

ALISA BRAUDO



THE BUSTAN

A GARDEN OF THE PAST

IN TODAY'S LANDSCAPES

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"Perhaps this garden exists only in the shadow of our lowered eyelids, and we have never stopped to ponder what we are seeing and living, to draw conclusions, to contemplate from the distance."

(Invisible Cities, Italo Calvino)



Introduction

My Interest In The Bustan

The bustan for me has always had a somewhat mysterious character. Since this kind of garden is almost disappearing from the landscapes of Israel, I haven't had a chance to visit many bustanim.* Its image, however, is very vivid in my mind through literature and poetry. It has the charm of unvisited places, a fragrance of love, the music of the East. Fantasy and reality seem to blend harmoniously in it.

In Israel today, the bustan is often mentioned as the kind of landscape we should preserve and recreate. This new interest is part of an increased recognition among planners and designers that we should look to local examples for our future designs. Little, however, is known about this garden, and even less is done to incorporate it into contemporary designs. Its image is familiar to many, but its physical characteristics and symbolic meanings are not widely known.

Intrigued by the idea of the new interest in this little explored subject, I chose to study it in order to understand it better, and to find out in what ways it could be valuable and applicable today.

My search, however, was not based merely upon curiosity. From the little I knew, I believed the bustan would be a good model for study and observation. Its historical roots, its complexity, its modest scale, and its close connection with the land - seemed to me important things we lack in contemporary design. I was hoping that this exploration would teach me how to create places as rich and expressive as those of the past, while still responding to needs and values of modern society.

* Bustanim: plural of bustan

As I probed the subject, the veil of mystery has gradually been removed. The bustan proved to be a 'down to earth' place, with distinct physical characteristics. I feel as if I have eaten from the tree of knowledge, and lost some of the beauty of the primeval essence. Nevertheless, a deeper exploration reveals hidden connections that give me an insight into the bustan's mystery. Hopefully, these special qualities have been captured in this work, conveying the elusive charm along with the concrete character of the bustan.

* * *

Choosing to do this kind of work while here in America has presented me with difficulties in being faraway from sources and from the 'real places.' However, doing graduate work has been an opportunity for me to concentrate on a subject for a long time while receiving good instruction in an academic atmosphere. While still working and designing in Israel, a few years ago, I hardly had time or the perspective to seriously explore and consider what our future landscape should be. In these past two years in America I have had a chance to 'contemplate from the distance' my homeland landscapes, while learning about other people and other places and gaining insights into landscape design in general.

This work is a result of my desire to add to the luggage (which is already heavy) I'll be taking back to Israel a clearer vision of what can be done there, by me or others, in the future.

* * *



Sources Of Work And Personal Biases

Like other patterns of folk culture and vernacular architecture, the bustan, as mentioned before, has not been explored and documented extensively. In Israel, in particular, the documentation of gardens as a physical form, has hardly existed. Only a recent interest in the subject has generated some studies of vernacular forms of agriculture and historical reviews of gardens. Unfortunately, many of the old bustanim have disappeared from the landscape, making examination and study more difficult. Many of the urban bustanim have been destroyed as modern urban development took place, and rural gardens were deserted or neglected through political shifts and changes in traditional agriculture. The bustan as a living form exists today mainly in traditional agricultural communities, in private gardens, old neighborhoods, and sacred places.

Due to my geographic distance from Israel, I have had to rely heavily on documents: photographs, descriptions and reports of other people. In that regard, I see my work as incomplete.

On the other hand, I found a tremendous amount of descriptive material on the landscapes of Israel, created by travelers and pilgrims to the Holy Land in the 19th century. The reports and the wonderful illustrations have given me an insight into the places long since disappeared, and of a culture before the era of modernization. Obviously, the descriptions of the native culture, as done by Western observers reflect the observer's set of values and personal biases. Nevertheless, both 'objective' facts and personal perceptions were a valuable resource for understanding the nature and significance of the bustan.

Easier to find than documentation of actual places were images of the bustan in literature and poetry. Undoubtedly, its symbolic and metaphoric influence grows beyond its physical boundaries. The images though, are derived from real places, and may therefore be regarded as a legitimate resource for the physical character of the bustan as well.

Other resources for understanding the bustan were its historical precedents and cultural setting. Putting it in an historical context and looking at similar gardens in the Mediterranean basin, have given me a wider perspective and clearer ideas about the characteristics of the bustan.

Finally, my own personal background could not be disregarded. When combining the different sources, I have certainly assimilated my own set of values and cultural background into whatever 'objective' illustration of the bustan was formed. Being a Jewish, native-born Israeli of European descent, and a landscape architect - is probably reflected in my perception of the bustan. 'The bustan' in this work then, is 'my bustan' - as formed in my mind through other people's eyes and thoughts.



1. Drawings of travelers were a wonderful source of understanding the bustan as part of a vanishing culture.

The Focus Of The Work

In this work I chose to focus on some aspects of the bustan which seem important and applicable to contemporary society. The work is so structured that each part, except the first which is more general, represents a landscape value as reflected in the bustan, and its relevance and potential applications today. By landscape values I mean the physical expression of things that are culturally significant, and are imprinted in the landscape. The values which I would like to see preserved and continued are:

1. Response To Place: Creating a place which fulfills human needs, physical and mental, in relation to a particular climate and environment.
2. Reflection Of Agricultural Systems: Emphasizing the connection between man and land as a life-giving source in a garden setting.
3. Fun And Function In The Garden: Combining pleasure and utility in the garden - thus creating a place which serves many purposes, reflects different aspects of human life, and demonstrates the beauty of the agricultural art.
4. A Place Of Symbolic Connections: Transcending a physical place to a place of spiritual meaning by its linkage to tradition, folklore, religion and myth.

Each of these chapters includes other valuable aspects which reinforce the basic theme.

Finally, I do not see this work as a comprehensive research on the bustan. There is a lot more to be studied and understood. Rather, I regard it as a framework for discussion about the value of this garden, and similar kinds of gardens, in contemporary landscapes. More modestly, I will be happy if this work will generate a better understanding of this beautiful and almost forgotten human creation.

PART 1

What is the bustan

GENERAL PRESENTATION OF THE SUBJECT:

- A COLLAGE OF IMAGES
- NAME - SOURCES - ETYMOLOGY
- CHARACTERISTICS AND ATTRIBUTES
- HISTORIC TRANSFORMATIONS
AND CULTURAL INFLUENCES
- THE BUSTAN IN LITERATURE AND POETRY

1. A Collage Of Images

The bustan means different things to different people. Although very familiar as a concept in Israel, one gets a variety of answers to the simple question, what is a bustan? The most common answer is that it is a fruit garden. An Arab villager will probably have a slightly different answer. For him the bustan is a garden irrigated by a spring or a well. An Israeli-born might associate it with the wonderful gardens in deserted Arab villages. A Sephardic Jew, third generation in Jaffa, will tell you about an enchanted garden in the city which he used to visit as a child. Some will tell you that it is a garden of the past, and others will say it is an existing, living form. For some, the name bustan will evoke images of romance and love, and others will tell you it is just an agricultural garden. People will mention its geometric layout, and others will claim it is 'messy' and disordered. Some might have no idea what it is, but will tell you about the 'Spanish bustan' - a play describing the folklore of a neighborhood in Jerusalem. For many Jews from Moslem countries, the bustan is alive as a memory from their native lands, and for a young man from Tel-Aviv, the bustan means a small restaurant in Jaffa In all these images - the words 'wonderful,' 'old,' 'fruits,' and most of all 'good smell' will be repeated as a common thread.

What I think is important about this collage of images, is the wide picture portrayed of a place full of meaning to different cultures. Many of the individuals and cultural groups that compose the Israeli human landscape, can find in it expression of their own life and values. People will identify it with their past, with memorized songs, with toil and sweat, with times of pleasure. This accumulation of cultures creates a place which is more than the sum of its components. This garden is not merely its trees and flowers, its fountains and pathways. It is more than a social place or a place for growing food. This garden has become stories and poems, art and folklore, part of the history of the people and the land.

2. Etymology - Name Sources

The Hebrew dictionary defines 'bustan' as an orchard or a fruit garden (1), referring to its most popular image in Israel. The word 'bustan' itself is formed from the Persian words 'bu' = smell, perfume, and 'estan' = a suffix of place, meaning 'a place of fragrance.' (2) The Hebrew word 'bosem' (בֹּסֵם) = perfume comes from a similar root. Bustan is used in Arabic in the sense of garden in general, and sometimes in the sense of orchard. In Turkish, it refers to 'kitchen garden,' and vegetable gardens called 'bostani' were found in Samarcand. (3) In the Algerian dialect, it denotes 'cypress' and in Beirut it means a plantation of mulberry trees. (4)

In Israel the 'bustan' as it appears in the indigenous agriculture refers to: "a mixed garden, consisting of different kinds of fruit trees and vegetables, irrigated by the system of the bustan." (5) The irrigation system named 'bustan' is used in the dialect of the Arab 'fellach' (villager, farmer) in Israel. It refers to the use of a spring or well as a reliable water source year round. (6)

The word bustan does not appear in the Bible, and it probably came into use in Hebrew in later times, through Islamic influence. The earliest use of the word in Jewish literature which I found is in a work entitled 'The Bustan Al-Ukul' (The Garden of Wisdom) written in Arabic by a Yemenite Jew in 1165.

The term bustan probably became best known in the Near East through a book-length poem by this name, written by the Persian poet Sa'di at Shiraz in 1257. The work is a classic, and has been read in primary schools in every country where Persian has been cultivated, especially in Iran, India, Central Asia, and Ottoman Turkey. (7)

In studying the word bustan, two other terms should be clarified: 'garden' and 'pardes.' Both words appear in the Bible, but their meaning in Hebrew has been transformed through the ages.

The word 'garden' (גן - in Hebrew) is related to the root
 גן = to protect, guard, implying it is an enclosed, protected
 place. Today this word encompasses a variety of meanings: it can
 relate to a park, a fruit garden, a flower garden, an outdoor
 entertainment area, and it is often used as an image for a blossom-
 ing urban or rural area. Combined with other words it denotes
 nursery school (גן ילדים), zoo (חיות גן), playground (משחקים גן), and
 paradise (גן עדן). Its Biblical use, though, was much more precise
 and referred to the kind of garden prevalent at that time: an
 irrigated garden, usually in the outskirts of the city or the
 village, with fruit trees, scented shrubs and sometimes vegetables.
 (8) (9) Some identify the garden with the Persian 'bagi' (garden)
 as related to the word 'bikaa' (valley), due to the fact that most
 gardens were located in the valleys, where water was found.



1. Dead Sea Apples

The ancient Biblical garden was basically
 a tree garden, consisting of fruit trees and
 scented shrubs.

It's clear then that the basic character of the Biblical garden is very similar to the bustan, as it appears in the vernacular landscapes of Israel today. Its literary and symbolic images drew heavily from Biblical sources as well. Therefore, the bustan is perceived in this work as a continuation of the Biblical garden.

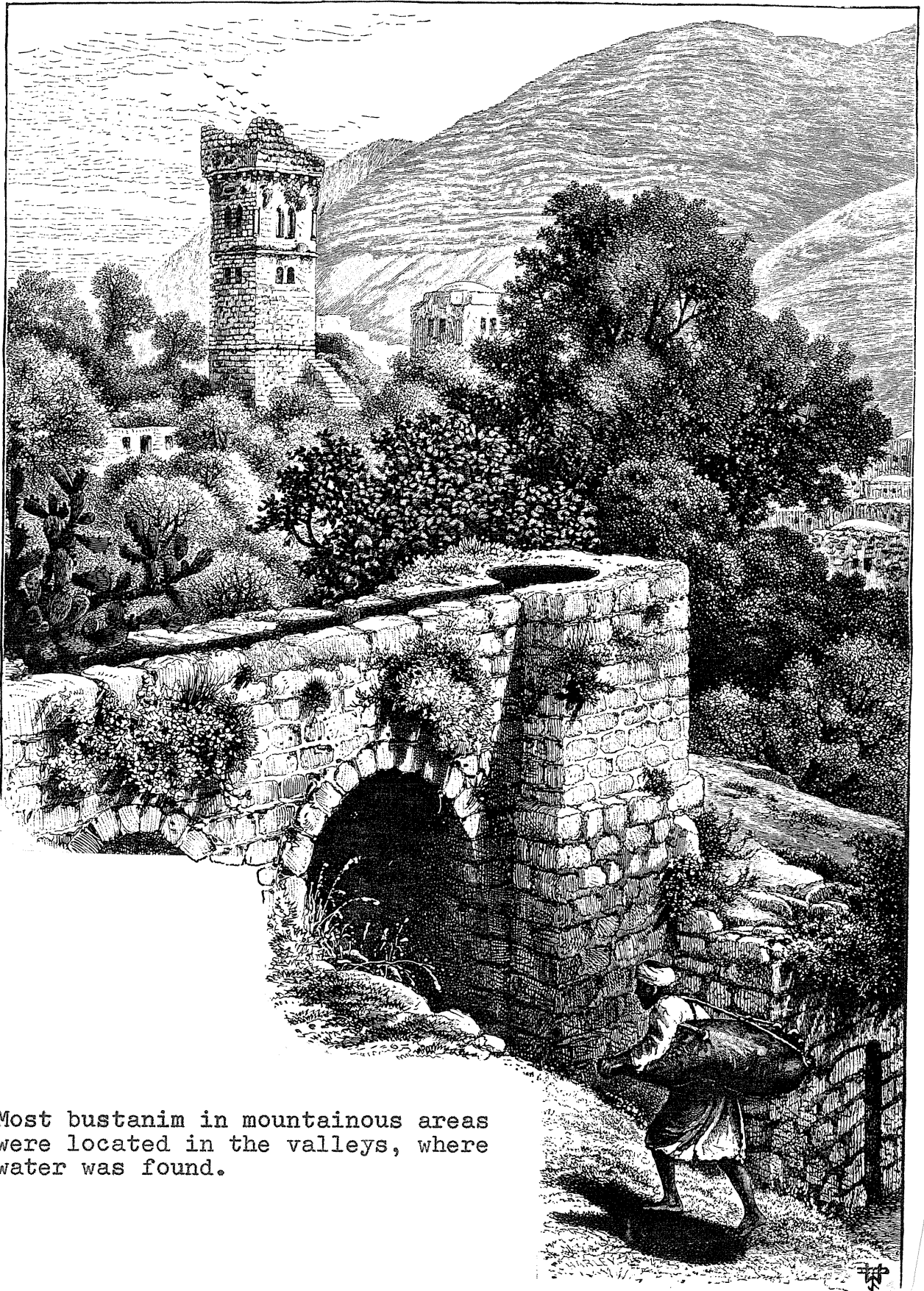
Related in meaning is the word 'pardes.' It denotes today in Hebrew an orange grove or a citrus grove. Its ancient meaning, though, was much more encompassing. Originally, it derived from the Persian words 'para' = to go around and 'dise' = to form (10) meaning: to form an enclosure. In the Bible it is used three times: once as a garden, and twice as a park. (11) Later on, in the interpretive writings on the Bible (Talmud and Mishna), it was identified with the irrigated gardens in the city or around it (12), and thus was probably an earlier word for bustan. In the medieval writings it was imbued with symbolic meaning, but the initial identification with an enclosed garden remained unchanged. Therefore, the word 'pardes' is perceived in this work as part of the image of the bustan as well. This word was transformed in Greek into *παράδεισος* = paradise, and thus known to us today with its heavenly connotations.

We can conclude then, that the term bustan, although widely known in the Near East, assumes different meanings in different cultures. Nevertheless, its Israeli manifestation has particular characteristics which can be identified in a variety of gardens.

3. Characteristics And Attributes

The bustan has taken different physical forms in different times and places. One of its typical characteristics is that there is no 'typical bustan.' However, some of the elements repeat in all the variations, enabling us to define each one as a bustan.

I will illustrate here briefly the characteristics and attributes of the bustan, trying to give a whole picture of the garden. Each one of these topics will be discussed and elaborated upon later on in this work.



Most bustanim in mountainous areas were located in the valleys, where water was found.

2. The bustanim at the entrance to Nablus, and the aquaduct on the slope of Mt. Grizim, as seen in about 1870.

Physical Characteristics:

- It is an enclosure.
- It is a relatively small scale place (typically ranging from 1/2 to 10 dunams. For example, the Bedouin bustan in Sinai is about 1.5 dunams, and the bustan of St. Catherine is about 7 dunams).
- It consists mainly of fruit trees, scented shrubs, vegetables, and herbs. No lawns are found in the bustan.
- It is an irrigated garden (although a form of unirrigated bustan has also evolved in Israel).
- It includes a variety of plants, with only a few of each kind.
- It is based on inter-culture of plants (mixed planting of trees, shrubs, and plants that support each other).

The Design Of The Garden

- The order, in general, is derived from agricultural patterns rather than from a symbolic or formal order.
- It is a dense garden, with small divided spaces, based upon an intensive use of the land.
- The plantings are defined by beds, hedges or irrigation channels.
- Water is an important feature, and usually very visible in the garden.
- In many cases, there is an outdoor structure such as a pergola, an arbor or a pavilion.
- Fragrance is an important element of the garden, and the place is designed to be experienced sensually more than visually.

Functional Purposes

- The bustan is basically an agricultural garden, but it assumes social and pleasurable roles as well.
- It is mainly a garden for self-sufficiency, related to a family or a community, and is not designed to provide an economic surplus.

Historic And Cultural Context

- The bustan has evolved in the area of the Middle East, responding to its particular climate, landscape, and culture.
- It is a vernacular garden, that cannot be separated from other forms of folk culture which evolved in this area.

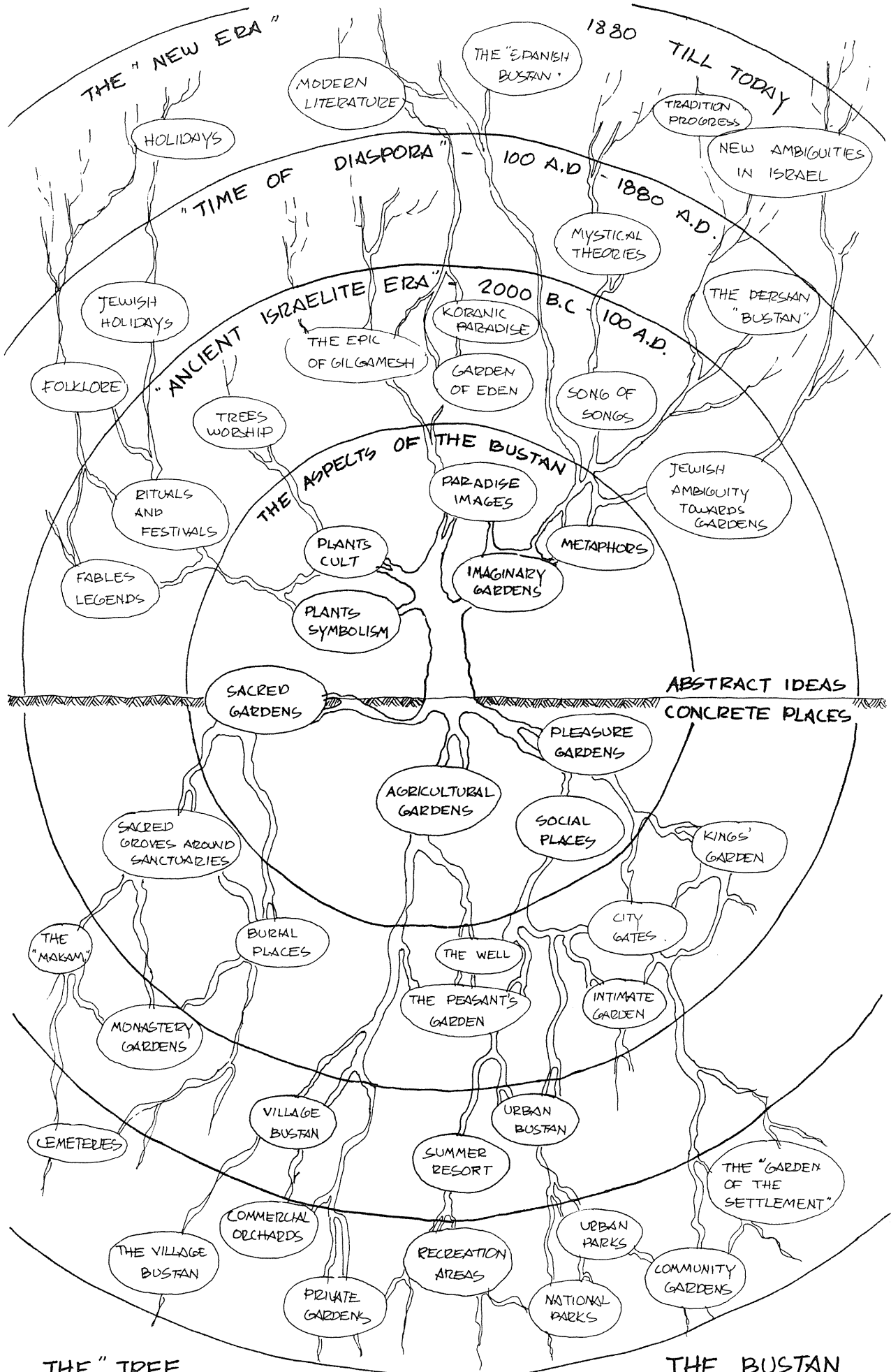
Variations

- The bustan is a flexible pattern that absorbs cultural diffusions, and changes according to its geographic location.
- It is found in rural and in urban places.
- Although it has a generally modest character, it was also found in the gardens of kings.
- Similar gardens are found in the area of the Mediterranean basin.

Symbolic Meaning

- During the ages it was imbued with rich symbolism in the different cultures, and exists strongly and vividly as a concept or an image.





THE "TREE OF TRANSFORMATION"

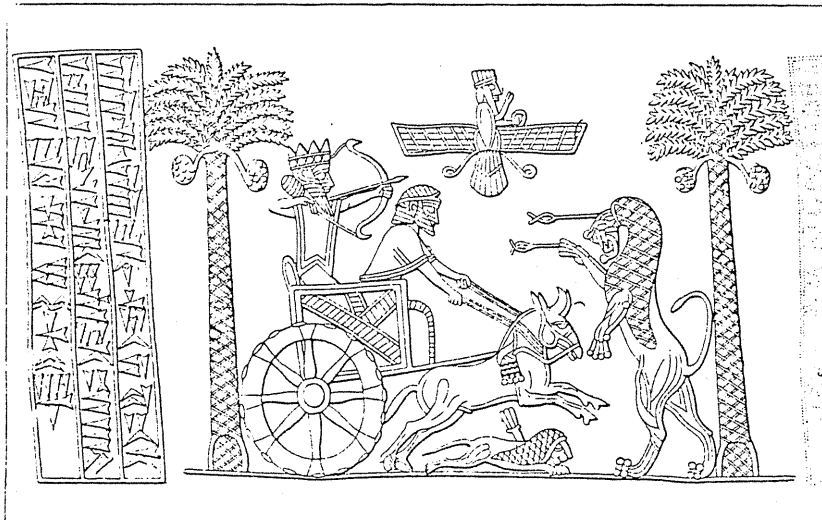
THE BUSTAN THROUGHOUT TIME

4. Cultural Influences And Historic Transformations

Cultural patterns are always in a dynamic process of transformation. Cultural diffusions, political changes, economic and social influences - all transform existing cultural patterns. Even when the process is slow and invisible within the span of a human life - it is clearly demonstrated in the larger historical perspective.

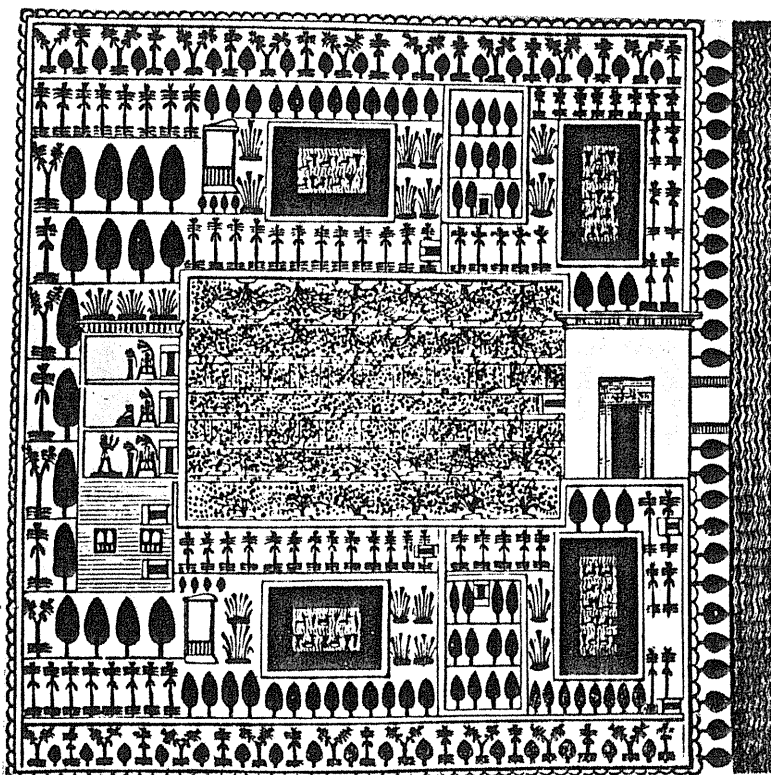
Israel is located at the crossroads of continents and cultures. It has always been a place where different cultures interacted, and it has also been a source of influence on its surrounding environment. The bustan, as a physical form, has absorbed different influences during the ages. Its abstract existence in religion, literature, and poetry of cultures of the Near East has taken many different forms, and is in the process of further transformation. These two aspects, the concrete and the abstract, should be perceived as complementing and nurturing each other, and are thus illustrated in the 'tree of transformation' of the bustan.

The main cultural and political powers in the ancient world were Mesopotamia and Egypt. No doubt, the ancient Israeli gardens of Biblical times were influenced by those two great powers. However, the Mediterranean landscapes and the Jewish culture generated the creation of gardens that were different



3. An Assyrian hunting park. The Israeli bustan was smaller and more confined than the vast Assyrian parks.

from those of neighboring cultures. In general, the Israeli gardens were smaller and more confined than the vast Assyrian parks, and not as lush as the oasis gardens of Egypt. Moreover,



4. Plan Of An Egyptian Garden (about 1500 B.C.)

The Egyptian garden like the bustan was basically a tree and a flower garden. Its layout however, is much more formal.

nature worship, an important part of the ritualistic purpose of ancient gardens, had been eliminated from Israeli gardens by the montheistic religion of Israel. The reverence for trees, flowers, and fragrance persisted, however, as an underlying part of the garden.

