A smaller scale project is the al-Anqawi residential house in Jeddah, which is considered one of the most successful attempts to personify Hidjazi indigenous architecture in extensively modern form.

In addition, it is worth indicating here that revitalising history through celebrating desert in the urban landscape has also been promoted recently by upper class society in Saudi cities. This has been very prominent not only in the academic media, but also in the popular press. In the mass media and particularly in popular but serious periodicals, a remarkable focus has been accorded to the practicality of restoring the native desert environment in Saudi cities. 'Ezra 'au saharina talhan' (plant our deserts with talhan) (Plant our desert with Acacia gerrardii) was one of those provocative articles that have tackled this subject. The author, Al-Sihaibani (1999), posed rhetoric questions as why it is economically, environmentally, and culturally important to re-introduce native desert plants into the urban realm.

Such serious endeavours are likely to reverse the retreat away from native landscape by rooting the wisdom of this idea in the public consciousness. This might be particularly valued in the urban realm of middle class neighbourhoods. In Saudi cities, the middle class is the engine that drives the urban sprawl, for this social group forms the major proportion of the society. According to Sahier (1993) 65% of Medina households lies within this social class. A large proportion of this layer of society aspires to possessing a private house. On one hand, this social group are concentrated on the peripheral parts of the city where low land price is the key factor. On the other hand, creating a new scheme, i.e. desert landscape, in new developments is much more possible than changing an already established tradition, i.e. exotic landscape. The location of such areas on the urban fringe adds to the feasibility of creating urban desert landscape for the following reasons:

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19 Talh is the common name of Accacia
i) Kennedy and Zube (1991) indicated that the creation of urban desert landscape in desert cities relies on plants types used in gardens of private houses. To create such landscape, there is a need for large parcels of lands for private houses developments within which generous area can be designated for private or semiprivate gardens.

ii) The creation of desert urban landscape on the city edge is more visually accepted than within the inner city.

7.10.6. Private Gardens in Modern Saudi Culture.

In modern Saudi culture, looking after a private garden is not seen as contributing to the public good. With very few exceptions, gardens are always left with no proper maintenance after the first year of house construction. This can be attributed to the following factors:

i. Water is a big issue in Medina. Local municipalities advise against using tap water for landscape irrigation; supplying the city with water is expensive (the city receives its water from the desalination plant in Yanbu 250Km to the south-west of Medina). On the other hand, the ministry of Agriculture and Water Resources has recently, allowed pumping of ground water for garden irrigation. Despite the benefits of this decision for people interested in having private gardens, the costs of well drilling has limited the use of well water for irrigation.

ii. Throughout the history of Medina, private gardens were not part of Medina houses with the exception of the interior diwan or kharjah (a small garden usually located in a roofless room in the third or fourth storey of a house). The house and the garden were always located in two different areas. In Kharjah, the scale of the garden was small and very much compatible with the fact that water is a limited resource in Medina. Because it was part of the building structure, it allowed the female members of the family to attend the garden since privacy was provided in a decent manner (al-Turki 1998). This perfectly suited the Madani culture at that time when male members had their responsibility in the more extensive actual gardens, i.e. the bilads. On the other hand, in modern Medina, Kharjah have not been incorporated in the modern architecture of houses. Gardens, however, are created in setbacks around residential houses. The walled 2-3m setbacks around residential buildings have, in most cases, been paved for the dimensions of these private open space cannot readily accommodate a planted landscape. In addition, the lack of privacy and the fact that the Madani tradition of living in houses with no outdoor gardens have made it difficult to establish a garden tradition.
As a result, plantings is generally restricted to a couple of trees with some groups of flowering shrubs.