Succeeding powers in the Near East were the Greeks and the Romans. The Greek philosophy of unity with nature was rejected by the Israeli religion, yet the Hellenistic affinity to earthly pleasures is clearly manifested in the royal gardens of Israel, such as the winter resort of Herod in Jericho. (13) Roman

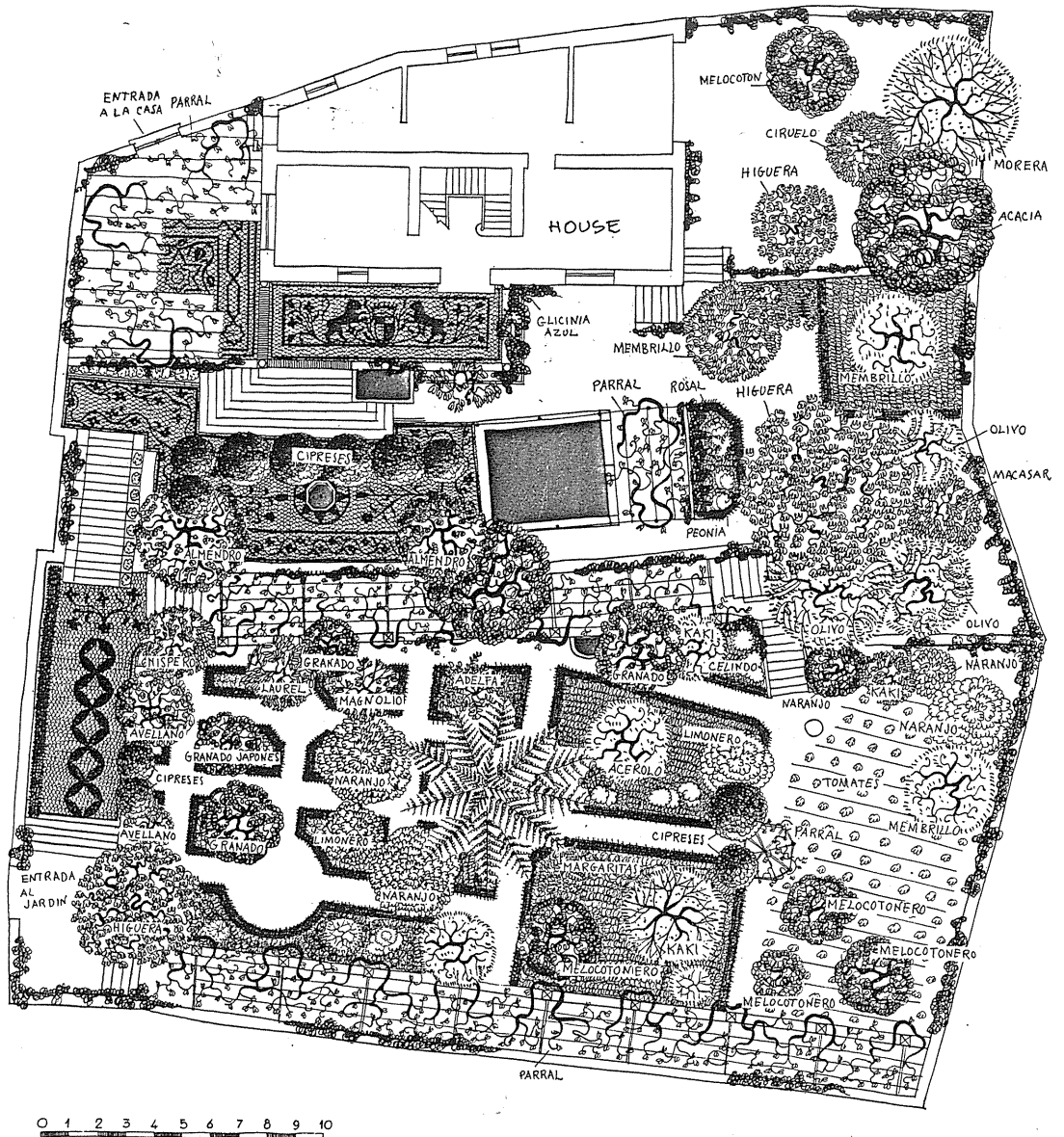
culture probably had an influence on the Israeli bustan - establishing a closer relationship between house and garden both physically and conceptually.

Symbolic shapes such as the division into four or octagonal fountains which are characteristic of monastery and Islamic gardens can sometimes be found in the Israeli bustan and can be attributed to Islamic and Christian influences.

A major change in the perception of gardens in the Western world occurred in the 16th century in Europe (14), as pleasure gardens were predominantly separated from their functional and symbolic aspects, and were designed to be visually experienced and to accommodate social activities. The Renaissance Italian gardens and the French formal gardens are the two most outstanding examples of this trend. They, in turn, generated the creation of spectacular pleasure gardens all over the Mediterranean basin.

The bustan, in contrast, has always retained its modest agricultural character. The reason is probably the social and political structure of Israel for the last 2000 years. For centuries the country had been under the occupation of foreign rulers, therefore a royal court and affluent class that could support the development of pleasure gardens, did not exist. Most of the population belonged to the agricultural community, and their gardens were a reflection of their needs and their way of life.

Similar modest folk gardens are found in other areas of the Mediterranean. In excavations in Pompeii, agricultural commercial gardens are found within the city walls. These gardens were of a much more functional nature than the gardens and inner courts of the richer residents. (15) In an Italian drawing from the 16th century, a Medici family villa is portrayed surrounded by a garden. This is basically an agricultural garden which consists of the interculture of olive, wheat, and grapevine. (16) It is an enclosed, defined space which obviously served for leisure time as well as for agricultural purposes. In a neighborhood in



5. A Carmen in Granada - The Modest Folk Garden Of Spain

(a drawing from about 1950) This plan demonstrates the spontaneous design of the garden, which responds basically to topography and the location of the house. It is intensively planted, combining food-plants with ornamental paving to create outdoor rooms for times of leisure.

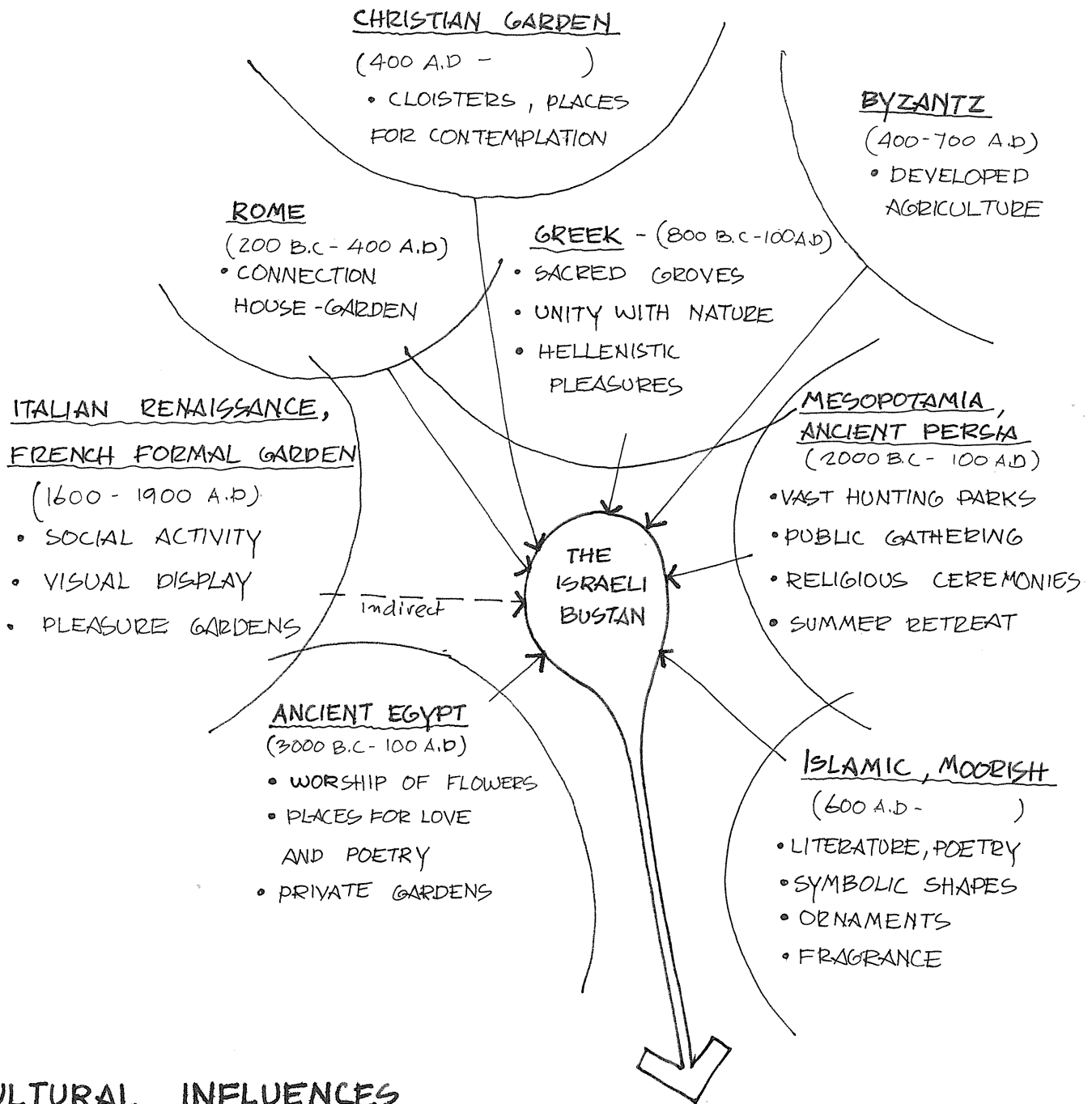
Granada - the Albasin - not far from the famous gardens of Alhambra, another kind of garden exists. This type of garden, named 'carmen' is a distant relative of the bustan, even in its name. The word 'carmen' is derived from 'karm' meaning vineyard in Arabic, whereas in the Arabic dialect of Granada the word bustan meant a garden of trees and plants. (17) The Carmen of Granada had thus somehow assumed the meaning of bustan. It is actually a small garden within the city, adjacent to a house, where flowers, fruits, vegetables, and grapevines are grown. This modest place, although basically a productive garden, is also a place of beauty and social gathering.

Common to all these gardens is the intensive use of the land, and the combination of utility and pleasure in the garden. Probably, the traditional intensive agriculture of the Mediterranean inspired the creation of these places.

Like the carmen, the bustan was found in urban landscapes as well, where its social and esthetic aspects were emphasized. Bustanim were found in royal residences as well as in the houses of simple people. In the more affluent gardens, the influence of other cultures can be easily traced, yet the overall character of the bustan is retained.

Sacred bustanim (bustan in the plural) have evolved around holy places, mostly near monasteries and burial places. The 'sacred bustan' is not prevalent in the landscapes of Israel, for reasons which are explained elsewhere. However, symbolic elements which suggest heavenly connections are part of the essence of the bustan.

To conclude, we might say that the bustan became a repository of successive cultural powers, and its evolution reflects the cultural history of the country. In a way this accumulation of influences has made it so rich with meaning to different cultures.

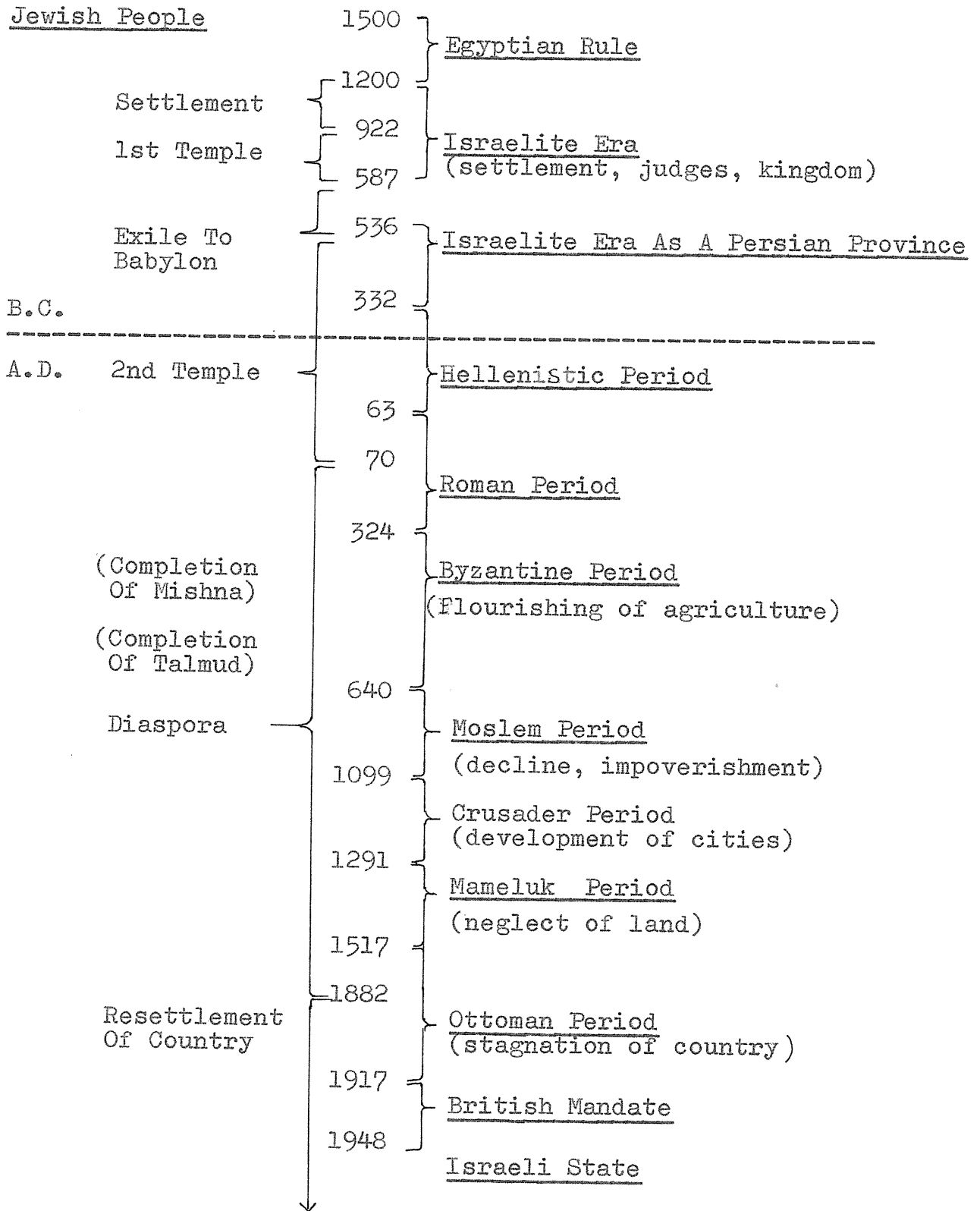


**CULTURAL INFLUENCES
ON THE
ISRAELI BUSTAN**

THE UNIQUENESS OF THE PLACE

- MEDITERRANEAN AND DESERT LANDSCAPES
- JEWISH CULTURE
- LACK OF ROYAL CLASS
- STRONG AGRICULTURAL COMMUNITY

Chronology Of Successive Powers In Israel



5. The Bustan In Literature And Poetry

The bustan's existence as an image in literature and poetry is even stronger than its physical existence. It evolved particularly in Medieval Jewish poetry in Spain, drawing from the ancient source of the Song of Songs, and was influenced by Persian and Islamic poetry.

In Persian poetry, the garden imagery is a combination of earthly images and heavenly associations. While the earthly and sensual images of the garden describe earthly feelings such as love and friendship, the mystical and abstract evolves into a symbol of sacredness: "The orchard is like a mosque and the branches of trees are bowing down in prayer. The dove is the muzzin and his voice is the call for prayer." (18)

The symbol of the garden as a place of heavenly connections, has evolved in Jewish philosophies of Medieval times into a symbol of universal truth. "The Bustan Al-Ukul" (Garden of Wisdom) written in 1165 in Yemen by Nathanel-Ibn-Al-Fayyum, is a philosophic view of Jewish theology. It uses garden imagery to explain the theories about man's place in the universe and the truth found in the sacred books. The Garden of Eden is the symbol of the 'universal soul' from which all living forms have emerged. Its meadow is the 'meadow of learning,' and it is divided up by streams of difficulties. The ultimate reward for those who acquire the universal truth is living in the 'garden of wisdom.' The book itself is divided into seven chapters, representing seven stages of knowledge. The first discusses the unity of God, while the seventh and last is Paradise - the after dwelling and ultimate reward.

The famous "Bustan" written by the Persian poet Sadi in the 13th century, is also a metaphor for a place which contains wisdom. Its content is mainly related to the duties of man towards God and his fellow-man, and it uses very little garden imagery. However, its ten 'doors,' or chapters, "lead into a garden that is indeed rich in the fruits of knowledge." (19)

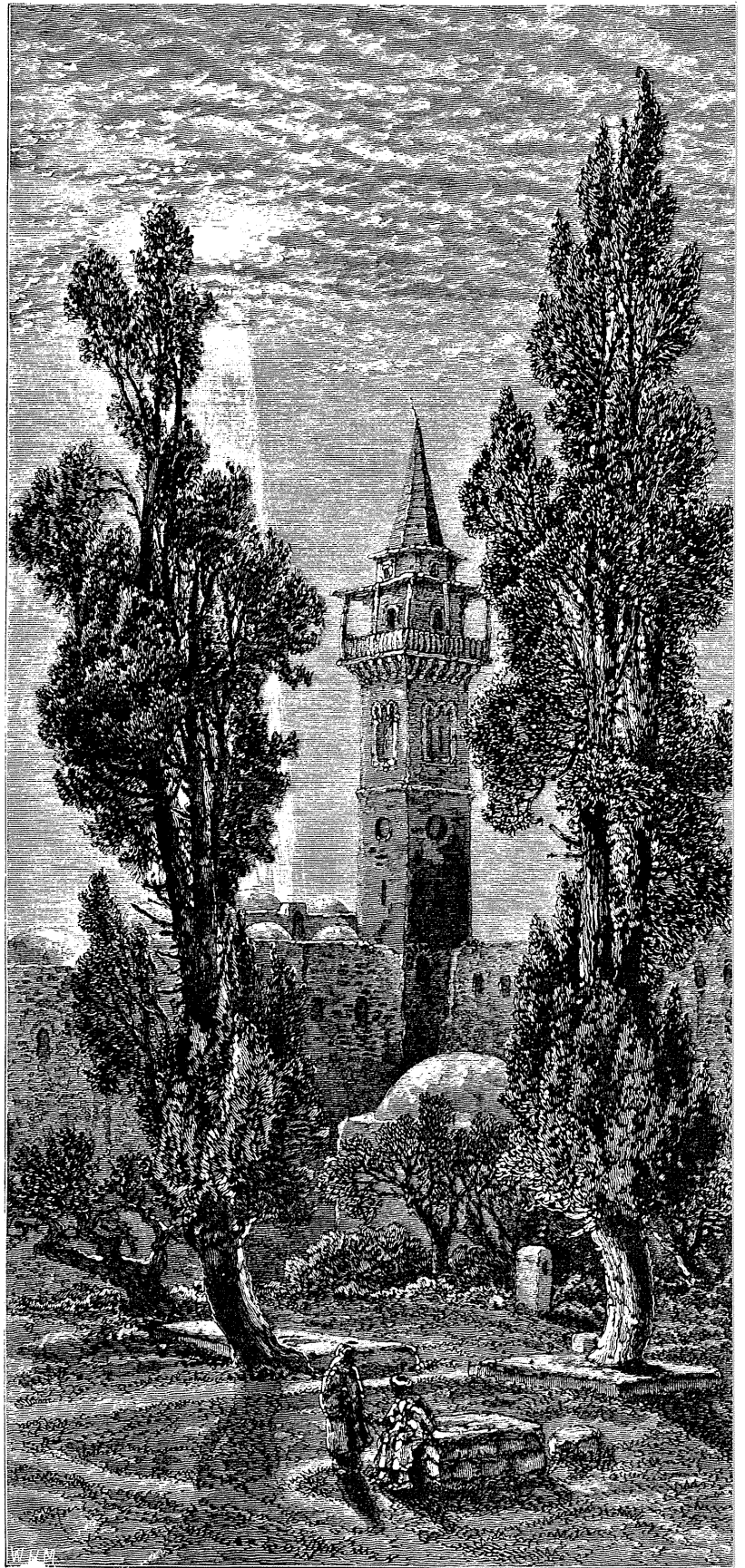
A similar interpretation of the garden as a place which contains the ultimate truth is found in Jewish mystical theories of the Kabbalah. A whole theory has evolved around the 'pardes,' which denotes a garden or park in the Bible. (20) These theories relate to the story in the Talmud about four great rabbis who entered the 'pardes': "One saw and died, the second saw and lost his reason, the third laid waste the young plants (that is seduced the young). Only one, Rabbi Akiba entered in peace and came out in peace." The four rabbis' entrance into the pardes came to stand for the four levels of interpretation of the Torah (Pentateuch). Each letter of the pardes in Hebrew stands for a particular level of interpretation:

P - peshat	- the literal meaning
R - remez	- the allegorical
D - derasha	- the Talmudic and Aggadic interpretation
S - sod	- the mystical meaning

The pardes into which the four ancient scholars entered, thus came to denote speculations concerning the true meaning of the Torah on all four levels. (21)

The choice of the garden or 'pardes' as a metaphor in these mystical theories, reflects the perception of the garden in Jewish tradition. It is an enclosed place, which contains symbolically the universal truth and the divine presence. The act of penetration is very important, since it is a transformation into a different realm. Typically, an enclosed walled place contains mysterious dangers as well as rewards and the one who enters should be ready for both. Its center is the well of fresh water, which gives meaning to the whole place. "The Torah is likened to a well of fresh water, whence spring ever new levels of hidden meaning." (22) Finally, for the one who is able to perceive the obvious and the hidden, the experience of the garden is complete, and he is able to exit in peace.

The 'pardes' as a real place is transcended in the Kabbalah



"Since yesterday has gone
and tomorrow has not come,
take account of this moment
that now is

In this garden of the world
there is not a cypress
that has grown
which the wind of death
has not surpassed."

The Bustan - Sadi

6. Old cypress trees beside a sacred grave
in Jerusalem

into a symbolic existence that stands on its own. In return, as the symbol became widely known, it affected the experience of the concrete garden or 'pardes.'

An echo of the mysterious qualities of the garden, attributed especially to the bustan, is found in modern literature as well. Chaim Guri describes a bustan in Tel-Aviv, which he knew in his childhood: "This was a special garden in the northern part of the city. It was a kind of dense, Oriental bustan, with citron trees, sycamores, figs, pomegranates, and mulberry It stretched North and East towards an unknown land. There were parks for shelters, and they got lost in the darkness of the gardens, looking for shelters, loving There was heaven. There was hell." 923) The act of penetration into an unknown land, and the potential dangers and rewards, are present here as in the pardes images, conveying the mysterious essence of the bustan.



JEHUDAH HALEVI

THE GARDEN OF HIS DELIGHT

Let my beloved come into his garden
And prepare his table and his seat,
To feed in the gardens.

The glorious flowers of the garden of his
delight—
On these shall he set his eyes
To gather lilies;

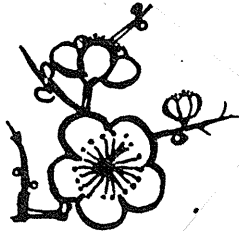
And shall eat the hidden fruits,
The new and old.

My beloved, turn in to me,
To my porch and my temples;
To feed in the gardens

Show thyself in my tents,
Among the beds of mine aloe trees¹.
To gather lilies

Behold, for thee, breasts of pomegranates
Given for a gift!

My beloved is mine and I am his
When I knock at the habitation of his temple;
To feed in the gardens



His banner over me is love,
And his left hand is under my head;
To gather lilies

He waters the gardens with a fountain,
His waters are faithful.

The chosen of desire are met:
They disport themselves in the garden of
love;

To feed in the gardens
Precious plants they plant,
Holy seed they sow,
To gather lilies
Cuttings of glorious trees,
Plants of pleasantness.

How goodly are the tents
Where the children of nobles meet;
To feed in the gardens

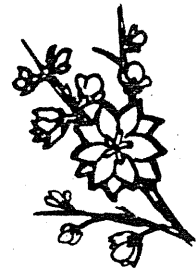
Sitting under the shadows,
In the gardens by the aloes.
To gather lilies

God shall give them a heritage of joy—
Children—the heritage of the Lord.

יהודה הלוי

גן עדנו

וַיִּכִּין מַסְבוֹ וּכְנוֹ	יְבֵא דוֹדִי לְנֵנו
לְרַעוֹת בְּנֵנִים	
עַל־יָהִם יָמֵן עֵינַי	הוֹד פָּרְחֵי בֵּן עֲדֵנו
לְלַקֵּט שׁוֹשְׁנִים	
תְּרַשִּׁים גַּם יִשְׁנִים:	וְיֵאָרֶה מְגֻדִים צְפוּנִים
לְאוֹלָמִי וְהִיבְלִי	דוֹדִי סוּרָה אֵלַי
לְרַעוֹת בְּנֵנִים	
בֵּינֹת עֲרוּגוֹת אֶהְלִי	תִּרְאֶה בְּאֶהְלִי
לְלַקֵּט שׁוֹשְׁנִים	
מִתְּנָה נְחֻנִים:	הֲאֵלֶּה שְׂדֵי רְמוֹנִים
בְּדַפְקֵי גֹה הִיבְלוֹ	לִי דוֹדִי וְאֵנִי לוֹ
לְרַעוֹת בְּנֵנִים	



וְתַחַת לְרֵאשֵׁי שְׂמַאלוֹ	וְעַל־י אֶהְבֶּה דָגְלוֹ
לְלַקֵּט שׁוֹשְׁנִים	
מִיְמִינִי וְנֶאֱמַנִים:	יִרְנֶה בְּמַעַן עֵינַי
בֵּן אֶהְבֶּה יִשְׁמַעְשֶׁעוּ	בְּחֹרֵי חֶמֶד נִפְגְּעוּ
לְרַעוֹת בְּנֵנִים	
וְזָרַע קֹדֶשׁ יִזְרְעוּ	נְטָעֵי שׁוֹרֶק יִטְעוּ
לְלַקֵּט שׁוֹשְׁנִים	
נְטָעֵי נְעֻמִים:	שְׂתֵי־לִי הוֹד וְצִנִּים
שֵׁם נִפְגְּעוּ בְּנֵי אֶצִּילִים	מִהֵטְבוֹ אֶהְלִים
לְרַעוֹת בְּנֵנִים	
בְּנֵנוֹת עַל־י אֶהְלִים	וְשִׁבְתֶּם תַּחַת צִלְלִים
לְלַקֵּט שׁוֹשְׁנִים	
נִחַלְתִּי אֲדָנִי בְּנֵינִים:	אֵל יִנְחִילֵם עֲדָנִים





A medieval Jewish poem written in Spain, drawing from the ancient source of the Song of Songs.

Garden Perception In The Song Of Songs

The 'Song of Songs' tells a wonderful story about the search for love, the emotional development of the lovers, their disappointments and their happiness.

This poetic story has been endlessly interpreted, and was imbued with religious and symbolic significance. The most commonly accepted is that the relationship between the lovers is a metaphoric symbol for the relationship between God and the people of Israel. I would prefer to accept it literally as a love story, and to add my own interpretation based on my impression that it reflects the garden perception of the ancient Israelites.

The plot of the story takes place in four different landscapes: pasture, wilderness, city, and garden. Each one is associated with certain experiences that the lovers go through:

<u>Pasture</u>	<u>City</u>
● Search 	● Disappointments 
<u>Wilderness</u>	<u>Garden</u>
● Preparation 	● Reward 

The pasture or the meadow is the place of the search. The woman goes to look for her lover among the shepherds, feeling ashamed of her need to wander around:

"Tell me, you whom my soul loves,
Where you pasture your flock,
Where you make it lie down at noon.
For why should I be like one who wanders
Beside the flocks of your companions?"

(1:7)

The city is a place of disappointments. The search goes on, but without results:

"I will rise now and go about the city,
In the streets and in the squares.
I will seek him whom my soul loves,
I sought him, but found him not."

(3:2)

Even when the search is almost over, when her lover comes to visit her at night - the hostile landscape of the city provides only disappointments. She opens the door for him, but he has already gone. Her renewed search is even more painful:

"The watchmen found me
As they went about the city.
They beat, they wounded me,
They took away my mantle
Those watchmen of the walls."

(5:7)

The wilderness is a place of transition. The beloved comes out of there, all perfumed and ready for her lover:

"What is that coming up from the wilderness
Like a column of smoke,
Perfumed with myrrh and frankincense
With all the fragrant powders of the merchants."

(3:6)

Even when the lovers come together after emerging from the wilderness, we know that love was found somewhere else:

"Who is that coming up from the wilderness,
Leaning upon her beloved?
Under the apple tree I awakened you."

(8:5)

Finally, the garden is the ultimate place of reward. There love is found, there promises are kept.

"I come to my garden, my sister, my bride,
I gather my myrrh with my spice."

(5:1)

The garden is both the place and the metaphor of love.

"Let my beloved come to his garden,
And eat its choicest fruits."

(4:16)

This phrase could be understood literally, as an invitation to come into the garden, but also as invitation to come to his beloved and find his promised love there. Even when love is not found, it is sure to be hiding behind the walls of the enclosed garden:

"A garden locked is my sister, my bride
A garden locked, a fountain sealed."

(4:12)



7. The Lovers In The Garden
(a drawing from 1510)

The garden is a place of certainty, of secure knowledge. When the beloved goes down to his garden, he is sure to be found there. Unlike the hostile landscape of the city or the pasture, which conceals the beloved and forces his lover to search for him desperately, the garden is friendly and revealing. It is a place of refuge, of a peaceful mode of being for the lovers together, and for each one separately. The beloved sits there in the company of her friends and the lover goes down to the garden to gather lilies and to look at the blossoms of the valley. When her friends tease her: "Whither has your beloved gone, O fairest among women?" (6:1), the beloved assures them that her lover has not disappeared, and their love has not diminished: "My beloved has gone down to the garden I am my beloved's and my beloved is mine." (6:2)

The landscape of the garden thus is the most favorable one for scenes of happiness and beauty, and reflects the affection and appreciation that ancient Israelites had for their gardens.



PART 11

Landscape values as reflected in the bustan

1. RESPONSE TO PLACE
2. REFLECTION OF AGRICULTURAL SYSTEMS
3. FUN AND FUNCTION IN THE GARDEN
4. A PLACE OF SYMBOLIC CONNECTIONS

Response to place

" A MAN IS BUT A PIECE OF LAND
A MAN IS BUT A MOLD
OF HIS NATIVE LANDSCAPE ."

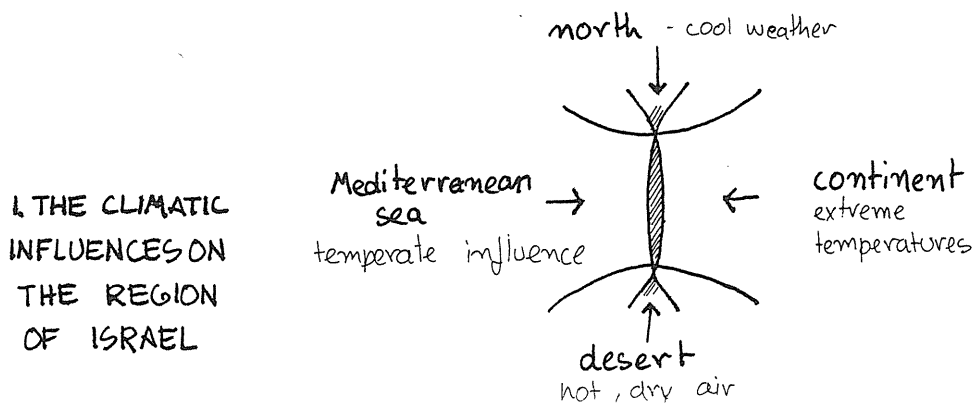
SAUL TCHERNICHOVSKY

The word 'place' (makom - מקום) in Hebrew bears a very powerful meaning. Besides the common interpretation, it also stands for the name of God. This double meaning originated from the ancient people's perception that each and every place is imbued with unique spiritual connections. Similarly, the concept of 'place' or makam in Persian is composed of both the physical boundaries of a place and the spirit (ruh) which it contains. (1)

The search for a landscape pattern which responds uniquely to the physical environment, grows from the belief that each place requires a unique response. A place can be perceived as a particular physical place. In this discussion, however, I refer to place as a more general term, defining a certain geographic environment which shares common physical and climatic characteristics.

Each environment generates the creation of different physical forms. Physical needs along with mental drives accumulate to create a place where the natural environment is enhanced, difficulties overcome, and limitations recognized. The bustan is an example of such a pattern, where continuous evolution has contributed to its sensitive relationship with the environment.

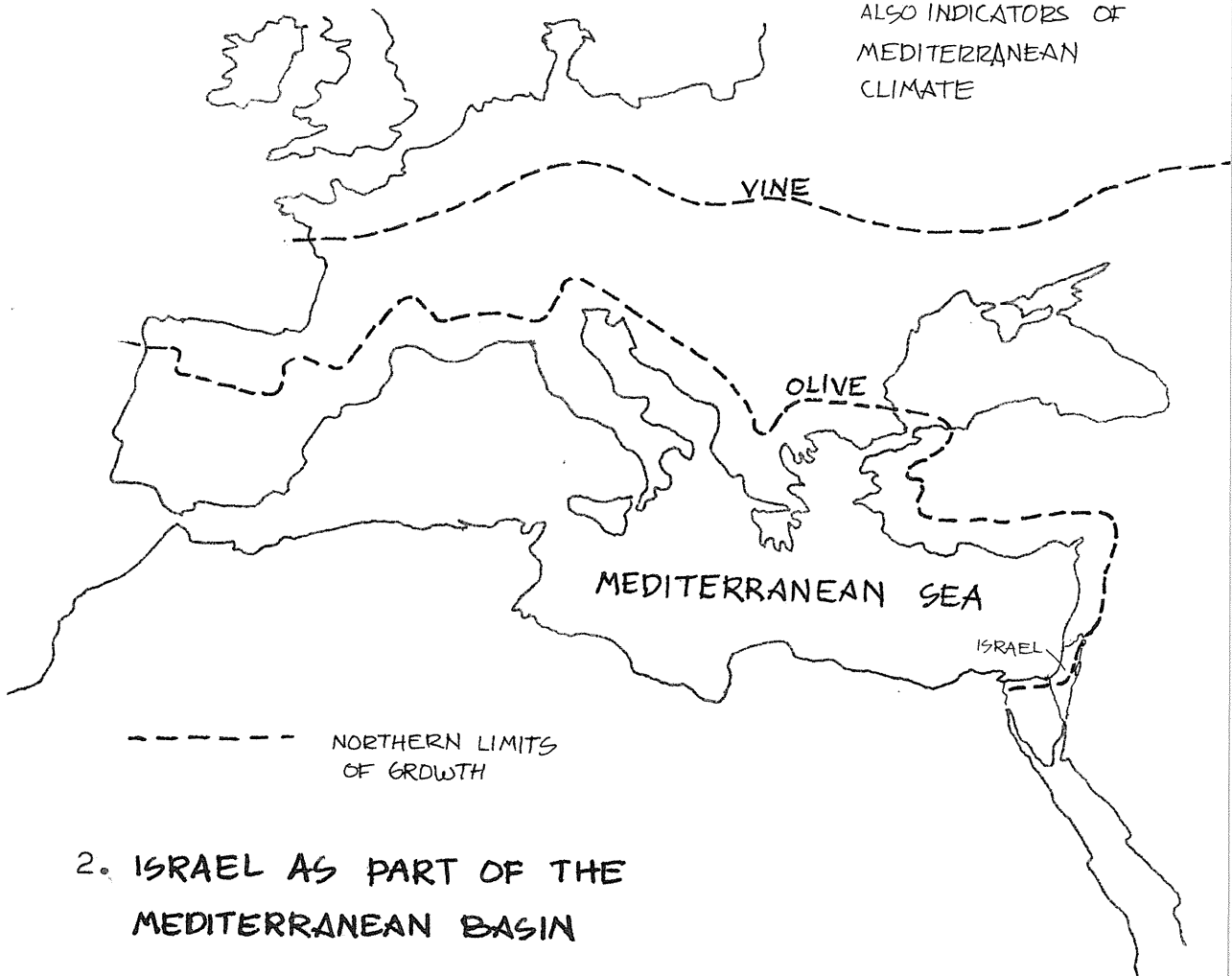
The Israeli bustan grew out of the local landscape where the Mediterranean and the desert meet and interweave. This area is characterized by a diversity of climates and landscapes caused by an overlap of different zones. The different geographical regions



generated the creation of different types of bustanim, as will be shown later.* Despite their differences, they are, however, recognizable variations of the same underlying basic concept.

Most of the settled areas of Israel today belong to the Mediterranean landscape. The natural landscape is comprised of coastal plains and hills covered with 'chaparral' - a tangled,

• OLIVE, VINE AND WHEAT,
THE TYPICAL FOOD-PLANTS
OF THE AREA, ARE
ALSO INDICATORS OF
MEDITERRANEAN
CLIMATE



2. ISRAEL AS PART OF THE MEDITERRANEAN BASIN

* Without getting into political discussions, I would like to include the Sinai, Judea and Samaria since they are essential to the understanding of the different varieties of bustan.

low canopy, leathery forest. The traditional food plants grown in this area, which are also indicators of a Mediterranean climate are: olives, grapes, and wheat. (Fig. 2) Climatically, the area is characterized by a hot dry summer and a short rainy winter.

An interesting perception of the climatic influences on Mediterranean landscapes is found in Braudel's book (2). By turning the map upside down, the immense impact of the Sahara desert on the Mediterranean area is clearly demonstrated.

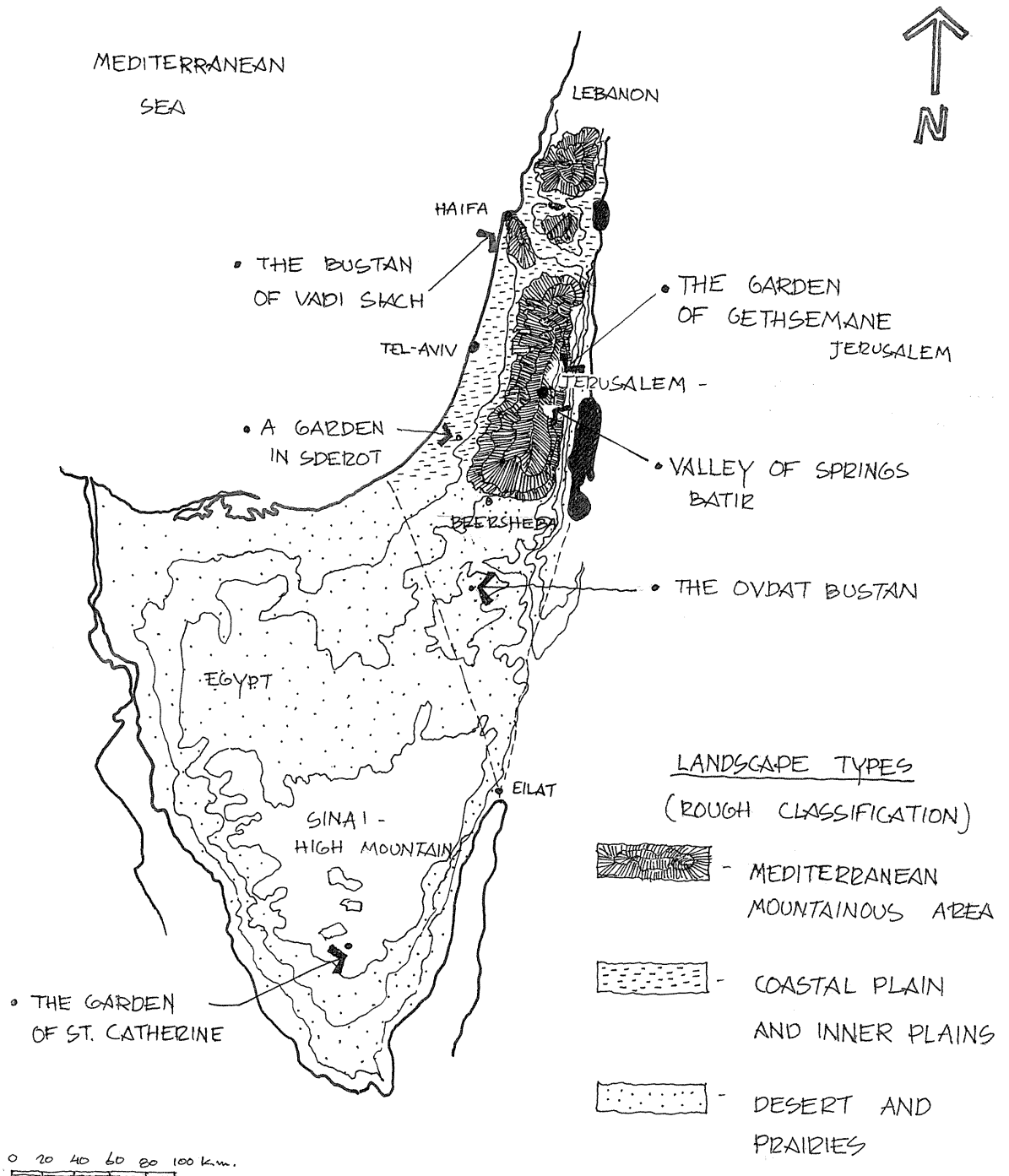


3. The Mediterranean and the rest of the world

The unusual orientation illustrates how the great Sahara desert dominates the sea.

According to Braudel, the different areas of the Mediterranean are united by the common sea, the climate, the seasonal rhythm, and the landscape. Therefore, similar forms of architecture and gardens can be found on the Mediterranean shores.

* THE BUSTANIM WHICH ARE INDICATED ON THIS MAP ARE ILLUSTRATED IN THIS WORK



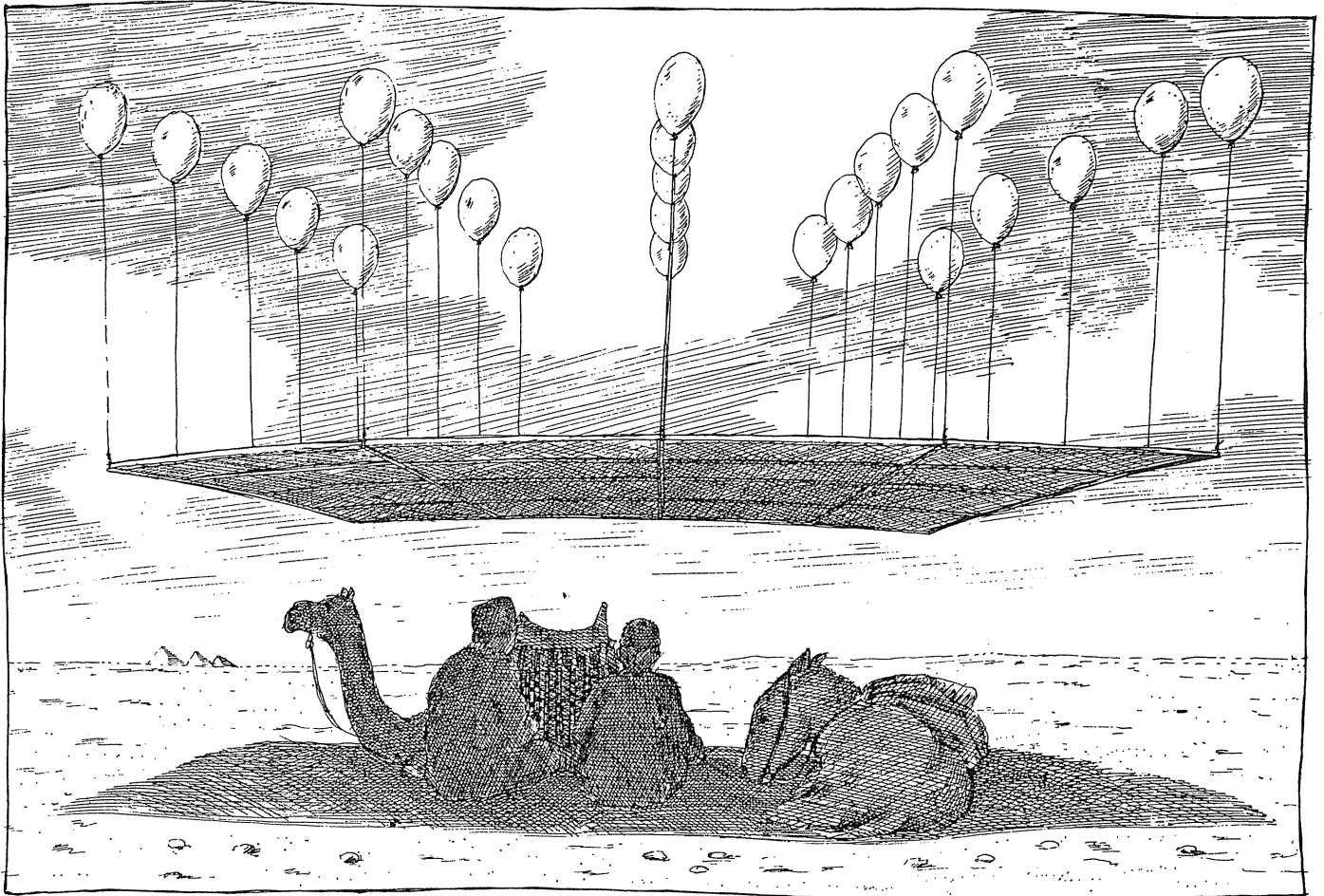
4. LANDSCAPE TYPES IN ISRAEL
AND LOCATIONS OF BUSTANIM

The kind of garden which evolved in this area - the bustan and its equivalents in other countries, reflects the mastery of agriculture generated by Mediterranean landscapes. The land requires continuous care, yet when carefully tended it is very rewarding throughout an almost year-round growing season. It is the kind of landscape which requires shelter from the sun for plants and people, and therefore encloses its houses and gardens. Above all, water is a precious resource carefully captured and economically used. In Israel, in particular, reliable year-round water sources such as the Nile or Euphrates do not exist; existence is totally dependent on diligence in obtaining and conserving water and on the intensive cultivation of the land.

This need to economise in the use of water led to the concentration of all irrigated plants in one protected place. The creation of a garden which meets these needs also provides fulfillment for the deeper needs of the human soul. The longing for a place which would contrast with the surrounding harsh and demanding environment is clearly manifested in the bustan's creation.

The Bustan As The Image Of The Ideal Place

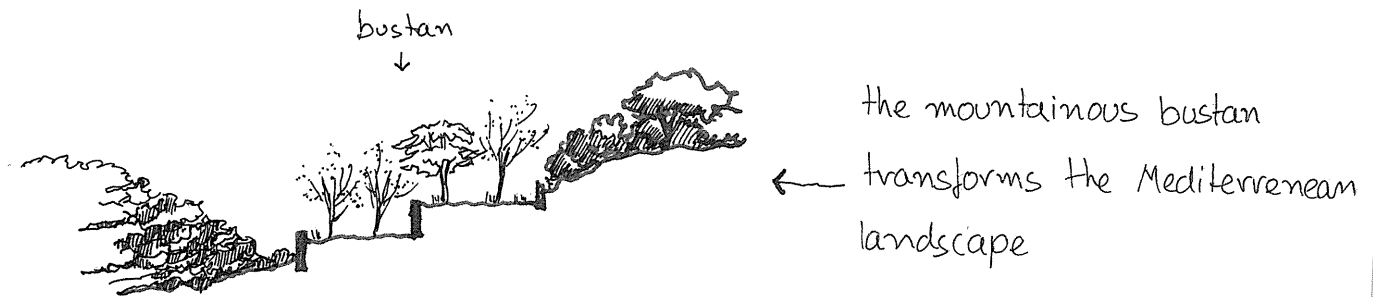
"Every garden needs its opposite to exist." (4)



5. Oasis

The bustan drew from its surrounding landscape, yet transformed it by creating its contrast. The 'oasis bustan' was a cool, shady confined space in the midst of a vast dry landscape. The 'mountainous bustan' replaced the low evergreen forest of the Mediterranean with the airy, deciduous leaves of fruit trees. The canopy of trees provided shade in summer, yet filtered the sun on winter days, creating an ideal environment for both people and plants. No wonder then, that images of the 'ideal place' originating in this region drew heavily from the garden image.

Throughout history images of paradise have been transformed



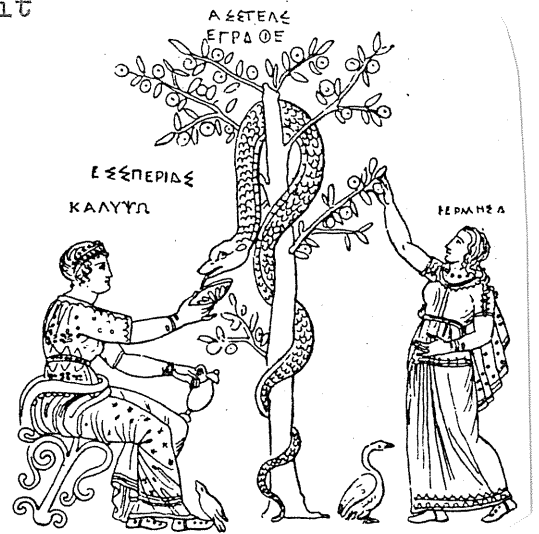
the oasis bustan
is a contrast to the
barren environment



by different cultures to reflect their varied perceptions of the 'ideal place.' The myth of paradise, the place of perfect existence, has found expression and embodiment in a physical place where the environment appeared ideal.

Even within the commonly shared image of the garden as paradise in ancient myths of the Near East, one finds variations reflecting particular environments. The old Sumerian paradise was the land of Dilmun, where fresh water, fruit trees, green fields and meadows combined to create the ideal environment. (4) This place, where man and animals dwelt together in harmony, was probably derived from the vast Mesopotamian hunting parks. The garden of Eden ('delight' in Hebrew) described in Genesis, seems to be closer to the image of the bustan. It was a defined, enclosed space with a variety of fruit trees and plenty of water. The water though, did not flow freely in a celebration of abundance; it "went out of Eden to water the garden and from there it was parted and became into four heads" (Gen. 2:10) much like the economic distribution of water in irrigation channels. Although ideal, this garden was not only a place of

rest and leisure. Man had to "till it and keep it" (Gen. 2:15) and then enjoy the fruits of his labor. The fortunate believer of the Islamic faith had no such duties. The Koranic paradise is a place of utmost relaxation and pleasure, "reclining therein upon couches, they shall see neither sun nor piercing cold, and close upon them shall be its shadows, and lowered over them its fruit trees to cull, and they shall be served in vessels of silver." (5) This description is probably more closely connected to and derived from the landscape of oases where blessings of nature do not require continuous labor as do the Mediterranean landscapes.



5A. The garden of Eden
(a Greek drawing)

Historical Transformations Of The Image Of The Ideal Place

The image of the bustan as the 'ideal place' evolved in response to its immediate environment. Today gardens are still designed to be ideal places. Man improves on his environment to create places where he can enjoy, relax and have a controlled experience of nature. The images of this ideal place, as reflected in contemporary gardens, have undergone significant changes. These changes are especially evident in Israel where the bustan has remained as an anachronistic reminder of the old image of paradise, while other kinds of gardens reflect more recent concepts of the ideal place.

The key to understanding these transformations along with contemporary trends in Israeli society lies in understanding the cultural history of the country through the past 100 years. It was about 100 years ago that Israeli resettlement began, bringing about cultural and physical changes to a country

which had stagnated for thousands of years. The Jewish pioneers who came from Europe were products of Western civilization carrying with them different images of the ideal place which evolved from European landscapes and Western thinking.