iii. With very few exceptional cases, Saudis are not accustomed to the concept of private gardening around the house. This explain why most private gardens in Saudi residential units consist of paving around typical exotic trees like *Azadiracta indica*, *Delonix regia*, *Ficus altjesima*, *Ficus nitida*, etc., with flowering under story plants like *Lantana camara*, *Bouganvilia*, *Cana indica*, etc. In many instances, exotic trees barely survive and the under story plants die off without regular replacements. The only exception to this are large villas and palaces that are in most cases maintained on a regular basis by a specialised plant care contractors. Kathleen Kelly (1976) indicated that what set Saudi public gardens and parks apart from their counterparts of the west is the fact that the later rely on full time specialised gardeners and professional staff, this is not necessarily the case in Saudi gardens.

iv. As gardens and gardening is not a tradition in the modern Medina, planting material, gardening tools and devices, design experts, supportive technical staff, supplementary public literature on garden and gardening, and nurseries are not part of the local market. In Medina, the only two sources of plant material are the traditional farmers’ stores and the central Municipal nursery. The Municipality offers seedlings of all ornamental plants free to the public in order to in on hand encourage public interest in gardens and gardening and on the other hand enhance the municipality’s efforts of greening the city. Unfortunately, such endeavours have not yielded fruitful results. Seedlings in most cases dry out soon after plantating due to the public’s lack of experience and infrequent attention.

v. The typical housing units in Medina are villa types inhabited by families with 5-10 children. Set backs around these villas are mainly valued for offering a space for the children to play in. The use of this kind of open space as a play ground contradict with the possibility of maintaining a healthy garden.

In conclusion, Medina suburbs and houses are not designed in a way that can support successful gardens. Medina people also show no great interest in gardening activities, making the possession of healthy planted garden impossible. In addition, the natural environment of Medina makes it expensive to maintain.
7.10.7. Social Behaviour in Indoor and Outdoor Spaces.

In contrast to the Saudi social life style, in the West life style in both private and public spaces is less constrained. Shilling (1993) explained that for Euro-American culture home life is free of many of the behavioural constraints and restrictions which were part of the ancient world. The link between spatial types, i.e. private, semi-private, etc., and social relationships is crucial for understanding the public use of open spaces in Muslim cities. In Medina as in all Saudi cities, people’s accessibility to, and behaviour in spaces are very much a function of the type and degree of closeness of relationship among members of a social group within the vicinity of a space. Public behaviour in, and accessibility to indoor and outdoor spaces is historically informed by both the Quran and Hadith. The hierarchy of accessibility within indoor spaces begins, as the Quran advises, by the parent’s bedroom which is extremely restricted even to children who have reached the age of puberty. The rest of the house is also divided between family members according to the category of kinship. Relatives who come as visitors but are not mahram (male relative as brother, father, and uncle) are restricted in movement inside the house and in most cases can not go beyond the guest rooms. The houssh (the courtyard of the compound) is the third rank in the hierarchy of social-spatial structure of Muslim historic cities. Neighbours have specific rights that derive from the concept of jieerah (the state of being a neighbour) among people living next to each other. Males whose houses are in a particular houssh are not allowed to enter another houssh at times when male members are not expected home, i.e. morning times. Some of this social-spatial system that controlled accessibility and use of indoor and outdoor spaces is still in use.

In addition, division on the basis of gender in the Saudi social structure is profound, to the extent that it has informed all aspects of Saudi social and cultural life. It might be said that there is nothing in Saudi social and cultural life that does not respond in some way or another to this division system which separates males from females and operates in indoor as well as outdoor spaces.

This social division system has created corresponding design treatments. Haram (literally means forbidden, the women’s section of the house) as Bourieu (1979) defined it is ‘the inside and more precisely the female universe, the world of the secret, the enclosed space of the house, as opposed to the outside, the open world of the public square,’ i.e. the men’s world. Zugag (the alley around the house), for example, was an outdoor space that functioned perfectly as daily recreational and socialising space where male friends, kin, and passing people gather at afternoons in front of houses. Females who are not allowed to sit in public had the right of sharing the zugag for the very same purpose, however through the rowskhan that lies in the females’ domain (the house), but projected out as part of the outdoor space. As the veil serves to create a symbolic personal boundary between
females and males while they share physical space (Vom Bruck 1997), the rowshan created this kind of boundary between indoor and outdoor landscapes. This equality in the right to use and possess space was valid also inside the house. Indoor spaces were designed in a way that allowed social contacts among the family members at different times of the day. They also functioned in applying division between males and females when visitors are within the haram (the house). This division system was also applied in gardens. The house’s kharjah or diwan (the indoor top garden) is part of the female world and acts as a microcosm to the palm gardens which were part of the men’s responsibilities. In Medina, every family used to picnic in its private garden or rent a garden in which no strangers were allowed during the family’s stay in that garden.

7.10.8. The Saudi Desert and Initial Societal Perception.

The Saudi Arabian desert is part of a greater desert called the Palearctic Desert which includes the vast deserts of Russia, China, India, and some African deserts. On maps geographers named three major Saudi deserts, al-Dahna, al-Ruba al-Khali, and al-Nufoudh, of which Medina is not part of any of them. Among modern nomenclature for desert, i.e. environmental, military, etc. locally designated traditional nomenclature is the most commonly used for sub-regions of deserts of Saudi Arabia. For Medina people, names given to sub-regions of the desert are derived from tribal ownership, morphological forms of the natural landscape, dominating natural features in the landscape, and historic definitions of places in the desert. These traditional nomenclatures are the ones that contributed most in the creation of Medina culture. In addition, the formal translation of the term desert (sabra) has not been, historically and culturally, important in Medina. The terms al-khala or, most commonly, al-bar, however, are publicly used to mean desert, where al-khala literally means (emptiness) and al-bar means (wilderness beyond the city edge).

In recent history of Arabia, desert continued to represent in Saudi culture a natural metaphor of prowess, mingled with the notion of striving and victory. In contrast to external viewers’ attitude towards desert landscapes that Tuan (1993) described as ranging between detestation and economic commodification, Saudis, according to Dickson (1994), Cole (1975), Doughty (1936) saw desert as an intimate place they historically called dirah (home). Desert as asserted by Dickson (1994), Thesiger (1959) and Cole (1975) had never been named in a negative descriptive manner such as the way geographers in the past called the ‘Empty Quarter.’ Designers, obsessed by the western

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20 Not like the words ‘desert’ in English, ‘vustea’ in German, ‘desert’ in French ‘sahara’ in Arabic which mean barren uncultivated land; ‘erimos’ in Greek, ‘sha-muo’ in Chinese, and ‘sa-mak’ in Korean which mean solitude sandy area; ‘dirah’ in the Saudi local dialect means home.
idea of parks and gardens have skipped the paradoxical fact that desert has its own inspiring as well as brutal traits, forms, plants, materials, and natural phenomena that can be enhanced and/or developed in a way that conform with the local natural and cultural setting. The long history of western park and garden design, that began in 11th century when the Norman brought the traditions from Sicily which were established by the Arabs (Harvey 1993; Lasdun 1991), has been developed in a way that does not always fit the contemporary culture of Saudi cities (Hamed 1989). This situation applies to most Middle Eastern cities. Muaffaq Asbashi (1994) in his exploration of the environmental architecture in the Gulf States and Jamse Steele (1988) in his architectural monographs on Hasan Fathi considered the foreign influence on Arab landscapes as a serious threat that put their unique natural-cultural integrity at risk throughout the Middle East. Parallel attitudes to the international style in the field of landscape design is also found in the Southwest of the United States, on which James Rose (1961) commented:

'We are preoccupied with gadgets-wall to wall-with only a sideways glance at what they are doing to our environment, and when we do take a serious interest, we tend to borrow from other cultures the 'Japanese' garden is very popular at the moment, and we have not yet recovered from the 'English' lawn and perennial border.'

The creation of urban desert landscape would bring the natural setting that inhabitants used to go to for recreational purposes. Kathleen Kelly (1976) in her proposed earth berms around housing projects said 'families may begin to eat their dinners on the berms as they now do in open areas and on jebals (mountains) near their homes.' She suggested also that plant design on earth-berms 'should in no way give the impression that the berms will present a lush forest view to the inhabitants of a desert settlement.'