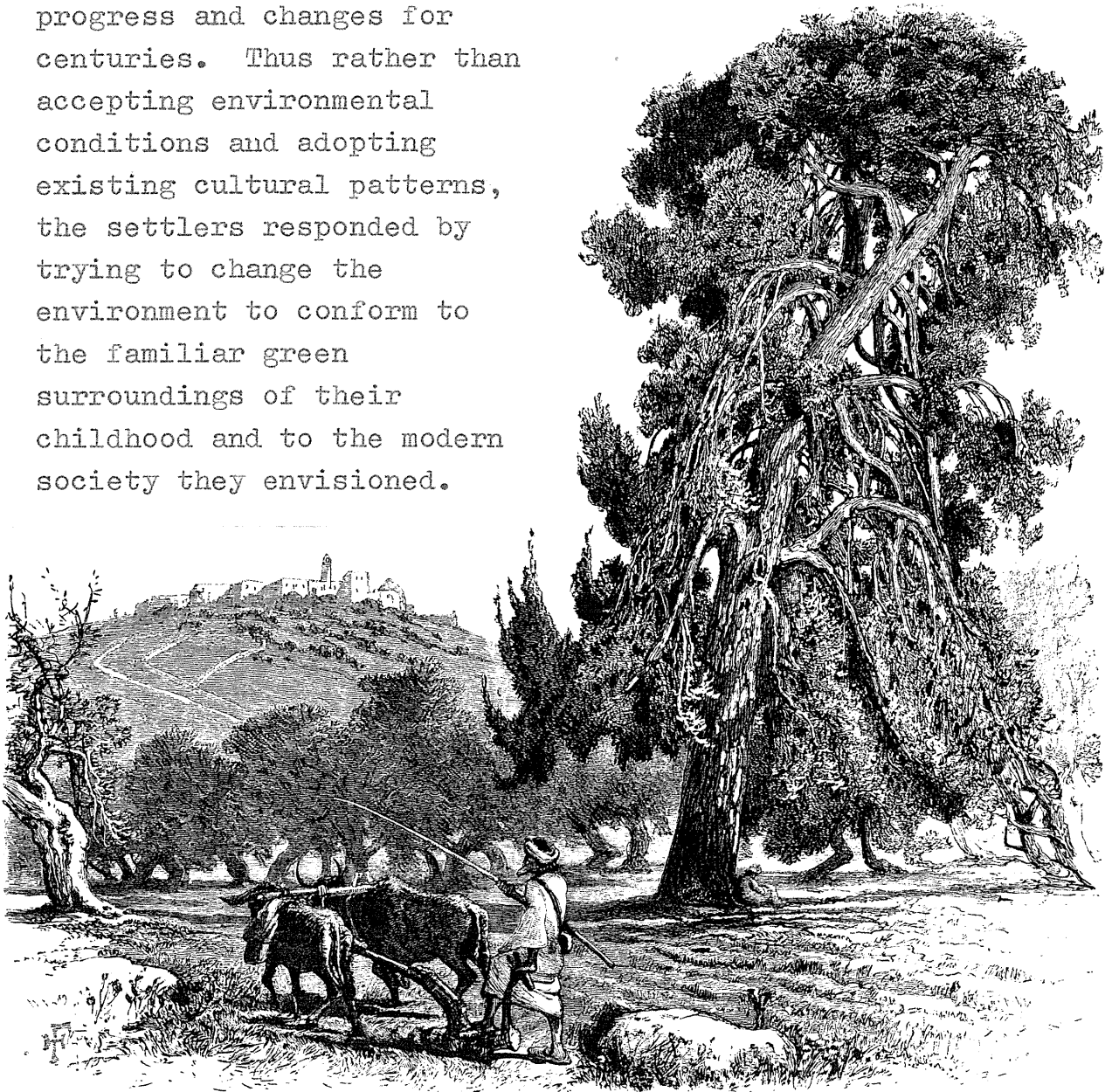
In order to understand those newly introduced images, the concepts of 'image' and 'common image' and their influence on design, should first be clarified. The image is a representation of information based upon past experience of the possessor of the image. (6) This 'mental picture' therefore is of a subjective nature, based on the imagination and memory of each individual. Nevertheless, communication between people makes possible the emergence of a commonly shared image. Usually a common cultural background such as religion and language facilitates acceptance of a 'common image.' (7) Images of places such as desert, oasis, paradise, and hell will probably evoke similar pictures within certain cultural groups.

While the Jewish pioneers never formed a homogeneous group, they probably shared some 'common images' of the ideal place based on both Jewish tradition and European concepts.

Their attitude to the new environment was ambiguous. On the one hand, they viewed the new place romantically; they were fascinated by the beauty of the wild country and by the costumes of the Arabs which echoed in their memory Biblical stories about their forefathers. This approach was typical of the Russian pioneers of the "Second Immigration" who tended to be enthusiastic and romantic. On the other hand, the reality of the harsh new landscape and the indigenous 'primitive' patterns of cultivation and settlement of the Arabs hardly corresponded to what they had imagined their future home to be.

Climate, environment, architecture, and cultural habits - all seemed strange and foreign to the newcomers. In this sense, they were no different from any other cultural group transferred to a new environment. Writing about the American pioneers' perception of the land in western United States, Yi Fu Tuan

states, "At the pioneer fringe, explorers and settlers met with novel scenes and events. Confrontation with novelty served to magnify a people's cultural bias. Immigrants saw the new environments through eyes that had adapted to other values." (8) The Jewish pioneers, moreover, came from a modern society to a country which had not seen progress and changes for centuries. Thus rather than accepting environmental conditions and adopting existing cultural patterns, the settlers responded by trying to change the environment to conform to the familiar green surroundings of their childhood and to the modern society they envisioned.



6. Primitive way of ploughing, in Kefar Et-Tur, near Jerusalem (a drawing from about 1880)

Said Yaacov Shur, one of the first gardeners, about this pioneering attitude, "When we came to the land we found it a desert, a sun-burned landscape. We took upon us a great task: to transform the landscape and to shade it, to cover the barren land with greenery, trees and shrubs." (9)

6A.



WE'LL PLANT A TREE (a pioneering song)

We'll plant a tree where we stand,
When we come to our land.
To build and to plant
To build and to plant

English Lyric by
OLGA PAUL

And the former barren land
Will be worked and tilled
On every hand.

Melody by
M. ZAIRA
Arr. by A. W. Binder

Energico

V'- chi ta - vo - u el ha - a - retz un'- ta - tem kal - etz - V'-
We'll plant a tree - where we stand, When we come to our land. - We'll

For those coming from green wet northern Europe, it was most difficult to adjust to the hot arid climate and the barrenness of the land. Unlike their Arab neighbors who responded to the climate by building densely and enclosing their houses and gardens, the Jewish settlers built their communities with lots of open spaces using trees and greenery to protect from the sun. No doubt, this 'openness' was part of the desire to get rid of enclosures and ghettos which had typified Jewish life in exile.

The pioneers' ideal was to create a healthy new society

integrated with the land and drawing its power from it. The "ideal place" then should not be enclosed and in contrast with its environment but rather, open and receptive to environmental influences. There seems to be a contradiction between "transforming the landscape" and "blending" with it. This contradiction might be understood if we accept the pioneering vision of larger 'transformed landscapes' with which they wanted to blend. As harsh as their situation was, they envisioned the country as the promised land of "milk and honey," and saw their own settlement of it as part of the process toward its accomplishment.

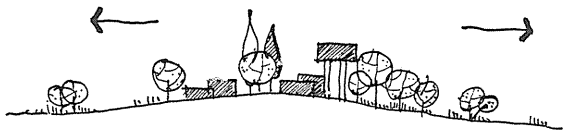
The tendency to eliminate enclosures was later reinforced by architects immigrating from Europe. The general concept of "vast perspectives" and "blending with the landscape," prevailing in the French and English schools of landscape design, corresponded well with the "openness" of the new Israeli communities. Wrote an architect of designing a settlement garden in 1935, "If the function of a place like this is to adjust to the surrounding landscape, to complement it and blend with it harmoniously - then nothing is more appropriate for the vast plains of Delhamia, than large lawns in the center of the settlement, open to all four winds." (10)

The same was true for the concept of unifying spaces and creating visual continuity, prevailing in the romantic garden. This approach, aiming at blurring the boundaries between individual units, was appropriate for a society based on socialism and communal idealism. Yet urban settlements and non-communal neighborhoods adopted it as well. The city of Tivon, built in the 1940's, was designed so that "the gardens of different lots will not be separated by a hedge or fence." (10A.)

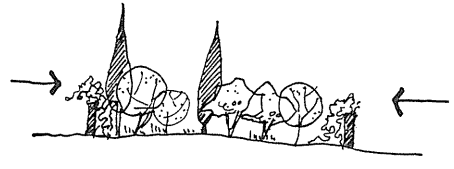
Thus the combination of European ideas with the ideals of the pioneers resulted in images of ideal places that were different from the image of the bustan. Its enclosed, divided, not so lush environment, did not provide the sought for

7. THE PIONEERS' IMAGE OF THE "IDEAL PLACE"

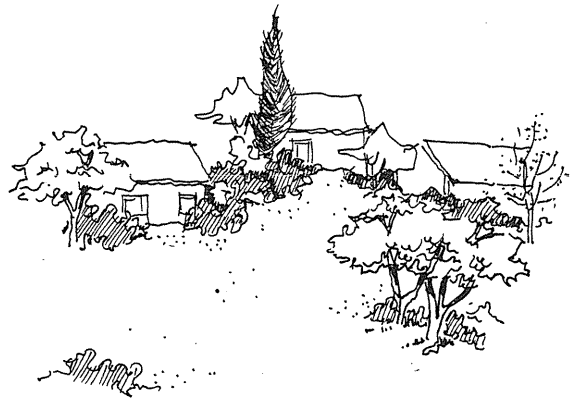
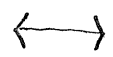
THE BUSTAN



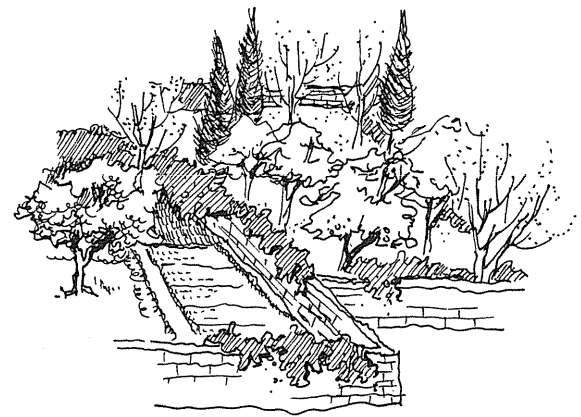
open to the landscape



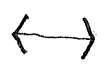
enclosed



continuous spaces



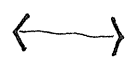
division of spaces



green, lush environment



relatively "dry" ground-cover



paradise of the forming society.

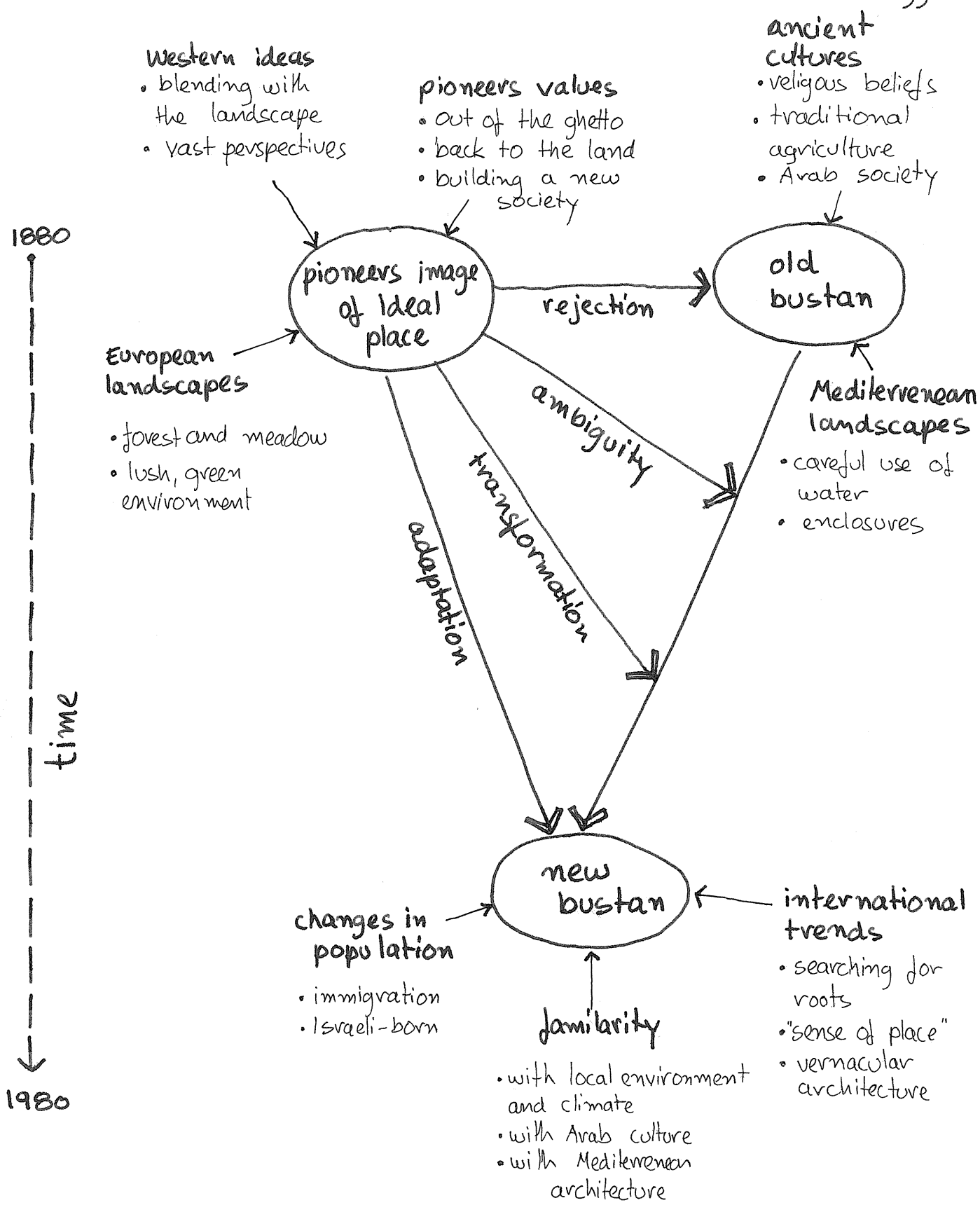
For generations, the bustan had persisted as a living pattern mainly in Arab villages. In the past 30 years, however, cultural changes have taken place in Israeli society making the image of the bustan more acceptable as a response to the environment.

A general process of integration of the people with the land is taking place. The Israeli-born do not have images of distant forests and open meadows. The brown summer landscapes of Israel are part of their childhood memories, thus they are not motivated to change it drastically. Also the landscape has changed; the great need for greenery and shade has been fulfilled in many places, allowing for reflection on older patterns.

The indigenous patterns of Arab architecture and gardening have become more familiar and more acceptable. This trend was reinforced when mass Jewish immigration from Moslem countries took place reintroducing the bustan into vernacular architecture.

The universal trend of "searching for roots" in architecture and landscaping is leading people to look to local examples both inside the country and in the whole Mediterranean basin. Patios and enclosed gardens become familiar through traveling to other Mediterranean countries, a popular inspiration for contemporary design. Thus, fashionable trends along with population changes and increased familiarity with the land result in a changing response to the environment.

Therefore, I believe that a "new bustan", modified and adapted to Israeli society today, will be more easily accepted as an image for new designs.



8. THE TRANSFORMATION OF THE BUSTAN'S IMAGE IN ISRAELI SOCIETY

The Bustan As A Physical Response To The Environment Today

The bustan, as an image, may be more acceptable in Israeli society at this time than 50 years ago. It is also increasingly recognized as a valuable physical response. It relates uniquely to Mediterranean climates and makes the best use of the limited resources of the land. Its different elements are combined to create a place which is pleasant for people and requires little human support.

Enclosure

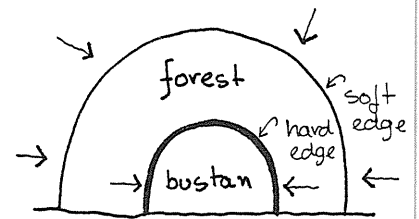
The enclosure of the bustan reduces the effects of harsh weather conditions. Other kinds of gardens which we find in Israel today, like the open-meadow English garden, are exposed to the devastating effects of wind, dust, heat and glare. In the enclosure of the bustan, on the other hand, the freshness and moisture are carefully retained.

This example of creating a micro-climate in the garden is effective and applicable today.

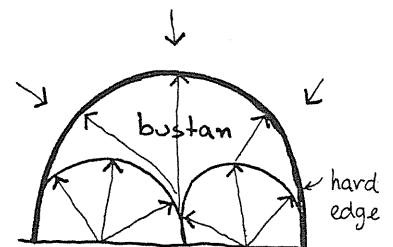
One can imagine these enclosures as part of a larger context, as well as entities on their own. Forested recreational areas and large parks can certainly include a unique place in the midst of the woods, promising relief and refuge from harsh weather. Urban gardens, hiding behind walls and plants, will promise a "touch of paradise" to a weary soul on a hot summer day.

Division Of Spaces

The continuity of spaces and unified planting which typify some of our



micro-climate
within micro-climate



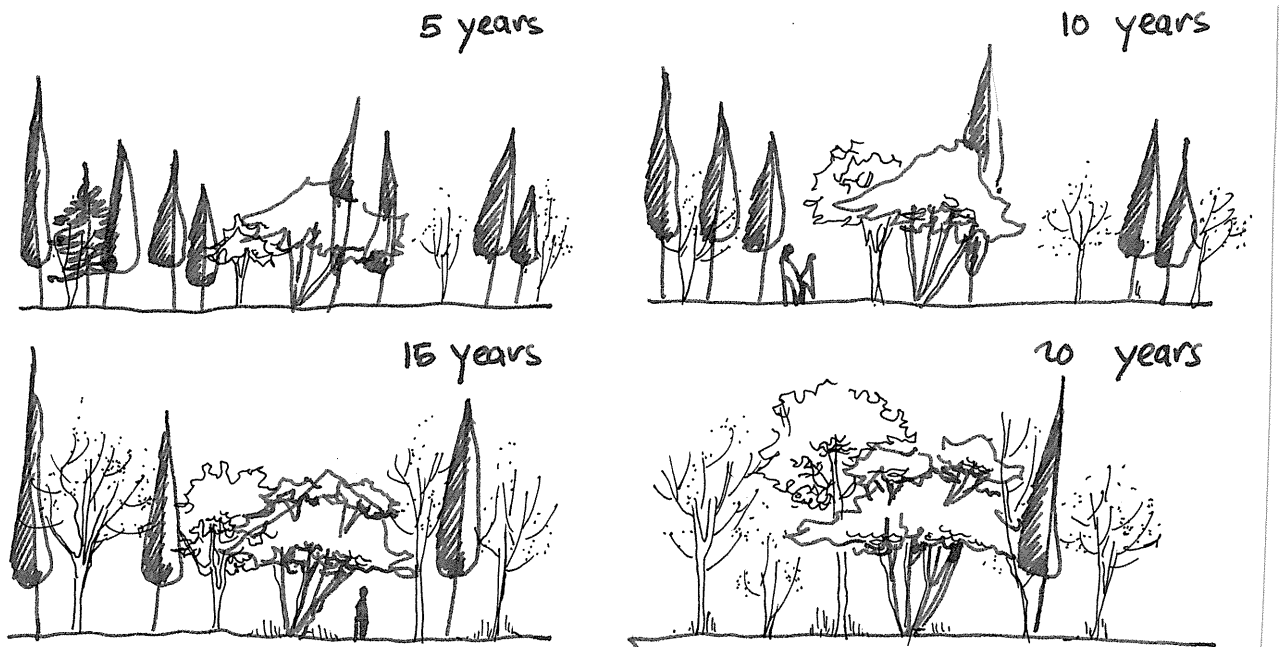
division of spaces
within the bustan

contemporary landscapes, like the pine forests and the vast lawns, seem to create a monotonous landscape in a land of diverse natural forms.

The bustan's open spaces are few and restricted in size. Even when the overall area of the garden is large, it is dissected and divided into smaller parts, easier to protect and maintain. Thus, a fragmented and diverse landscape is created, correlating with the environment, while a feeling of wholeness is achieved through the similarity between the different fragments and the overall character of the garden.

Shade

In Israel, the urgent need for shade in gardens leads planners to employ fast-growing evergreens or deciduous trees. Fruit trees are not likely to provide sufficient shade in a short time because of their small size and low canopy. The bigger



shade trees are gradually replaced by the bustan's trees

9. Proposed mixed planting to provide shade for the young bustan - transformations through time

and shadier among them such as carob, mulberry, and walnut are quite slow to grow and mature. In order to overcome this problem in contemporary designs, a new scheme of planting can be applied. Fast-growing non-edible trees can be combined with the bustan trees to provide shade in the first years of the garden. As the fruit trees grow and branch off, the shade trees will be gradually replaced. When reinforced with cypresses, shrubs and pavilions, the bustan can provide the shady environment so desired by people.

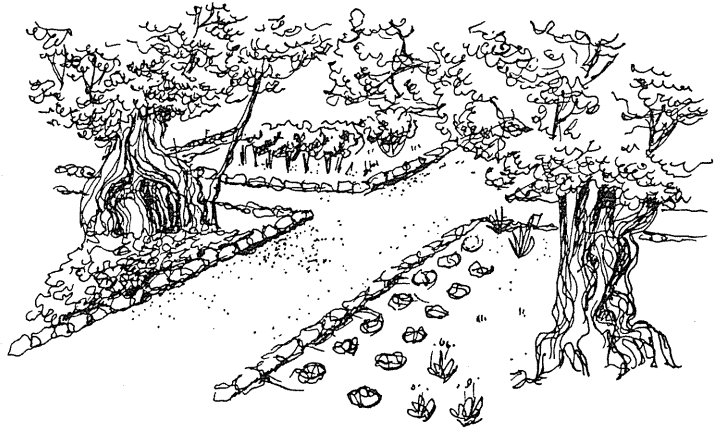


10. Different ways of providing winter-sun

The need for sun in the winter should not be disregarded. A common solution is the combination of evergreen trees with large lawns, allowing for both sun and shade. However, this might not be the best solution for Israeli landscapes. It grows out of European images of forest clearings with green natural meadows, whereas large grass areas are hard to irrigate and maintain in the climate of Israel. In the bustan, deciduous trees let the sun penetrate in winter, and encourage the growth of weeds and wildflowers among them. In summer, when the earth is exposed and vulnerable to thorny plants, the groundcover of the bustan seems less attractive. However, in some bustanim, Gethsemane, for example, the combination of hard paving, gravel and small stones - along with flowers, vegetables, and herbs in beds and pots provides a low maintenance, beautiful groundcover.

11. The garden of
Gethsemane

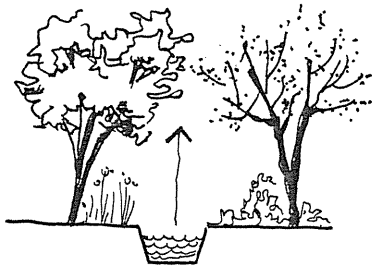
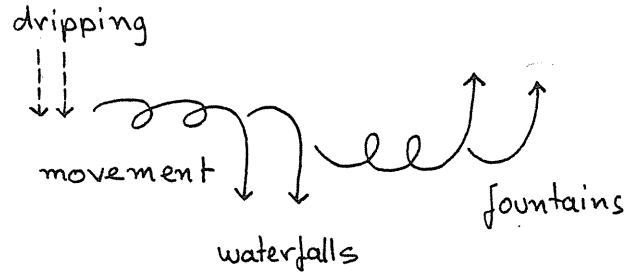
Gravel paths
and small
flower beds
make an
economical,
easily
maintained
groundcover.



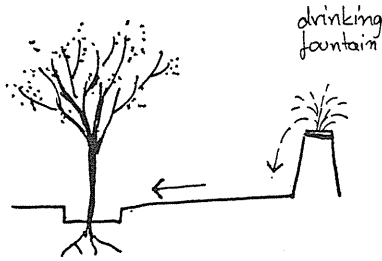
Water

The accentuated use of water in the bustan is an appropriate response to the summer heat, today as ever. Modern irrigation systems have made water an almost invisible element in the garden. Only the sprinklers are there to delight the children and refresh the air. Is it possible to develop a "modern version" of the open-channel irrigation system, operated and controlled mechanically? The loss of water due to evaporation would surely be appreciated by people and plants. The loss of water should be carried to a minimum though, by protecting the channels from direct exposure to the sun. Wherever excess water is available, from drinking fountains or drainage systems, it can be captured and directed to water shrubs and trees. In desert regions, runoff water of the larger environment, be it urban or natural, can be directed in channels towards the garden. Leading the water openly through the garden, letting it drop where elevation changes, capturing it in pools and allowing it to spring in fountains, will create an environment where the sight, sound, and cooling effects of water are carried out to the utmost.

12. Accentuating the dynamics of water flow



planting to prevent massive evaporation

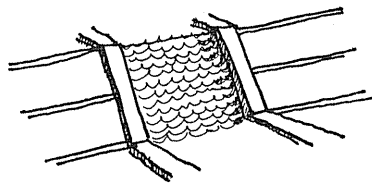


excess water is channeled to a tree

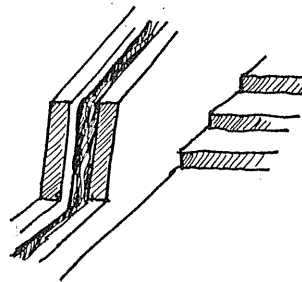
13. Planning for careful use of water

14. Examples of making the water visible in the garden:

SLOPES

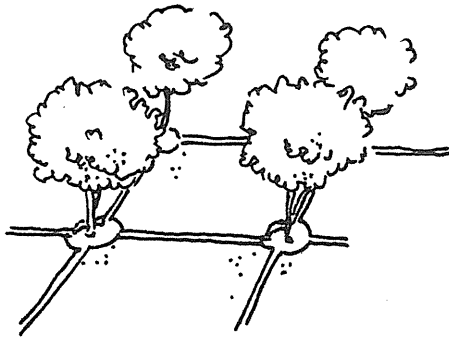


water "dancing" on a patterned slope - (chadar)
(Rambagh - Agra)

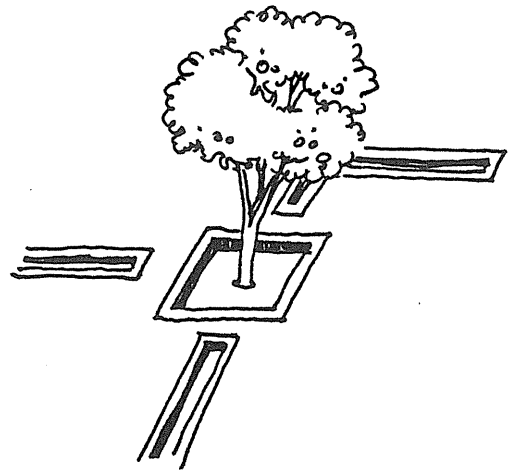


water as a hand-rail
(Palacio de Generalife - Granada)

LEADING

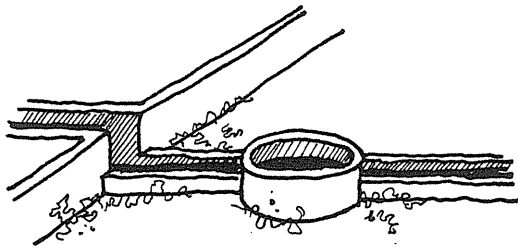


water flow is visible
(court of oranges - cordoba)

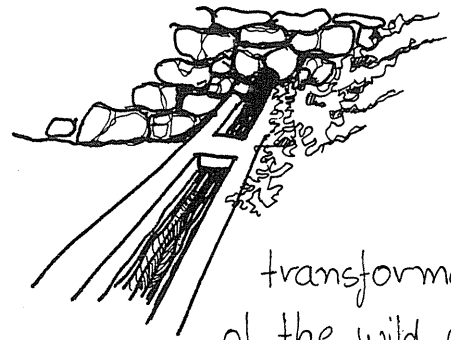


water appear and disappear
(court of oranges - seville)

TERRACING

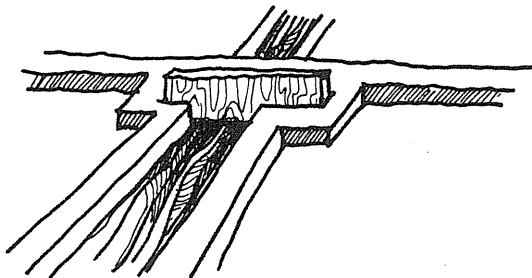


water dissects the terrace
(Vadi-Siach - Haifa)



transformation
of the wild edge
into a tame channel (Batir)

BLOCKING



wooden dam to flood a channel
(an interpretation of a channel
in Beit-Dagan)



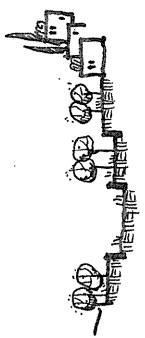
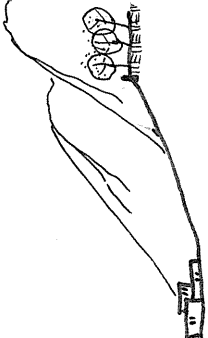
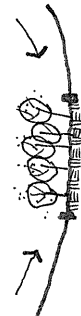
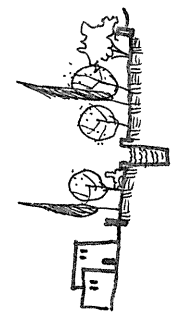
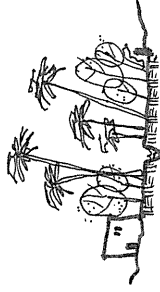
an intricate pattern of
earth-dams (Batir - Judean Hills)

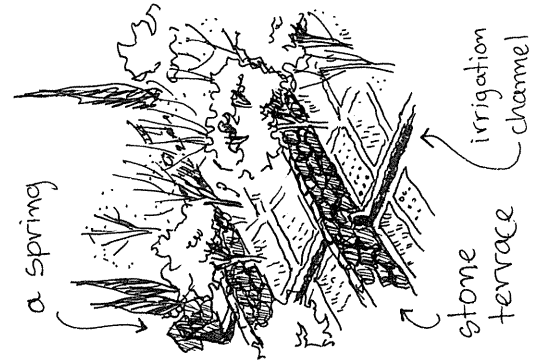
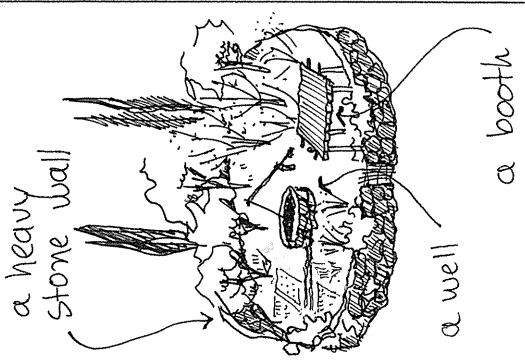
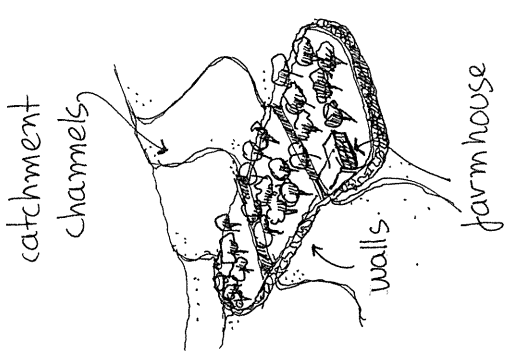
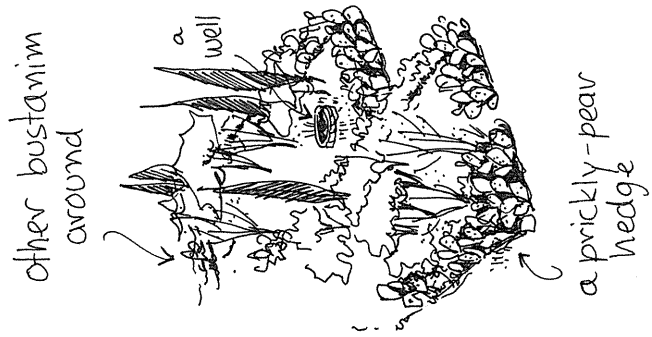

Adjustment To Different Geographic Areas

The bustan is a flexible pattern that grows out of the agricultural landscape. Its physical characteristics are dictated by the changing conditions of its environment (as exemplified by the enclosed table). While some of these qualities are of value to the contemporary planner, others are irrelevant.

Today, location of the garden is not dictated by its water source as in the traditional bustan, since water is pumped and distributed evenly throughout the country. The use of local materials for enclosures and groundcovers is of value today since it creates continuity with existing patterns of the land. Moreover, the choice of plants in the bustan can serve as a guide for contemporary planners. By studying differences between various bustanim, we can educate ourselves in how to choose appropriate plants for each geographical area. Changing conditions such as soil, climate and water are reflected in the bustan's plant selections, accumulated through the experience of generations. In addition, newly introduced plants can be integrated into the bustan. These plants combined with the "traditional ones" can form the plant structure of the "new bustan."

DIFFERENT TYPES OF BUSTAN ACCORDING TO GEOGRAPHIC LOCATIONS

	MOUNTAIN BUSTAN	HIGH-MOUNTAIN BUSTAN	DESERT BUSTAN	COASTAL-PLAIN BUSTAN	OASIS BUSTAN
Location					
Surrounding Environment	at the lower terraces, near the water-source (in the outskirts of the city or the village)	at the upper valley, a few miles away from the village	at the drainage basin	relatively flexible: near the water-source - within or outside the city or village	near the water-source
Water -Source	part of the entire agricult-ural environment	unique in its barren environment	unique in the desert	surrounded by other gardens	can be part of a larger oasis, or unique in the desert
	spring cistern well	spring well flood-water	run-off	well	spring well

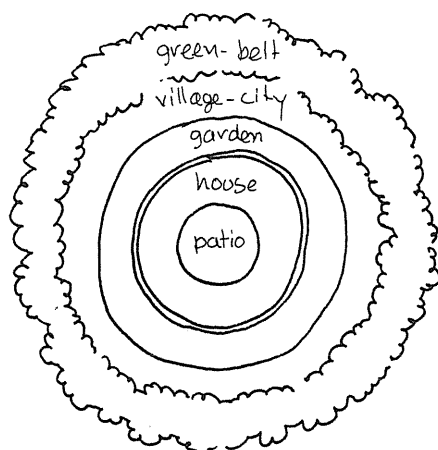
	MOUNTAIN BUSTAN	HIGH-MOUNTAIN BUSTAN	DESERT BUSTAN	COASTAL-PLAIN BUSTAN	OASIS BUSTAN
Size	usually small, dictated by the topography	small, dictated by topography and social structure (1.2-1.5 dunams)	relatively large, including the larger catchment area	varies when the overall area is big - it is divided into smaller parts	varies
Enclosure	stone wall plants	stone wall thorny plants	stone wall mud walls	thorny hedges (prickly pear) stone walls	stone walls mud walls plants - acacia trees
Typical View	 <p>a spring stone terrace irrigation channel</p>	 <p>a heavy stone wall a well a booth</p>	 <p>catchment channels walls farm house</p>	 <p>other bustan around a well a prickly-pear hedge</p>	 <p>well or spring inside palms green, lush vegetation</p>

	MOUNTAIN BUSTAN	HIGH-MOUNTAIN BUSTAN	DESERT BUSTAN	COASTAL-PLAIN BUSTAN	OASIS BUSTAN
Plant Selection	Mediterranean and Temperate Climate	Plants hardy to cold weather	Minimum water-requirements	Sub-tropical plants	Sub-tropical and tropical
Trees	fig tree pomegranate almond apricot mulberry apple quince loquat plum <u>Non-irrigated trees:</u> olive carob cypress jujube	pear quince almond plum apple apricot pomegranate fig	almond pistachios } the best peaches } apricot apple cherry pomegranate fig olive carob plum	lemon orange citron grapefruit pomegranate banana palm fig peach almond apricot mulberry <u>New trees:</u> mango avocado papaya <u>Non-irrigated:</u> cypress carob	palm citron pomegranate orange apricot fig lemon persimmon banana
Vines & Shrubs	grape-vine	grape-vine	grape-vine loganberry	grape-vine prickly pear	grape-vine prickly pear

	MOUNTAIN BUSTAN	HIGH-MOUNTAIN BUSTAN	DESERT BUSTAN	COASTAL-PLAIN BUSTAN	OASIS BUSTAN
Fragrant Plants and Herbs	rose rosemary salvia myrtle lily lavender mint	jasmine hollyhock rose ginger	rose nerium oleander	myrtle nerium oleander rose jasmine crocus daffodil lily	myrtle rose nerium oleander camphor myrrh frankincense crocus
Examples of Bustanin Described in this Work	1. The garden of Gethsemane - Jerusalem 2. Valley of Springs - Batir 3. The bustan of Vadi-Siach, Haifa	1. The garden of St. Catherine	1. The Ovdat Bustan	1. A garden in Sderot	

Relationship Between The House And The Garden

The bustan is closely related to the built environment. The indoors bustan is part of the house. The domestic garden is



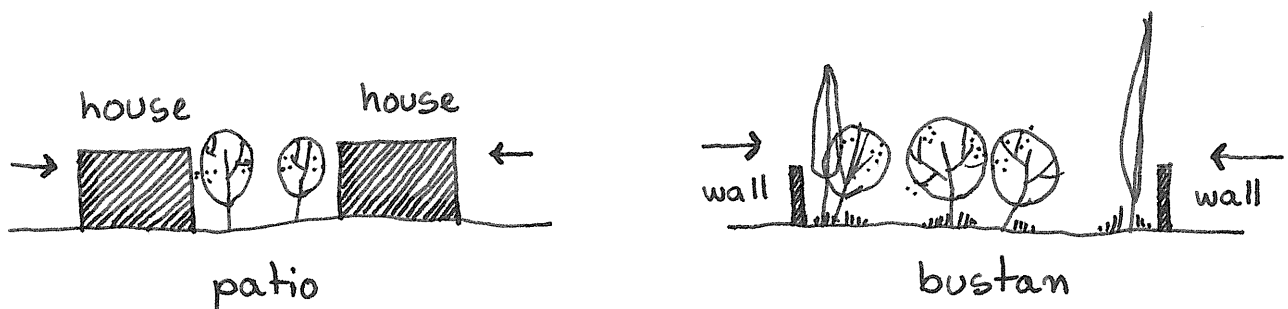
the various
relationship
between the bustan
and the built
environment

an extension of the house. The agricultural area of bustanim creates a green-belt around a city or village. In all variations described, the house and the garden complement and reinforce each other by creating a micro-climate within the larger environment.

1. The Indoors Bustan

The indoor courtyard or "patio" is a typical component of Mediterranean and Middle Eastern architecture. It is part of an architecture which responds to the climate by enclosing itself, and creating its paradise behind its walls. The house functions in a similar way to the bustan's walls. It reduces the effects of external conditions and creates a controlled environment within.

The indoor courtyard appeared in many variations throughout the ages, from the Roman peristyle of the first century A.D. to contemporary Spanish patios. The vernacular Mediterranean courtyard, in general, seems to have bustan-like qualities.



15. Controlling the interior environment

It is a confined enclosed space, sometimes containing a symbolic water-element. Its use of space and water is very economical. The ground is mostly paved, and plants grow in small beds or in pots. Plants are grown for both utility and pleasure - usually fruit trees, fragrant flowers and herbs.

Most notable in the region of Israel were the courtyards of Damascus in the 19th century. They were well-hidden behind walls, extending the experience of entering them. "The entrance to a private house is, however, generally only large enough to admit one person at a time, and opens into a passageway, which after one or more abrupt turnings, leads into the principal court of the house." (11) The modest residences had very small courts, about 50-150 square feet (5-15 square meters). Other courts, of the more well-to-do, were larger. "They are sometimes oblong, and an ordinary-sized court measures eighty feet by fifty (25m x 15m)." (12)

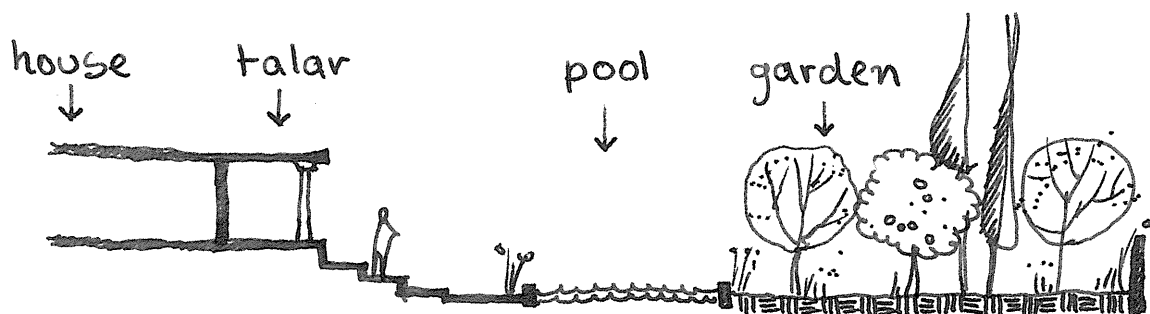
The pleasures of fragrance, even of single plants, were especially experienced in these small places. "Orange, lemon, citron trees and sometimes myrtles are planted singly within raised marble borders, and a vine is sometimes trained over trellis work." (13) The water was incorporated into the garden, refreshing the air and soothing the ear: "A fountain springing from a marble raised tank always stands in the center of the court, and there are two additional fountains if the court is a very large one." (14)

Indoor courtyards have become more widespread in modern Israeli architecture. Their content, though, is not often inspired by local examples. Many patios are designed to be experienced visually, their small space occupied with dense lush vegetation. The simple pleasure of sitting in the courtyards "fragrant with blossoming orange tree and musical with tinkling fountains" should not be forgotten. It would be wonderful to see the image of the "indoors bustan" reintroduced into our patios.

2. The Garden As An Extension Of The House

In many villages and towns in Israel, the bustan is a small garden attached to the house. Basically it is a functional place for household work, eating, keeping domestic animals, and also containing a grape arbor or a pergola for sitting in the summer. The domestic garden of the villager in pre-modern societies did not include a water-element since it was above the spring-level. Probably the image of the bustan as a "dry" place, shared by many Israelis, is derived from that kind of garden.

Its distant and more affluent relative is the domestic Persian garden. Traditionally, Persian houses were positioned at the end of the garden and had a raised recessed platform called a "talar" overlooking a pool or a water-course in the garden. The talar and its adjacent garden could be used as an



16. The relationship between house and garden in a Persian common house

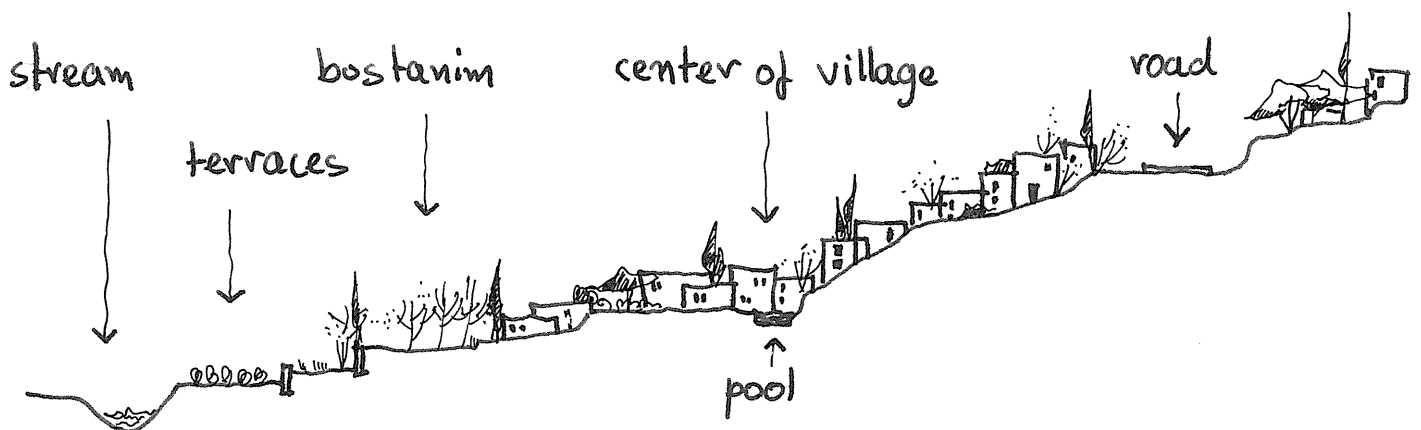
extension of the house and even as an additional house for much of the year. (15)

The garden often contained a summer pavilion, an elaboration of the simple pergola. Both served as airy cool shelters outside the house.

The contemporary equivalent of the talar is the famous balcony, an inseparable part of Israeli folklore. Unfortunately, the balcony is gradually disappearing from the local landscape, as the value of inner space is continuously increasing. The direct connection between the interior and exterior is being cut off.

3. The Bustan Village

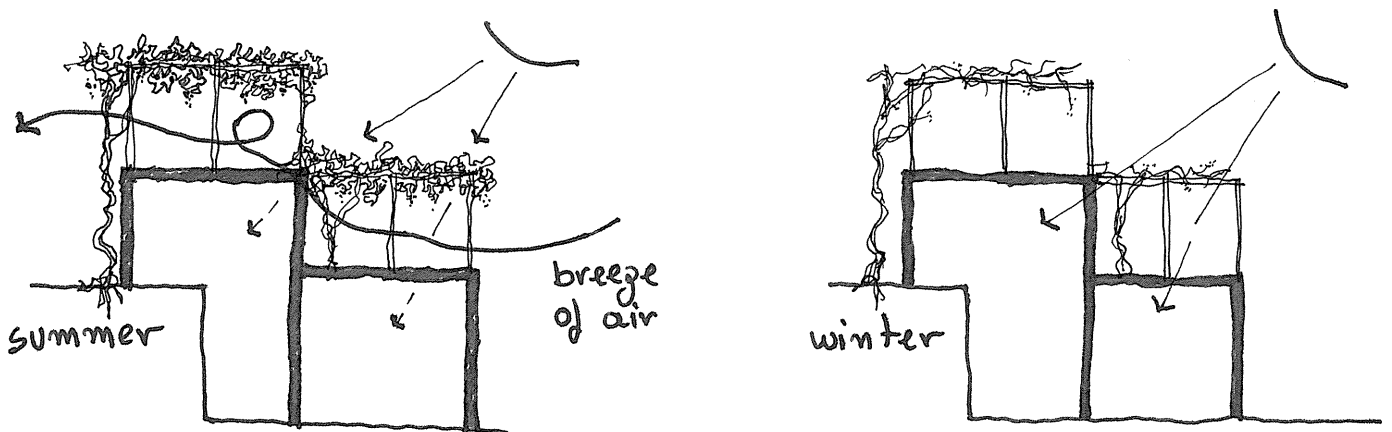
A unique pattern, in which the bustan is tightly incorporated into the architecture of the whole community, creating a bustan village, has developed in some places in Israel. Such a place is the village of Pkiyin in the upper Galilee. The village is built on a mountainous slope, submerged in greenery and colorful vegetation. The structure of the village is derived from the location of the water-source. The upper part above the spring-level is densely built, and the gardens are small and economic in their water use.



17. The village of Pkiyin - a schematic section

The lower part, where the spring comes forth, is the social center of the village. The water is then distributed into the gardens, creating a continuous belt around the village. (16)

Almost all rooftops in Pkiyin are covered with vine pergolas, serving as an additional outdoor room for the small dense house. The families often sit there enjoying the cool



note: the grape-vine is climbing from ground-level, absorbing the moist from the soil.

18. The cooling device of Pkiyin

breeze and the magnificent view. The rooftop garden is a simple and efficient device for creating a micro-climate as well. The deciduous vine protects the rooftop from intense heat in summer, reducing the temperature inside the house. Winter sun, on the other hand is most welcome.

4. Bustanim As A Green-Belt Around The City

As many cities evolved near water sources, the precious irrigated land was used for gardens and orchards, while the non-arable land was used for building the houses. A green-belt surrounding the city was thus created.

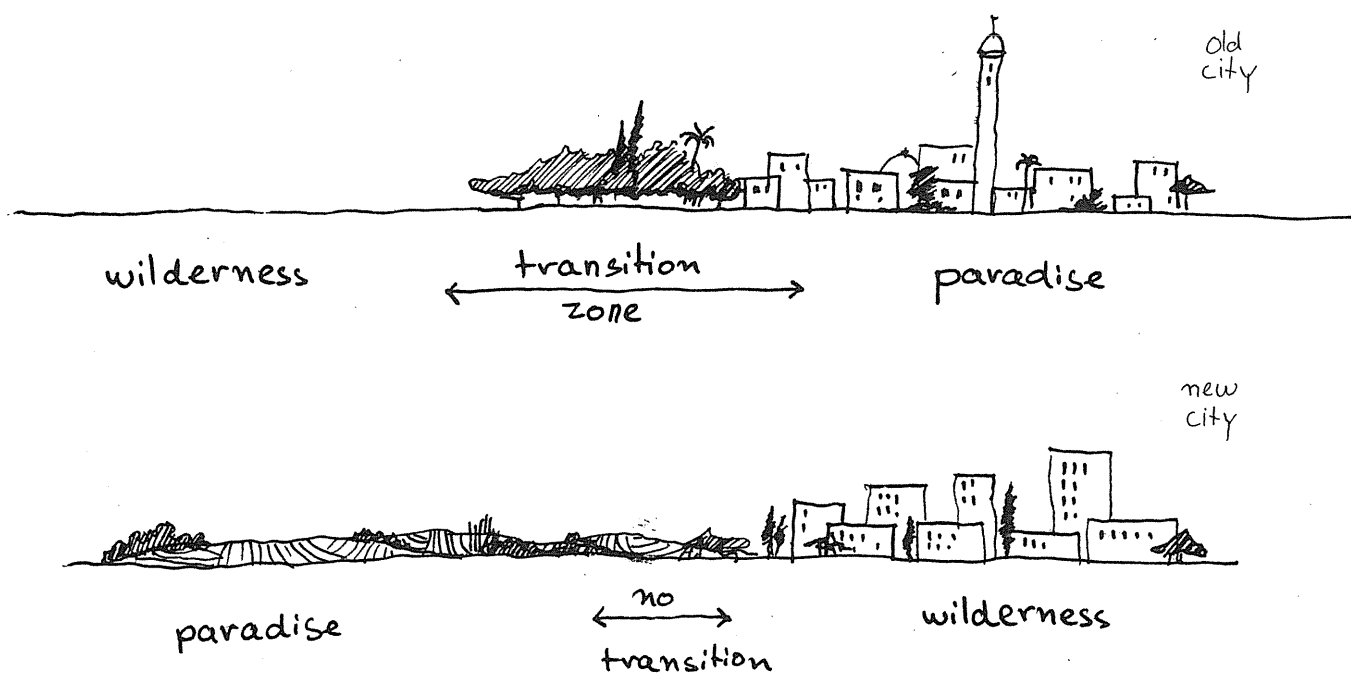
The green-belt was especially distinctive in areas where the larger environment was barren and desolate. The city of Damascus was named "the pearl of the East" because of its setting. "The beauty of Damascus is all the more striking for the contrast to the barren desert which surrounds this oasis. The white city looks like a diamond set in the dark green fruitful gardens. These gardens and orchards extend several miles around the city to the borders of the desert, and are a marvel of fertility." (17) Similarly, the city of Jaffa and its green surrounding gardens, is a sheer contrast to the barren coastal-plain dunes: "All the area around Jaffa, extending a few kilometers, is a green belt serving as an oasis." (18)

The transformations of the landscape while approaching the city increased the traveler's anticipation of the wonders lying ahead, and welcomed the returning visitor in the most pleasant way. Entrance to the city becomes a process of transformation of one's mood and feelings. Thomson, who visited Jaffa in 1833, describes travelling through Jaffa's bustanim after the hardships of the road, as "the wonders of a thousand and one nights." (19) A 19th century traveller, Mrs. Rogers, describes the undoubtedly unique experience of her entry into Damascus, "A ride through the shady groves, after a journey over the barren desert under the scorching heat of the Syrian sun, is a luxury which must be enjoyed to be appreciated." (20)

Obviously, this green-belt helped to create a micro-climate within the city itself. Winds and dust from the desert were blocked, and the evaporating water from the irrigated plants helped cool the air. Moreover, the fragrance of blooming trees extended far beyond the garden boundaries, enriching the air with a special quality. A traveller to Jericho in the 19th century describes: "We ride past the gardens and through shady lanes to our camp on the outskirts of the modern village. The air is heavy and languid, full of relaxing influences. An air of sloth and luxury, seeming to belong to some strange region below the

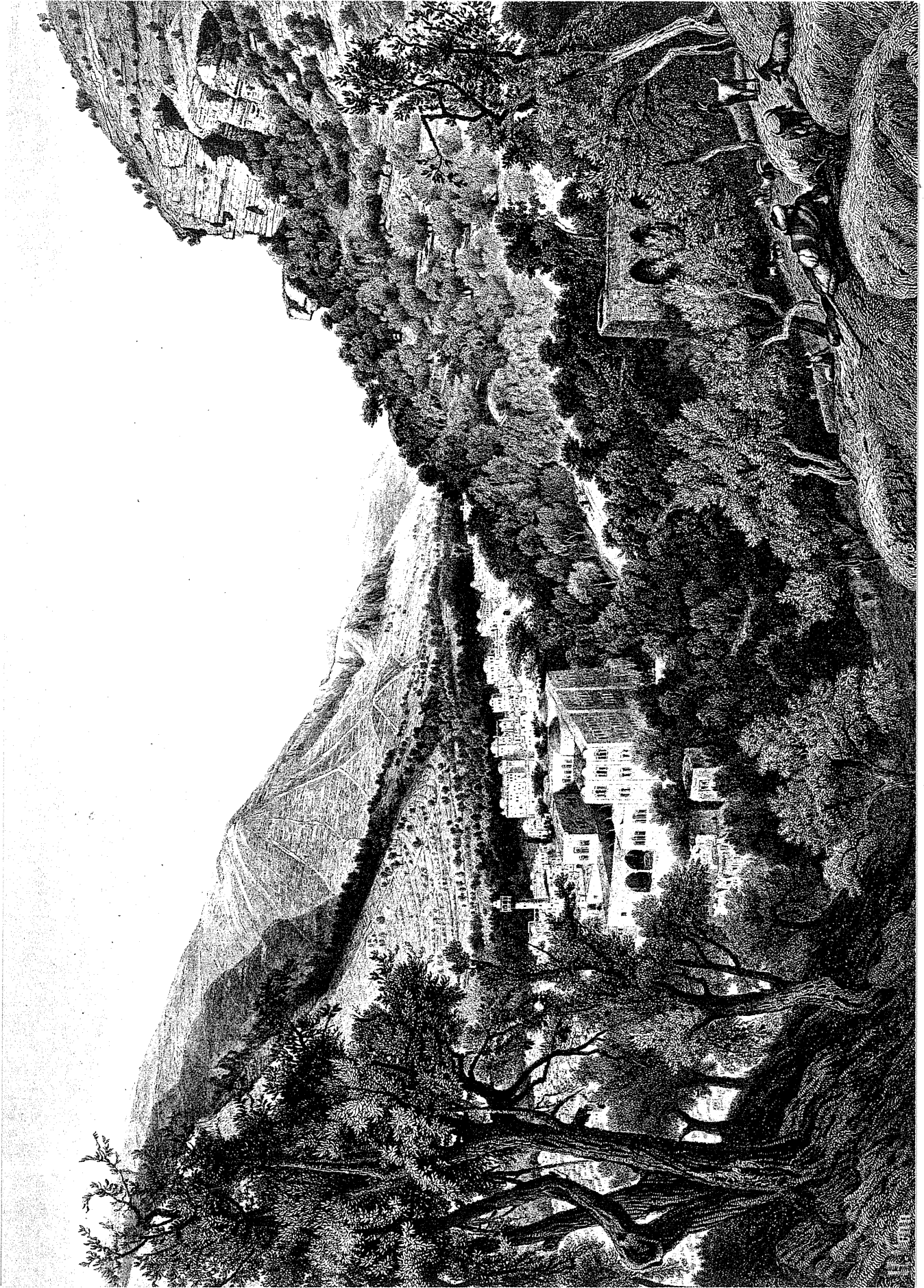
level of human duty and effort as far as it is below the level of the sea. The fragrance of the orange blossoms, like a subtle incense of indulgence, floats on the evening breeze." (21)

In a way, the green-belt of gardens functions like the wall of the bustan, enclosing a space both visually and physically, creating the illusion of being in the ideal place. The inhabitants of Damascus believed they were living in paradise. "The Damascenes believe that the garden of Eden was located there, and that the clay of which Adam was formed was taken from the banks of the Abana." (22)



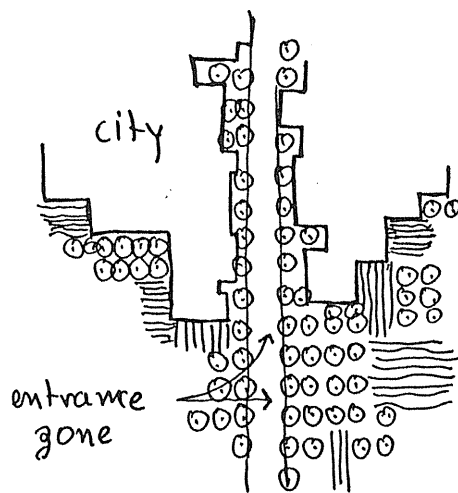
19. The traditional green-belt of bustanim had disappeared in modern cities.

Our modern cities have reversed the process. The urban area is being conceived as the new wilderness, (23) while the surrounding agricultural landscape is regarded as paradise. The transition between these two landscapes is often sudden and abrupt, diminishing the experience of entrance to the minimum. Even worse is the case when the entrance zone consists of the

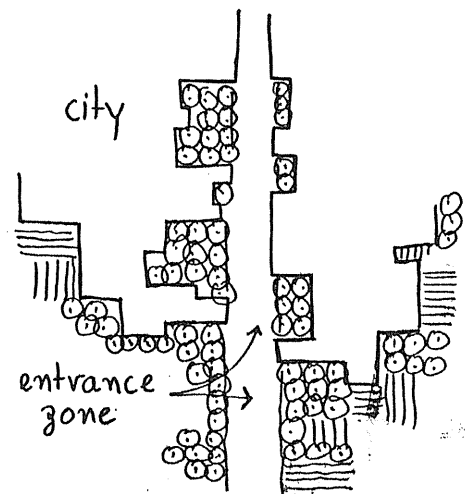


21. Nablus, the ancient city of Shechem (a drawing from about 1870)
The city was surrounded with a green belt of bustanim

city's leftovers, such as industrial sites and sewage plants. The welcoming feelings have been completely erased. If the agricultural landscape is extended into the entrance zone, the welcoming feeling of the traditional green-belt would be restored. A wonderful example of this is the city of Rechovot, where the orange tree boulevard of the main street is a most inviting entrance to a city surrounded by orange groves. The city is thus conceived as drawing from its surrounding agricultural landscape rather than setting up a contrast to it.



linear planting of
fruit-trees



road-side bustanim

20. Reintroducing the welcoming feeling to the city's entrance

Reflection of agricultural systems

"THE WATER NOURISHED IT,
THE DEEP MADE IT GROW TALL,
MAKING ITS RIVERS FLOW
ROUND THE PLACE OF ITS PLANTING."

EZEKIEL 31:4

The garden is part of the agricultural landscape and uses agricultural materials and tools to create its art.

Reflecting the agricultural connection in a garden design has, I believe, an important value. The basic connection between man and land as a place for growing food is clear. It helps us understand the agricultural order in micro-scale, and increases awareness of the transformation of the natural order into a man-made system. Moreover, a garden which retains its agricultural features is perceived as a part of a larger context and not as an entity on its own.

In the traditional bustan, the agricultural processes and patterns are clearly displayed. The process of watering is visible, the terraces are an integral part of the terraced agriculture, the enclosure is a means of protection, and the organization of the plants responds to agricultural considerations. Moreover, the intensive use of the land and the inter-culture of plants, which are characteristic of Mediterranean agriculture - are part of the bustan's design.

Like other traditional small-scale agricultural patterns, the bustan is an ecologically balanced system and reflects it in its design.*

A recently recognized approach to ecology called 'total ecology' perceives man as part of the ecological system, with a tremendous ability to modify it to his needs. Modern society has become more aware of the impact of man's activities on the natural environment. People are aiming at re-establishing a symbiotic relationship with the land, returning energy as well as using it. The 'give and take' relationship with the land was and is an integral part of the bustan that should be learned and understood.

The following is a study of the different agricultural systems which can be traced in the traditional bustan.

* "Ecology - a branch of science concerned with the interrelationship of organisms and their environments." (19)

1. Irrigation

Two types of agriculture, defined in the Bible according to their water sources, are found in Israel:

A. Ba'al. Agriculture depending on seasonal winter rain. Baal was the name of the Canaanite fertility god, who was believed to bring rain. (1) Another explanation of this word refers to the Hebrew meaning of the word "Ba'al" - husband, lover. The rain is perceived as the male element which fertilizes (בַּיָּד) the feminine element, the earth.

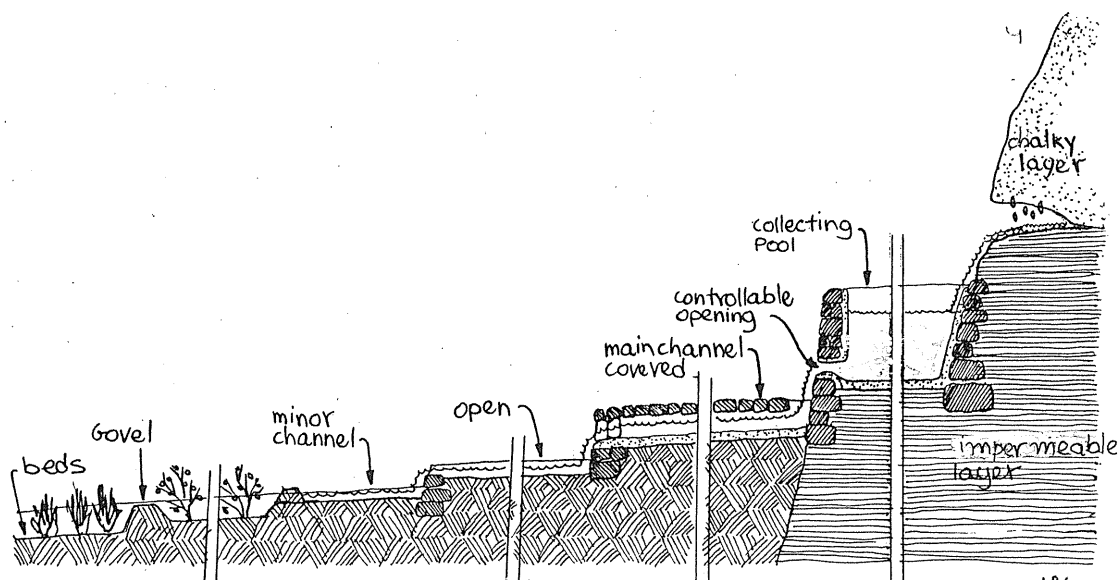
The native Arab farmer, the 'fallah,' calls this type of growth 'kerem.' It consists of plants which do not require frequent watering such as: olives, grapes, figs, grains, and certain legumes. (2)

B. Shlachin. Agriculture using a reliable year round water source such as a spring or a well. The name is derived from the Acadian word "schalach't" - a channel, and is related to the system of irrigation. (3) In Hebrew 'shalach' means 'send' referring to the fact that the water is 'sent' from the spring to the field. (4) This type of intensive growth is called by the Arab fallah 'bustan.' It includes all the plants which need consistent watering such as vegetables, herbs, flowers, and certain fruit trees.

Most bustanim belong to the second group, since they consist mainly of fruit trees, shrubs, and vegetables which need summer irrigation. The unirrigated bustanim, which belong to the first group, are limited in their plant materials to certain kinds of fruit trees, shrubs, and grapevines which thrive solely on winter rain. The young plants are watered by non-gravitational systems such as buckets, or recently by pipes. These bustanim are traditionally located closer to the houses, and on the higher terraces, leaving the lower valleys for irrigated gardens.

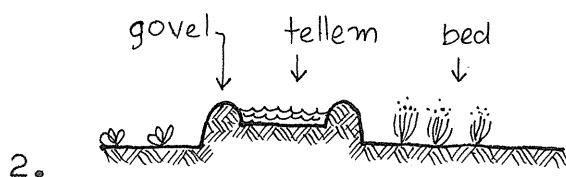
The irrigated agricultural bustan reflects the geometric structure of water channels in its layout. The few systems of

irrigation found, are all based on channeling the water from one main water source and leading it openly through the garden.



1. Typical section of water flow

A system found in the Judean hills is the 'tellem' and 'govel' system. The terraced terrain is divided into square beds, varying in size from 1 square meter to 2.5 square meters. Between every two rows of beds lies a trench called 'tellem.' The bed is lower than the tellem and is surrounded by a little earth mound named 'govel' (border). Water flows from the main

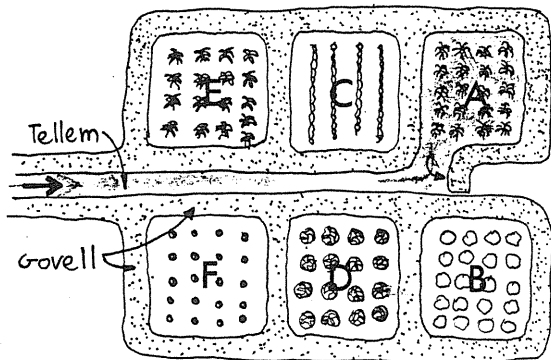
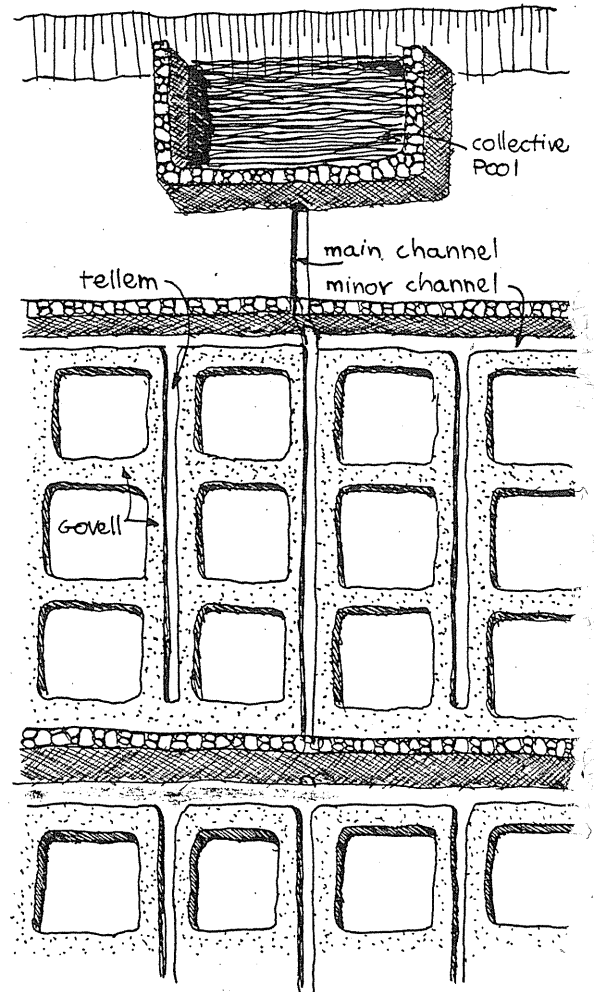


irrigation by
flooding

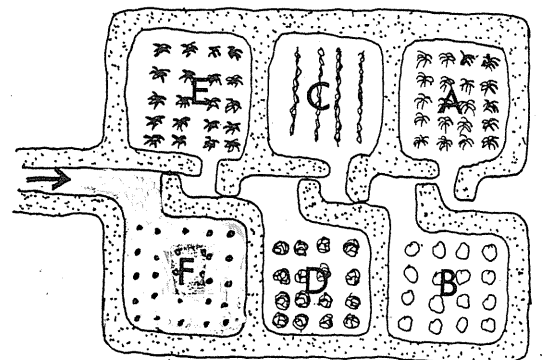
channel to a minor channel and from there to the telem, flooding the bed. Controlling the waterflow is done by opening the 'govel' by hand, foot, or hoe, and closing it again when the bed is sufficiently watered. (See Fig. 4) This system of flood-irrigation is mentioned in the Bible referring to Egypt: "Where

you sowed your seed and watered it with your feet, like a garden of vegetables." (Deut. 1:10)
 This system requires intensive human labor and is not very economical in the use of space, since the govell and tellem may each be the width of a meter. However it is still practiced in some traditional agricultural communities, where the high yield of the garden balances the intensive human input.

3. Scheme explaining the irrigation system of 'tellem' and 'govel.'



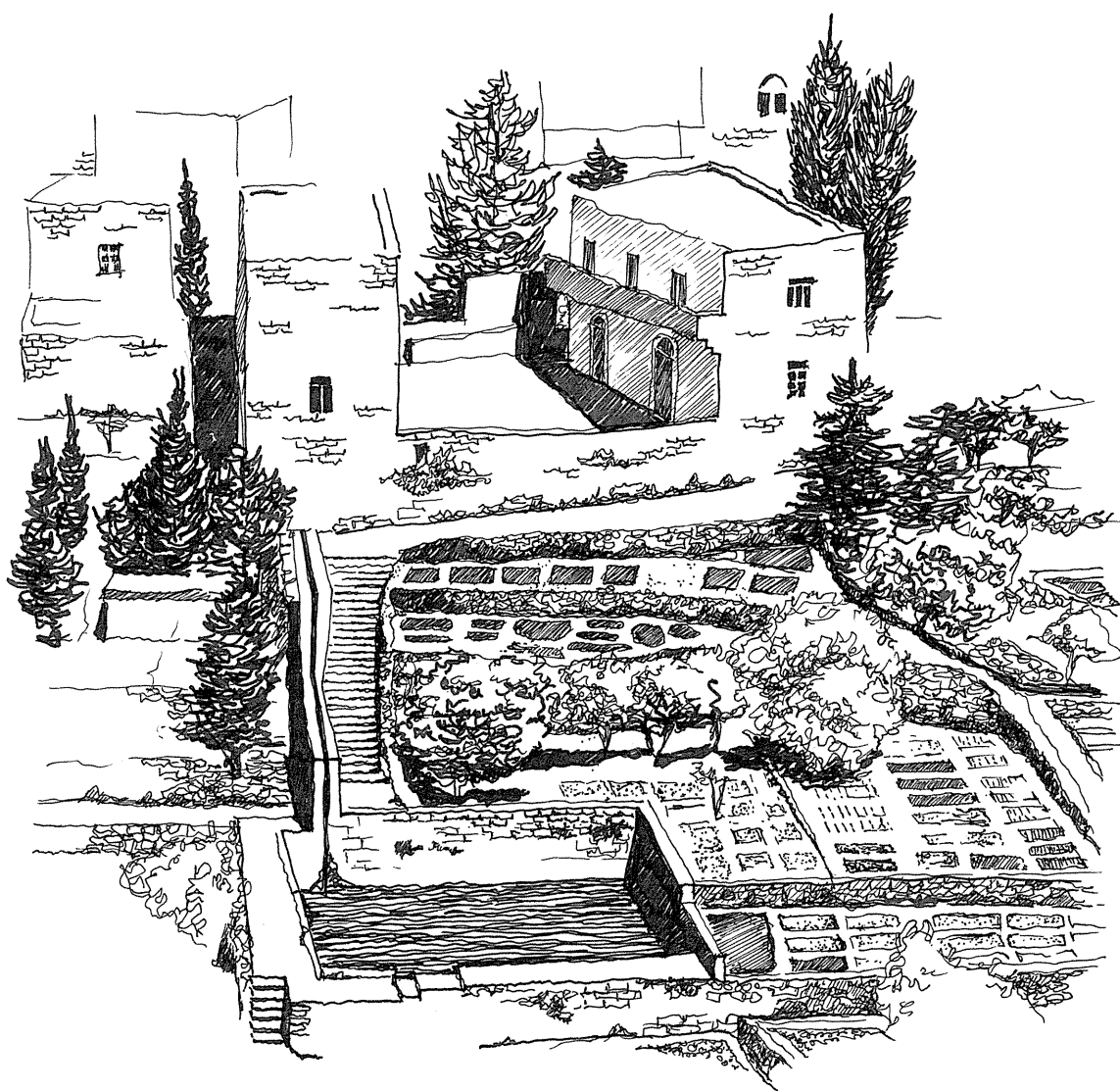
process of first irrigation



process of preceding irrigation

4. The process of irrigation

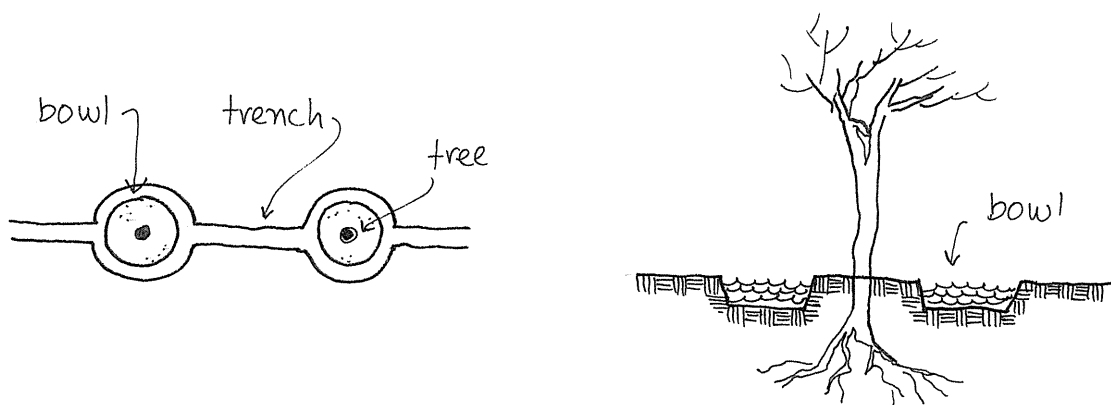
- Village life is centered around the pool. The water flows from an ancient spring-house to the pool, 8 meters below. It is used for drinking, washing, laundry, and irrigation.
- The distribution of water is part of the social structure of the village. Each 'hamula' (extended family) gets the amount of water it needs, measured in a traditional method of putting marked stick in the water.



5. THE TERRACED BUSTAN AND THE POOL IN BATIR

THE BUSTAN IS PART OF THE AGRICULTURAL LANDSCAPE
OF THE TRADITIONAL COMMUNITY IN THE "VALLEY OF SPRINGS"
AT THE JUDEAN HILLS

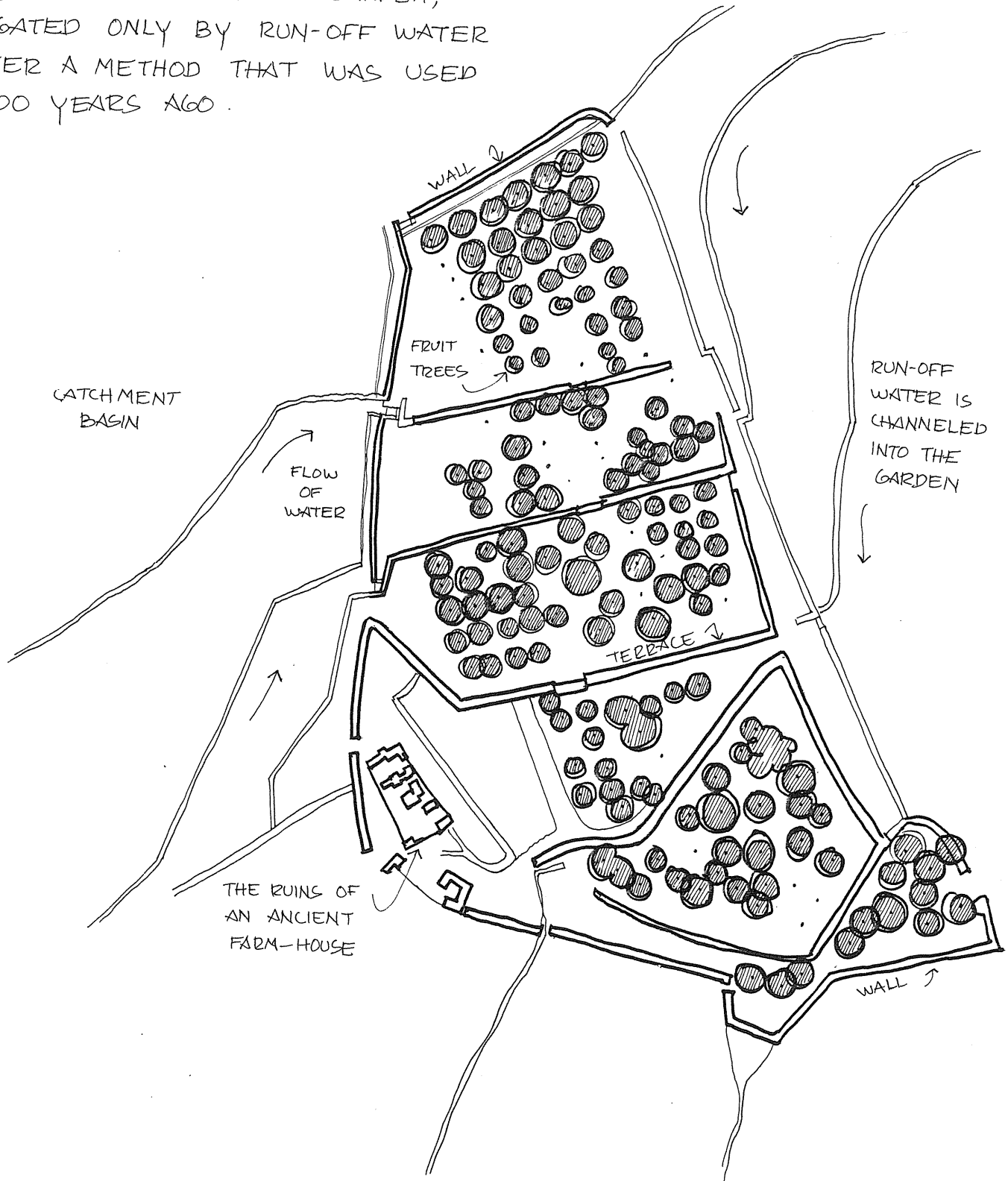
Another system of irrigation is mentioned in ancient sources of the Talmud and Mishna. This system refers to basins or depressions for holding water around the tree. A depression was dug around the trunk, but not too close in order to avoid rotting of the trunk and roots. The water was transported from one tree to another in an open trench. (5) This system is still employed in many bustanim and orange groves.



6. Irrigation of individual trees

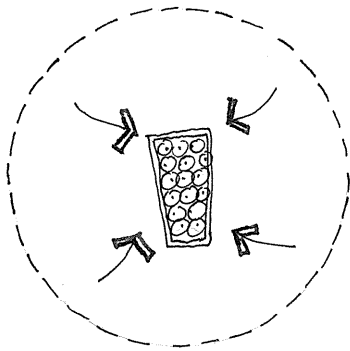
A unique pattern of water use has evolved in the desert bustan. In an area where annual rainfall varies from zero to four inches, a flourishing agriculture existed 2000 years ago. The mystery of where the water came from is partially solved by examining the remains of old agricultural farms. (6) (See Fig. 7) The desert garden uses runoff water from its surrounding environment, directing it in channels into the garden. The catchment area is 20-30 times larger than the growing area, multiplying the amount of water reaching the plants by a factor of 30. The success of this form of agriculture is due mainly to the quality of the soil. The loess (7) is a very favorable soil for runoff agriculture. When slightly wet it forms an impermeable surface. After penetration, however, the surface crust

- A RESTORED AGRICULTURAL GARDEN, IRRIGATED ONLY BY RUN-OFF WATER AFTER A METHOD THAT WAS USED 2000 YEARS AGO.

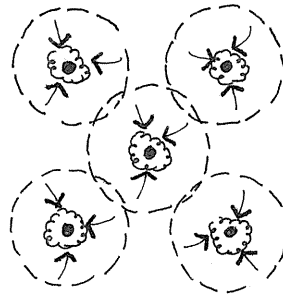


7. THE OVDAT BUSTAN- A GARDEN IN THE DESERT
(AFTER AN AIR-PHOTO FROM ABOUT 1975)

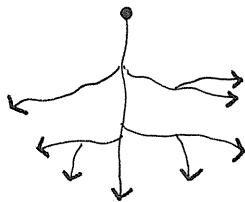
prevents it from evaporating quickly. The desert bustan reflects this system in its design. It is located in a catch-basin, and surrounded by catchment channels which lead the water into the garden. The garden itself is divided into terraces and surrounded by walls which prevent the water from flowing further down. Every drop of water is thus carefully preserved. Recent experiments have proved that the system works even better when each tree has its own small catchment area extending the overall area of the garden. (Fig. 8A) Since runoff agriculture has proven successful in the Negev, the desert bustan concept becomes an important model for contemporary agriculture in arid regions.



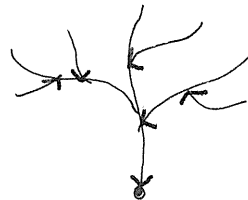
8. Catchment area of
of desert-bustan



8A. Micro-catchment
for each tree



man - made
irrigation system



natural
water-shed

9. The catchment system of the desert bustan imitates the natural process.

2. Terraces

In areas of mountainous agriculture, terracing is an important technique. The bustan, as a part of the whole agricultural complex, employs terracing for practical reasons. In the more elaborate transformations of the garden, terracing has become of esthetic and symbolic value as well.

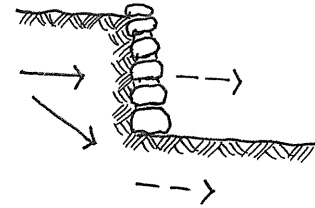
For thousands of years, the mountains of Israel, as well as those of most of the Mediterranean region, have been terraced for intensive use of the land. The natural ecological balance of wooded slopes retaining the topsoil, has been replaced by a new man-made balance. Erosion is prevented by building a set of stone walls and leveled surfaces which stop the soil from being washed down the slope, and enable vegetation to grow. Besides preserving the soil and creating level surfaces for cultivation, the terraces enable a better use of rainwater. Maximum penetration is allowed by preventing the water from running off the slope, and by leading it gradually from terrace to terrace.

Terrace building is a complex undertaking which requires cooperation, hard labor and continuous maintenance. Its existence indicates a stable agricultural community and good social connections. In the era of flourishing agriculture in Israel, throughout Biblical times and the Byzantine era (800 B.C. - 300 A.D.), the mountains of Judea and the Galilee were largely terraced and cultivated. Today only about 60% of the terraces are cultivated, most of them in Arab villages. (7)

One wonders today, in the age of cement and concrete, how those 'fragile looking' walls have endured so long, supporting a successful agricultural economy. A close examination of these structures reveals a delicate and clever system, based upon a deep understanding of natural forces which was accumulated through the experience of generations.

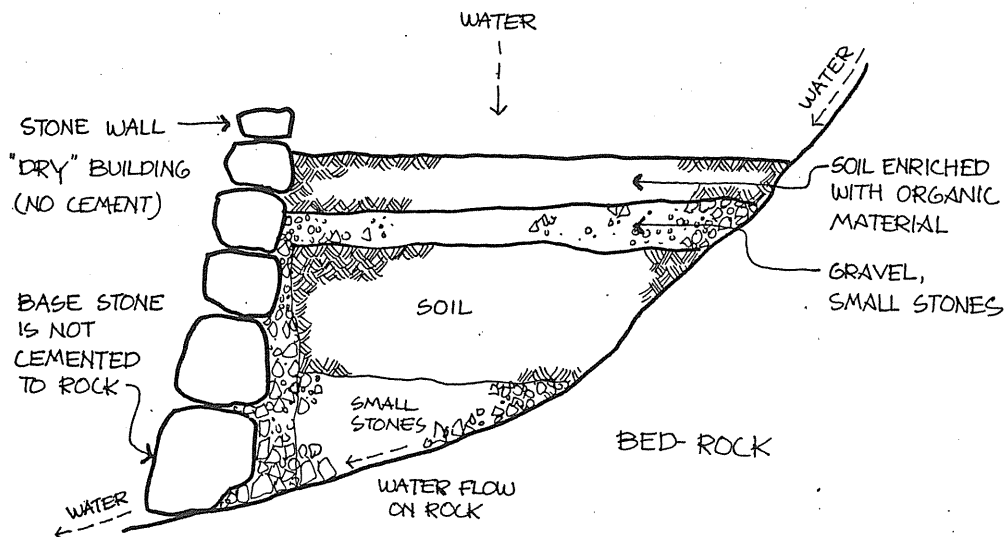
In order to prevent horizontal pressure on the terrace, the wall was built without sealing the spaces between the stones with

cement or clay. Excess water could drain easily through the stones. This system is recognized today as 'dry building.' Moreover, the base was never excavated into the rock, or cemented to it. Thus the destruction of the wall because of water pressure was prevented.



10. HORIZONTAL PRESSURE ON WALL IS REDUCED, AS WATER SEEP THROUGH THE STONES

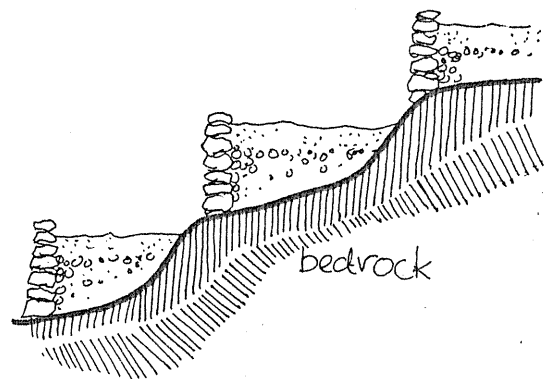
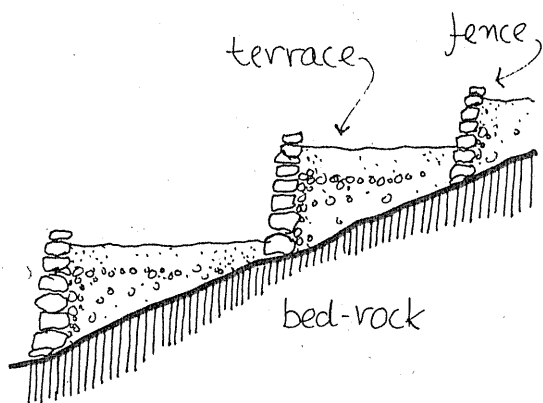
The terrace itself was built of several layers, in order to provide maximum permeability, good drainage, and adequate nutrition for the plant. The water penetrates easily through an upper layer of soil and gravel, absorbs the nutrients of the enriched soil, and reaches the roots of the plant. The excess water flows slowly through the stones, on the impermeable bedrock to the next terrace.



11. The agricultural terrace

A typical section of the traditional structure

Terraces are built in response to the natural topography. The steeper the slope is, the higher the walls are, and the smaller the leveled surface is. Wherever natural terraces are found, man-made terraces are built to accentuate and reinforce the existing topography.



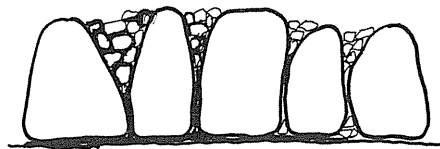
Reinforcing natural terraces

12. Terracing of an even slope

13. THE DIFFERENT CONSTRUCTION TYPES OF THE AGRICULTURAL TERRACE

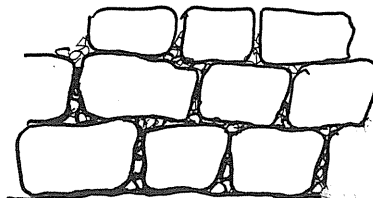
1. WALL BUILT OF BIG VERTICAL STONES, WITH SMALL STONES AS INFILL.

(TYPICAL TO THE YEARS 900-500 B.C.)



2. WALL BUILT OF SQUARE STONES, ADJUSTED WITH LAYERS OF SMALLER STONES.

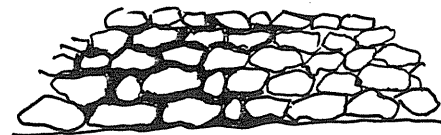
(TYPICAL TO THE YEARS 100-300 A.D.)



3. STONES LAID ON THEIR SIDE, IN A FISH-BONE PATTERN.



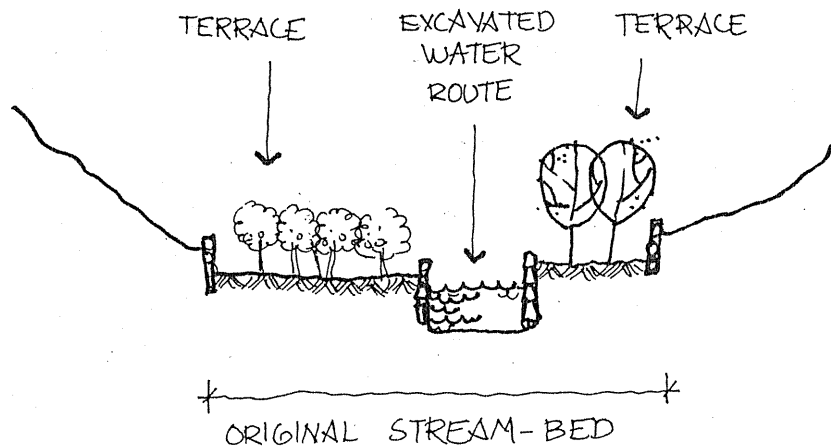
4. WALLS BUILT OF SMALL STONES, USUALLY FOUND IN LEVELED AREAS, FOR DIVISION AND SEPARATION BETWEEN TERRACES.



5. WALLS BUILT OF FLAT STONES, LAID IN A BRICK-LIKE PATTERN.



Many valley floors have been terraced, taking advantage of the convenient slope and rich alluvial soil. In order to overcome the powerful flow of water which might destroy the terrace, an alternate water route is provided.



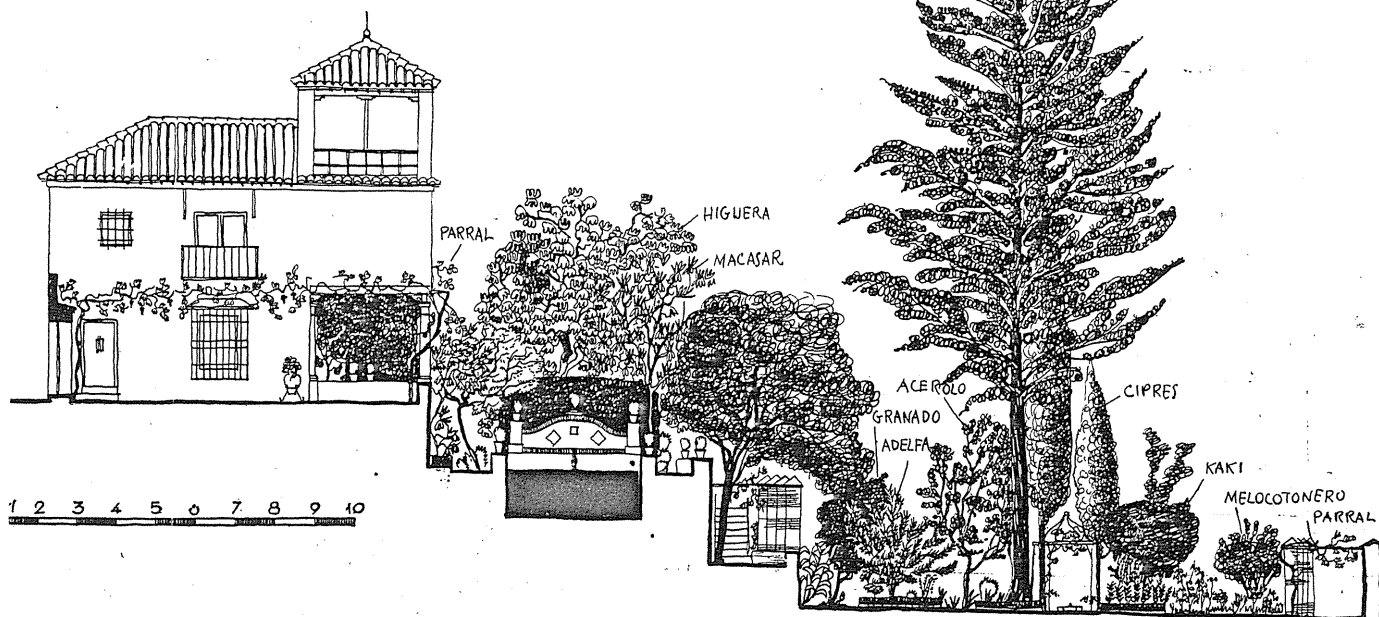
14. Terracing of a stream-bed

The material used for building the walls consists of the stones collected while preparing the earth for cultivation. Some of the walls are wider than necessary, due to piling of larger amounts of stone. The stone found in the area and the traditional building techniques are the main factors dictating the type of wall to be built. The different types of terrace walls of the Judean hills, as classified by two Israeli researchers (8), are illustrated in Figure 13.

An example of a terraced bustan is the neglected bustan in Vadi Siach, near Haifa. Here the terraces function as a means of spatial division and are an ornamental feature, as well as a means to overcome the steep slope. As the bustan spreads over several terraces, sets of stairs and pathways connect the various levels.

A garden, which evolved out of a similar agricultural context, is the Italian Renaissance garden. The Mediterranean landscapes of cultivated terraces inspired the artistic use of terraces in the Italian garden. Whereas the terraces of the Renaissance garden departed from their utilitarian aspect, the Israeli

mountainous bustan retained its food-growing component, as did the simpler Italian villas, and other Mediterranean folk gardens.



15. A terraced carmen in Granada

The terraces are both ornamental and functional features in this garden. They are carefully designed, corresponding with the architecture of the house, but they are also used intensively for food-growing.

3. The Enclosure

The enclosure around the bustan is one of its main characteristics and reflects the basic need for protection of the cultivated area. Animals, thieves, wind, and dust are kept out by the protecting walls. Of equal importance to protection, is the need to define the space and create cultivation areas. The farmer knows the boundaries of his land by the walls or fences that surround it. Sometimes these boundaries do not correspond with legal ownership, yet they are perceived by the farmers as the real definition of their space. An interesting research paper, about the Arab villager's perception of the land, reveals that he sees it as

divided into territories. Stone walls, often found in landscapes of Israel, mark these territories. (9)

The walls of the bustan vary from a simple functional fence in the peasant's garden, to an ornamental wall in the urban bustan and the pleasure garden. The materials they are made of reflect the materials found in the natural surroundings and the degree of sophistication of their builder. The simplest fence is probably made of thorny plants tied together, as found in the bustanim of Sinai and Gaza.



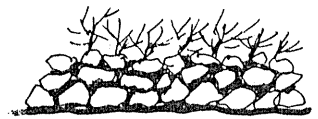
thorny plants



stone wall

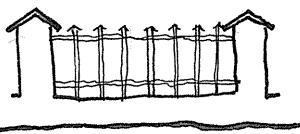
A more solid protection is provided by a stone wall, constructed in a similar manner to the terrace wall. Stone walls and thorns combined together create an effective form of protection. An interesting

description of a vineyard wall, probably not unlike the bustan's wall, is found in C.T. Wilson's book written at the beginning of the century: "Almost all the vineyards are surrounded by fences built of unhewn stones. Branches of prickly shrubs ('natash' in Arabic) are often placed upon the fence. These plants, attached by stones, prevent dogs, foxes, and hyenas from entering the



stone wall with thorny plants

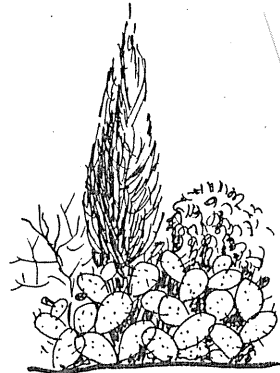
the place." (10) One can easily imagine how this simple structure has been elaborated into a stone fence with iron spikes, as found around the bustan of



stone & iron fence

Gethsemane, Jerusalem, where the iron poles function in a way similar to the thorny plants.

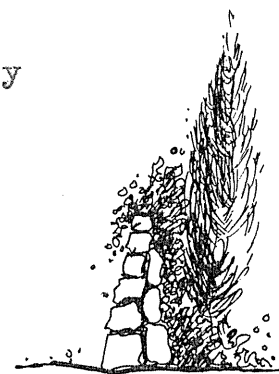
Where no stones are found, fences are made of other materials. In the coastal plain, the prickly pear plants



prickly-pear hedge

create an effective barrier. Often reinforced by rows of cypresses on the side of the prevailing winds, the 'living wall' encloses the space of the bustan from harsh wind conditions.

Also common in mountainous areas is the combination of a stone wall, a climbing vine and windbreaking plants. This kind of dense vegetation becomes both a physical and a visual barrier which hides what lies inside.



stone wall
with plants

4. Organization Of Plants

The organization of plants in the agricultural bustan responds mainly to plant requirements and to irrigation systems. In more elaborate gardens, social, artistic, and symbolic considerations are reflected as well.

The variety of plants in the bustan is an advantage in the ecological sense. The variety of species ensures it from total destruction of crops by natural disasters. The Bedouin bustan in Sinai, for example, contains more than twenty species of fruit trees on a unit of 1 - 1.5 dunams. That way it is protected from being totally afflicted by a sudden frost or an attack of pests. In this regard the bustan has an outstanding advantage over large commercial gardens.

This diversity however, creates problems of relationships between plants. The plants in the garden differ in their water, soil, and sun requirements. A very delicate balance is achieved by the sensitive organization of the plants.

● Water Requirements

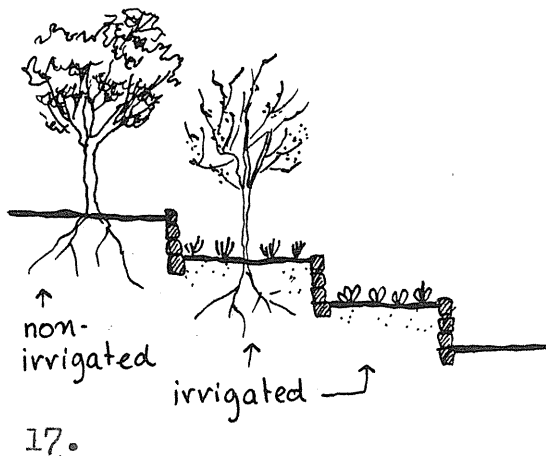
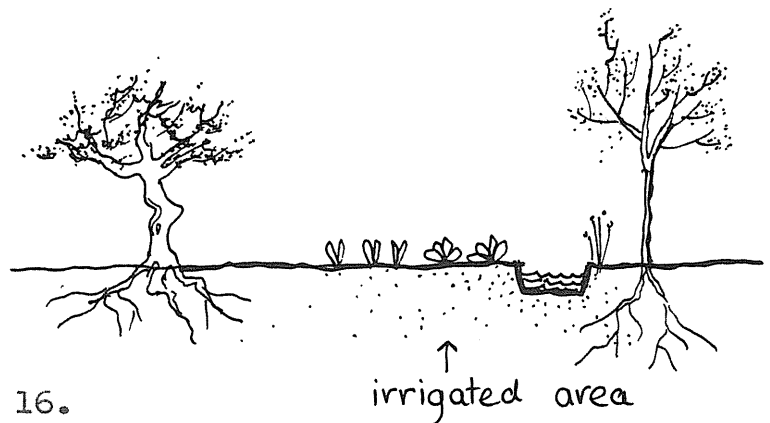
In the climate of Israel, vegetables and flowers require frequent watering in the dry season. Fruit trees, in general, yield better when irrigated regularly, although they can thrive on less water. (11) A Biblical metaphor refers to the benefit that a

tree derives from its proximity to the irrigated garden. The wicked one is analogous to a tree that sends its roots into his neighbor's garden: "He is green before the sun, and his branch shooteth forth in his garden." (Job 8:16)

Vegetables, flowers, herbs, and certain fruit trees are planted near the water source and along irrigation channels.

Other trees are located at a certain distance, sending their roots to the irrigated area.

(Fig. 16)

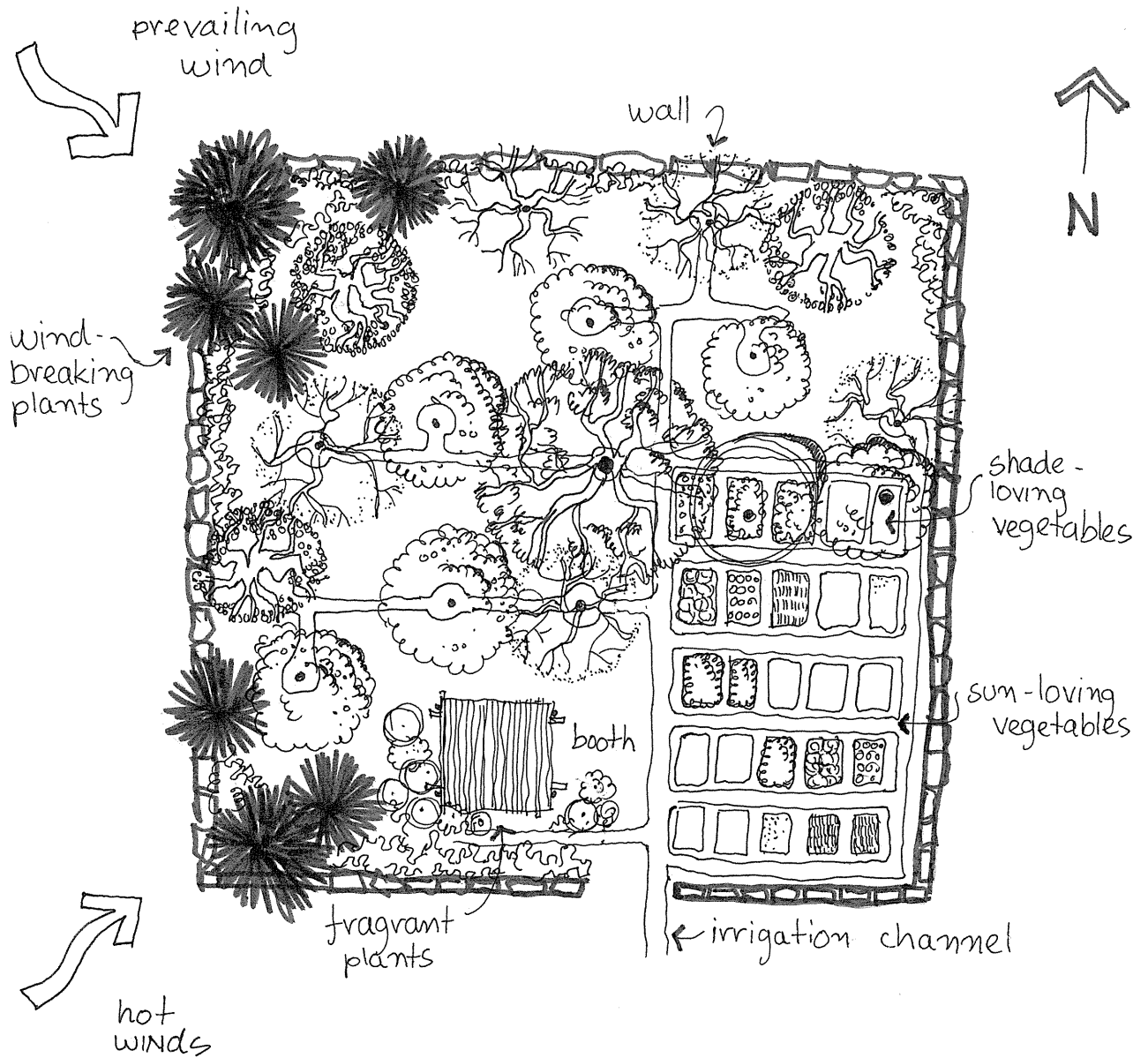


In the terraced bustan, irrigated plants are usually found in the lower terraces, nearer the water source. Upper terraces, above the spring level, are planted with non-irrigated fruit trees. (Fig. 17)

● Sun And Shade

The main problem in the mixed garden of the bustan is the shade cast by trees on sun-loving plants. The Talmud has a special regulation for this case. The garden owner is allowed to cut the branches of his neighbor's tree if they shade his plants. (12)

In order to prevent this situation from arising, the sun-loving vegetables are concentrated in the unshaded portion of



18. A SCHEMATIC ORGANIZATION OF PLANTS IN THE BUSTAN

The above scheme is an 'ideal' organization of plants in the bustan, regardless of local conditions such as topography, water-source, etc. Obviously, each bustan adapts itself to its particular environment, therefore this scheme should be regarded as a demonstration of principles rather than as a model for design.

the bustan. In the mountainous bustan, trees are planted near the walls, leaving the sunny part of the terrace for vegetables and other plants. (13)

Some plants, such as lettuce, are not affected by shade and can be grown between the trees. (14) Winter vegetables, such as radish, spinach, and horseradish can grow between the trees in summer, taking advantage of the coolness of the trees. (15) Thus, every bit of irrigated soil is used to the maximum.

- Windbreaking

Windbreaking is especially important in the exposed environment of the coastal-plain bustan and the desert bustan. Windbreaking trees such as cypresses, reinforced by lower shrubs, are planted along the walls, facing the prevailing winds.

- Fragrant Plants And Herbs

Fragrant plants can be enjoyed best from a short distance. They are usually planted along pathways, along irrigation channels or near a sitting place. Small spaces within the garden are ideal for planting scented plants. When the garden contains a booth or a pavilion, it is surrounded by herbs and fragrant plants.

5. Soil Enriching

The need to maintain a biologically healthy soil by returning to it what was taken by the plants was recognized early by farmers in Israel.

The Bible and the Talmud set special rules for retaining this balance. The year of the Sabbatical had to be observed, so that the land could rest and restore its nutrients and fertility: "And six years thou shalt gather in the fruits thereof. But the seventh year thou shalt let it rest and lie still." (Ex. 23:10,11) In the time of flourishing agriculture in Israel there was a special appreciation of the need for enriching the soil.

According to legends of the Talmudic era, the precious cinnamon tree gave fruit "as long as you cultivate it and manure it." (16) In a metaphoric story from the New Testament, the gardener pleads with the owner of the fig tree: "Lord, let it alone this year also, till I shall dig about it and dung it. And if it bears fruit, well. And if not, then after that thou shalt cut it down."

Unlike careful utilization of organic manure in the Israelite and Byzantine era in Israel, this valuable resource was totally neglected by Arab farmers. Mounds of waste were left to rot near the village, while fields and gardens were in urgent need of fertilization. A few places such as the village Artas in the Jordan hills, were an exception. This traditional agricultural community has managed to retain the high yield of crops from the bustanim and vegetable gardens by enriching the soil with:

- Organic Material - Manure of sheep was bought from the nomadic shepherds. Fertile ingredients from the vast grazing fields were transferred to the gardens.
- Plant Selection - Vegetables which enrich the soil such as legumes, root vegetables, and leaf vegetables were widely used. On the other hand, plants of the Solanaceae family such as tomatoes and eggplant which deplete the soil, were used sparingly. (17)

Modern agriculture uses chemical fertilizers to enrich the soil but this has some very unfavorable consequences. "When we concentrate chemicals and fertilizer to boost one-crop production we pollute streams and deplete the humus needed to maintain a biologically healthy soil." (18) On the other hand, animal manure and nutrients from sewage plants are being disposed of in such a way that a great deal of non-renewable energy is being lost in the process. In that regard, the soil enrichment system in the bustan makes more ecological sense.

6. Production For Self-Sufficiency

Over the past century, agriculture has evolved into a huge specialized industry, supplying food for distant consumers. This so-called 'efficient agriculture' is proving to be more and more costly as prices of energy rise. A study of California crops grown in 1972 shows that the amount of energy required to grow, handle, clean, pack, ship, and market food to distant consumers is greater than the energy we get out of it. (19) It seems important, then, to encourage self-sustaining low energy agricultural gardens that would shorten the way between the producer and the consumer.

The bustan, being a small, varied garden, in close proximity to the farmer's house, is designed primarily for self-sufficiency. The Bedouin bustan for example, can provide 50% of the yearly needs of a Bedouin family, both in living expenses and in calories. (20) The long duration of the fruitful season (from June until November) due to the variety of species, helps create a sustainable resource of food. Moreover, most fruits can be stored or preserved for the cold winter season.

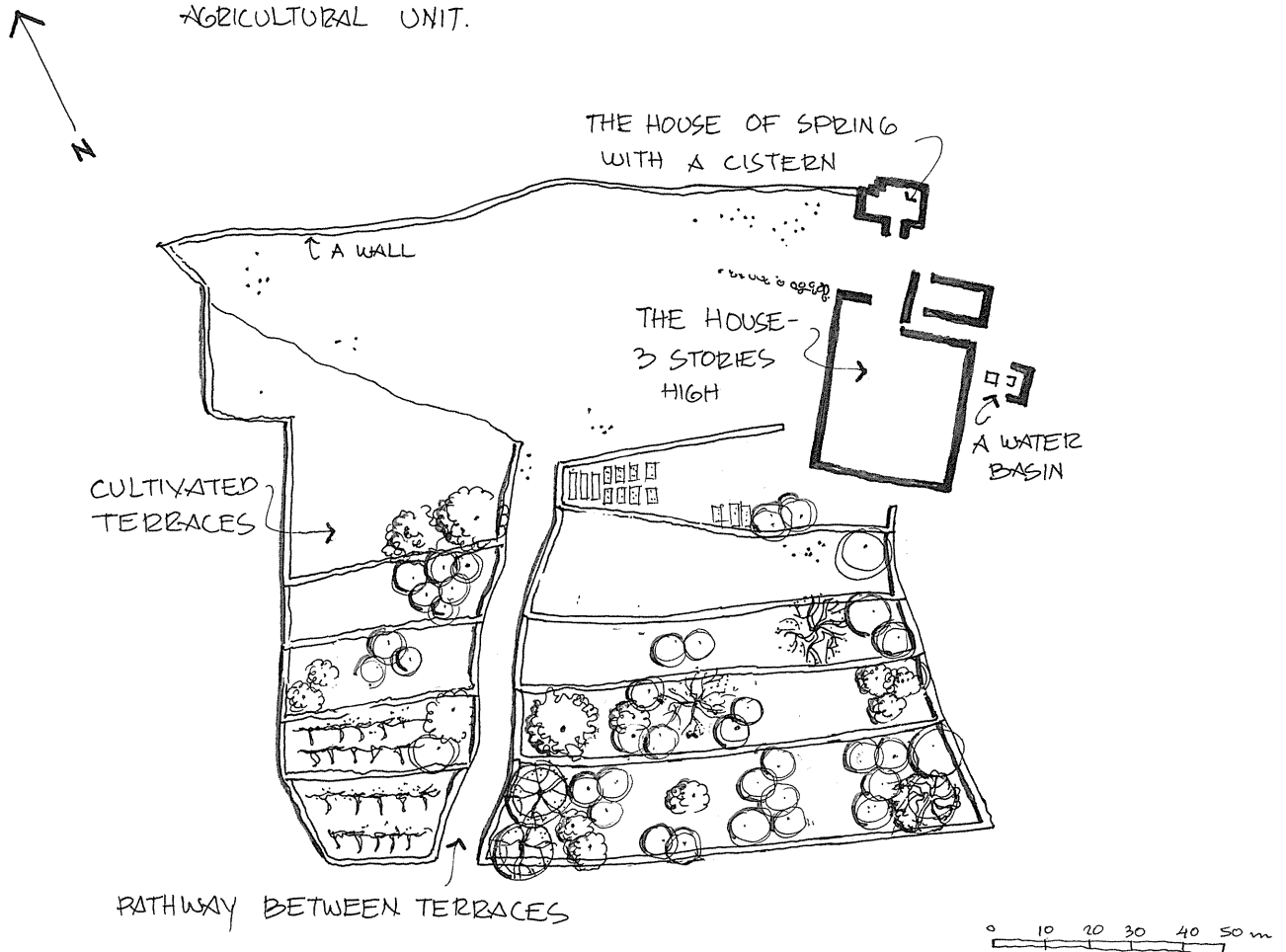
In pre-modern agricultural society, the family functioned as an economic unit. The bustan was perceived as a part of a whole agricultural unit in which the house was included. In archeological excavations in the Judean hills, agricultural units from the Israelite and Byzantine era have been found, in which the house is surrounded by a terraced garden. The size of the garden corresponds to the needs of the residents for self-supply. (See Fig. 19)

The tradition of small productive gardens, adjacent to the houses, has been carried on into modern agricultural communities in Israel. In moshavim, kibbutzim, villages, fruit trees and vegetables are grown by people for their own consumption. This landscape is becoming scarce in the more affluent communities, as more turf and 'decorative' plants replace the productive gardens. The bustan is gradually being pushed to the backyards, or

disappearing from the landscape as agricultural communities are transformed into suburban landscapes. Is it possible to reverse the process, and bring the bustan back to its former place of importance?

The need to reintroduce the productive elements into the garden is even more urgent within city boundaries. Today most of the consumer population consists of urbanites who rely

* NOTE THE INTEGRATION OF THE HOUSE INTO THE CULTIVATED TERRACE, AS AN HARMONIOUS PART OF THE AGRICULTURAL UNIT.



19. AN AGRICULTURAL UNIT IN THE JUDEAN HILLS
FROM THE BYZANTINE ERA (4-6 A.D.)

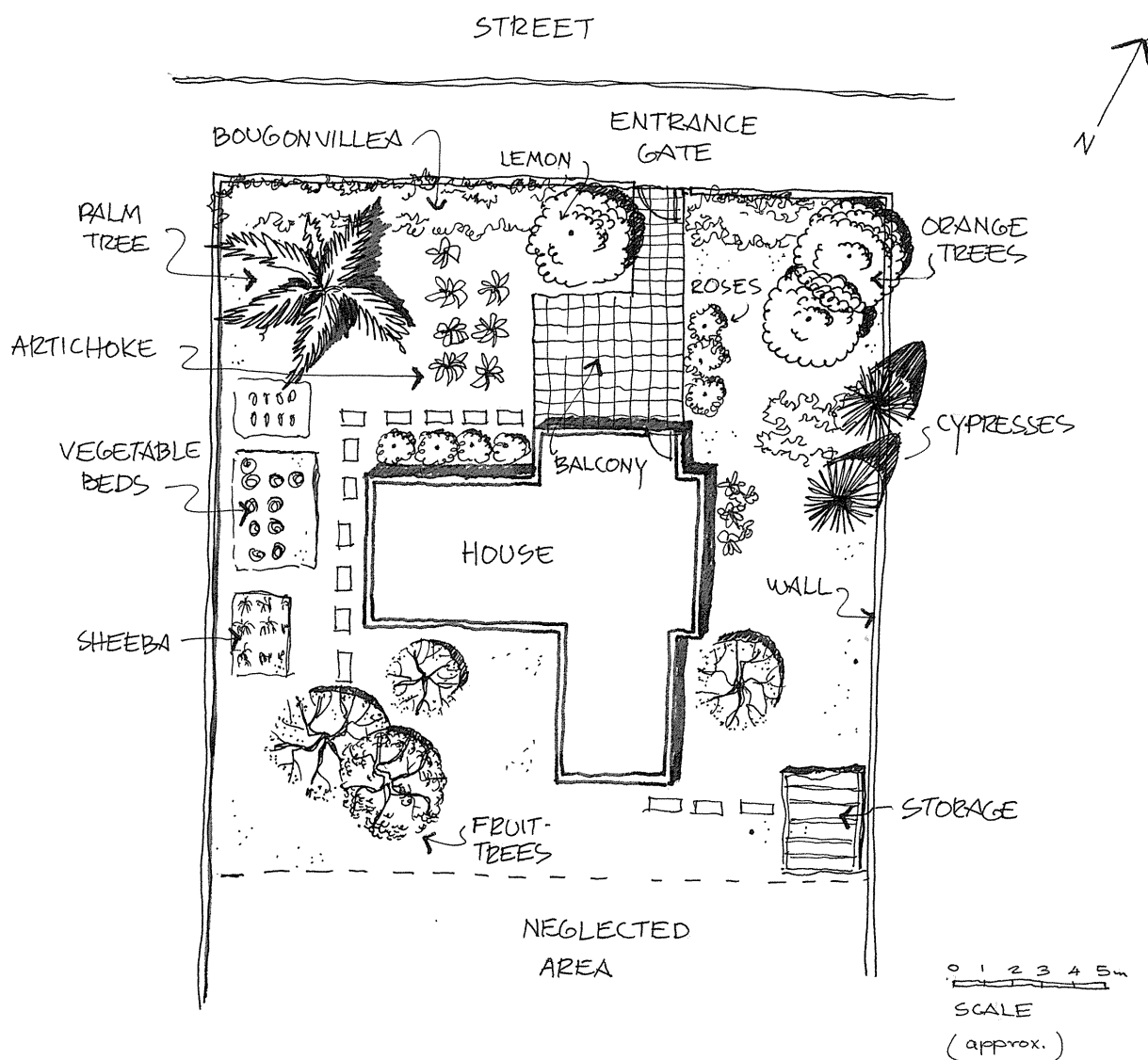
heavily on complex, long-range marketing systems. The idea that the city could produce food requires a shift in values to a more ecological, energy-conserving frame of mind. From this perspective, private gardens, public open spaces and institutional and industrial parks could be turned into productive landscapes. Recent research has shown that communal agricultural gardens within the city are cheaper to build and maintain than public parks under city management. (21)

It is interesting to note that the idea of self-reliant urban communities was the guideline for building 'new towns' in Israel 30 years ago. Two dunams (half an acre) of land was given to each family for growing food for self-consumption. The population, mostly Jews from Islamic countries, lacked the knowledge and motivation to maintain such a large portion of land. Smaller portions though, especially in the frontyards and areas facing the street, were carefully tended. Small bustanim of fruits, vegetables, herbs, and grapevine pergolas evolved around the house. A balcony, or a front porch surrounded by a wall, was added to complete the garden. The vernacular Mediterranean bustan had been transferred by the immigrants from North Africa to their new homes in the towns of Israel. (See Fig. 20)

Supported and encouraged by politicians and planners, this trend could transform our cities into more self-reliant communities.

The desire to have a small piece of land where one can grow radishes and onions, has not disappeared in this era of frozen vegetables in nylon bags. The opportunities, however, have diminished. Using small pieces of land in urban niches, after the example of the bustan, can provide those modest needs.

- NOTE :
- FUNCTIONAL PLANTS (VEGETABLES, FRUITS, HERBS) ARE MIXED WITH ORNAMENTAL ONES IN THE FRONT YARD, REGARDLESS OF THEIR "AESTHETIC" QUALITIES.
 - SCENTED PLANTS (ROSES, LEMON, ORANGES) ARE LOCATED NEAR THE ENTRANCE AND THE SITTING AREAS, WHERE THEIR FRAGRANCE CAN BE MOSTLY ENJOYED.
 - THE SIZE OF THE CULTIVATED UNIT (INCLUDING THE HOUSE) IS $\frac{1}{2}$ A DUNAM, WHILE THE REST ($\frac{1}{2}$ DUNAM) IS NEGLECTED.



20. A HOUSE AND A BUSTAN IN SDEROT

(based on my observations)

Agricultural Systems In The Bustan Of St. Catherine

A Case-Study

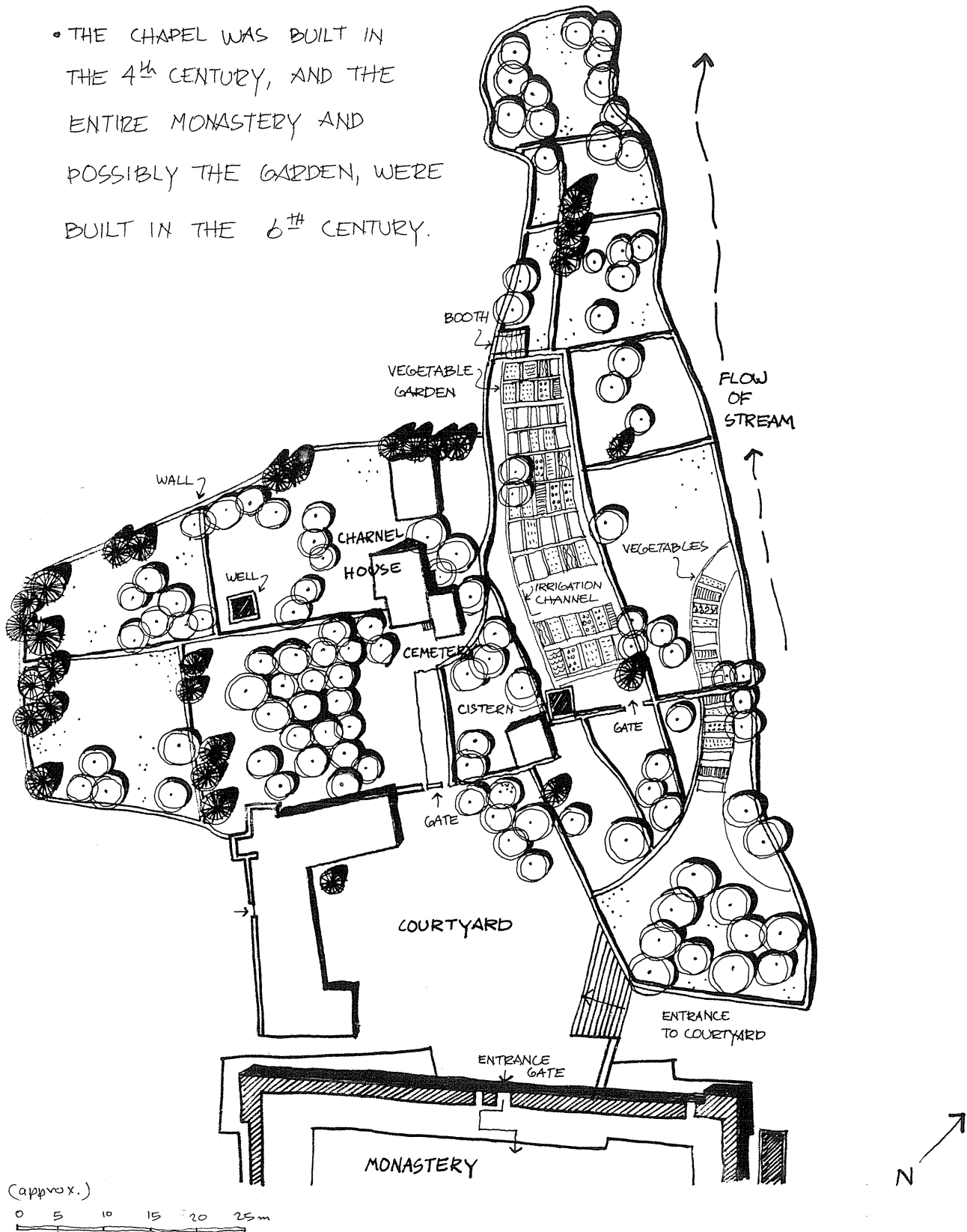
The garden of St. Catherine is a very ancient garden, reflecting the old agriculture of bustanim that flourished in Sinai in the Byzantine era (400 - 700 A.D.) (22) This garden is one of several in the high mountains of South Sinai providing the needs of the monks and the Bedouin tribes. It is unique however in being part of a sacred place, and a garden for contemplation as well as a functional place.

An examination of the garden's agricultural aspects (Fig. 22) shows how the general principles of the bustan apply to a specific place. It is perfectly adjusted to the topography, responding to the terrain more than to any formal structure. The garden is located at the edge of the valley where the soil is rich and where water is found. Although basically rich in organic material, the monks enriched the alluvial land by bringing soil from faraway. Water is supplied to the garden by a well, by a subterranean cistern and by rain and melted snow. It is distributed in the garden by irrigation channels, recently replaced by plastic pipes.

The plant selection reflects the extreme weather conditions. Fruit trees, hardy to cold weather, such as apricots, plums, and cherries, as well as traditional bustan plants such as olives and cypresses form the main plant structure. The plant organization as demonstrated in Fig. 22, is based on the delicate balance between the different requirements of the garden plants.

Unfortunately, economic changes including changes in trade-routes, brought about by Israeli occupation, have resulted in partial neglect of this bustan, as well as many others in the area. The main labor force, the Bedouins, were attracted to more profitable jobs outside the area. (23) Nevertheless, the continuous existence of the bustan (from about the 4th or 6th century!) and its importance as a sacred place, will probably assure its future existence.

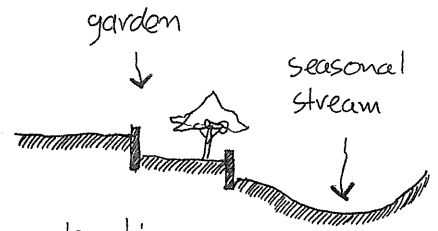
• THE CHAPEL WAS BUILT IN THE 4TH CENTURY, AND THE ENTIRE MONASTERY AND POSSIBLY THE GARDEN, WERE BUILT IN THE 6TH CENTURY.



21. THE GARDEN OF ST. CATHERINE

organization of plants:

- sun loving plants (vegetables), are separated from shade-trees.
- vegetables are planted near the water-sources, and are protected from the wind by walls and masses of trees.



location



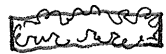
- The garden is located at the edge of the stream, on the upper terrace, protected from sudden floods.

terraces

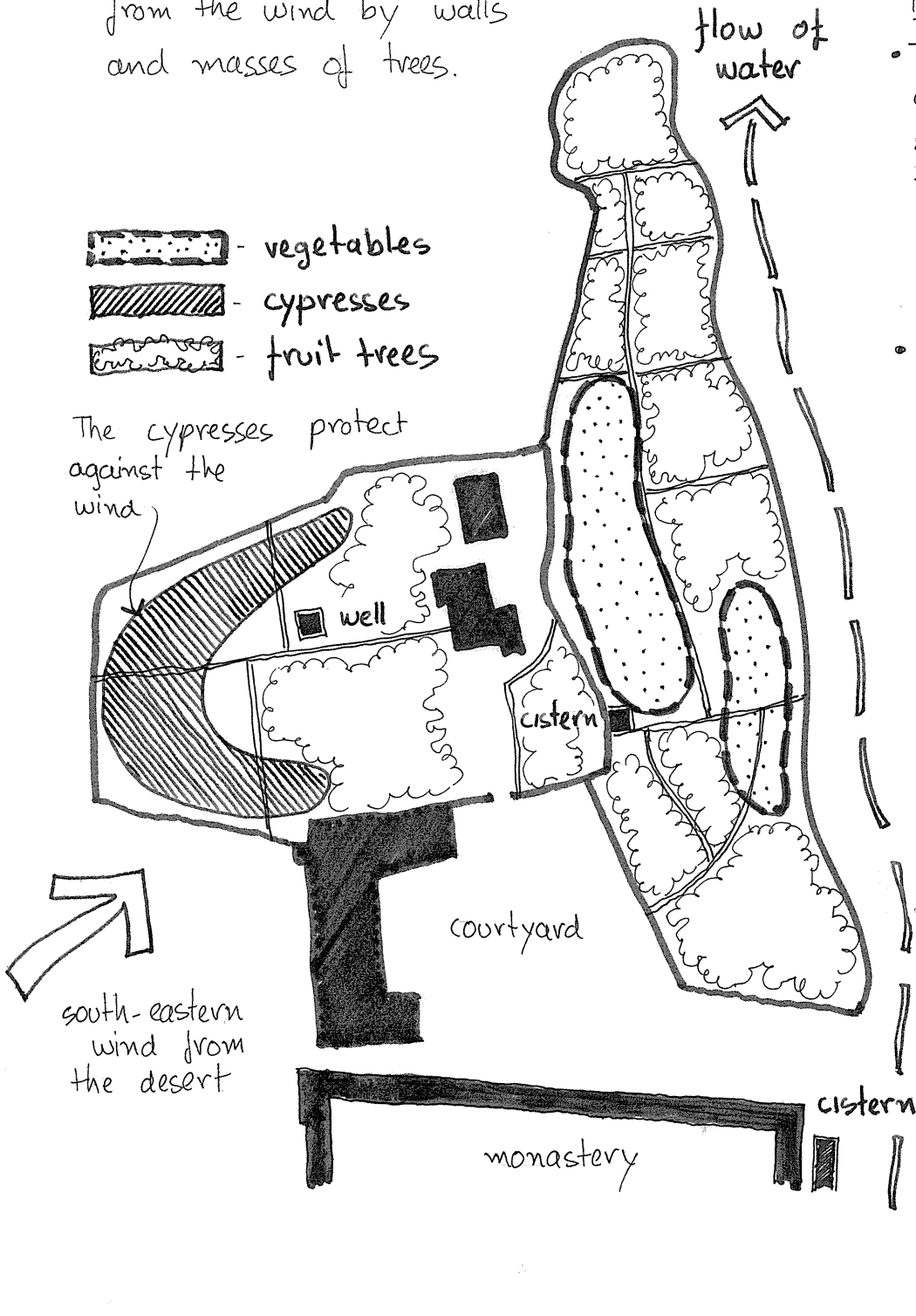
- Terraces are sloping down with the topography, allowing for maximum use of the land, and for good drainage.

enclosure

- The wall around the garden, and around each plot provides further protection for plants.

-  - vegetables
-  - cypresses
-  - fruit trees

The cypresses protect against the wind



22. AGRICULTURAL SYSTEMS

IN THE GARDEN OF ST. CATHERINE

Reflection Of Agricultural Systems In The Garden Today

The design of the bustan, as a garden which reflects agricultural systems, can be related to on many levels.

On one level, we may try to preserve and revive the ancient agricultural techniques of the bustan, as an educational resource. Demonstrating the agricultural principles of the bustan would give us an insight into a vanishing culture. Moreover, some of the traditional techniques have proved to be especially valuable, in view of the failure of some modern experiments.

The modern agricultural system of cultivation, as practiced in the mountains of Jerusalem, has proved unsuccessful in many places. Heavy machinery was used to create wide terraces and to 'blur the old terraces,' as government instructors defined it. The large investments brought about very disappointing results. Difficulties in drainage, erosion of soil that was not deep enough, and collapse of terraces - these were some of the problems that arose in the new agricultural settlements. As a result, only 15% of the terraced area in the corridor of Jerusalem is cultivated by Jewish settlers. (26) The rest of the area is neglected today. Reintroducing the traditional terraced bustan into the landscape might prove to be successful as an agricultural experiment and also as a valuable educational tool.

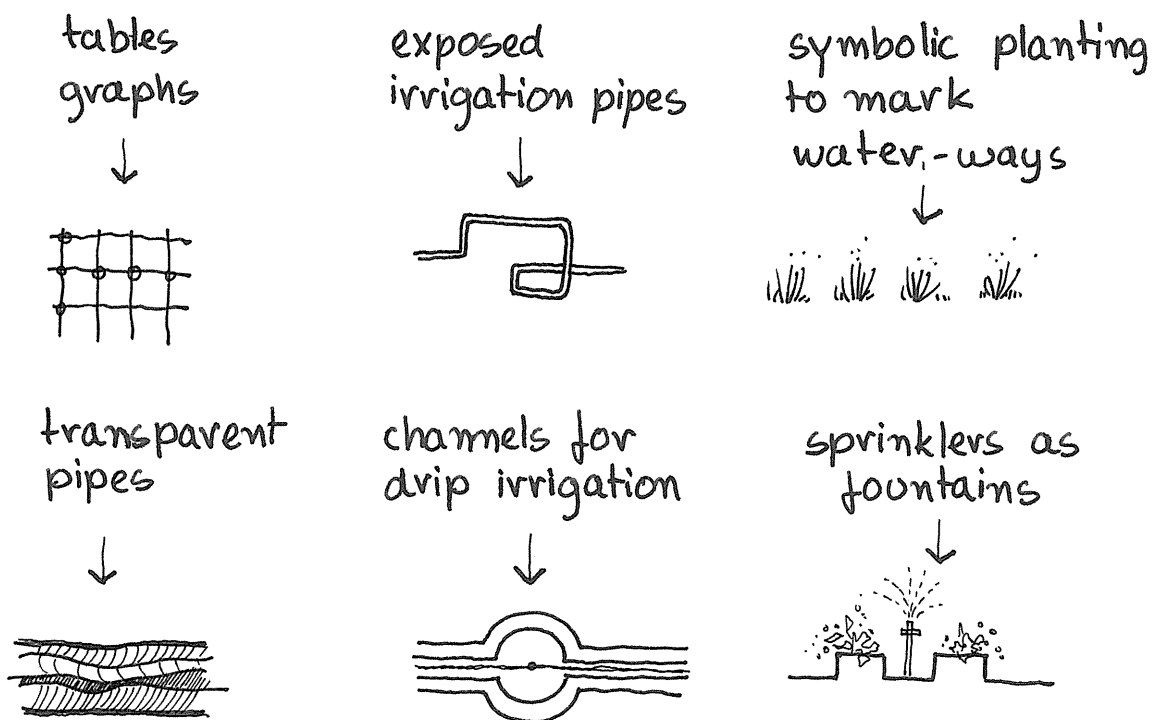
Similarly, other traditional agricultural techniques can be practiced in the bustan today. The interculture of plants - the combination of trees and plants which benefit from each other - can be valuable for the modern farmer. The deliberate use of certain plants which enrich the soil, might reduce the need of fertilization in the new bustan. Especially important is the model of the desert bustan, which extends agricultural possibilities in the desert beyond the limits of irrigated areas.

On a different level, we can think of the new bustan as

reflecting contemporary agricultural systems. Many of the agricultural techniques today are so large scale and complex that they can hardly be comprehended by an ordinary observer. Demonstrating these techniques in a garden setting might help simplify and clarify these processes. Moreover, a country which takes pride in its agricultural innovations and progressive techniques should not isolate them from other creative relationships with the land like the art of the garden. The modern techniques should be regarded as a source of inspiration for new gardens and parks.

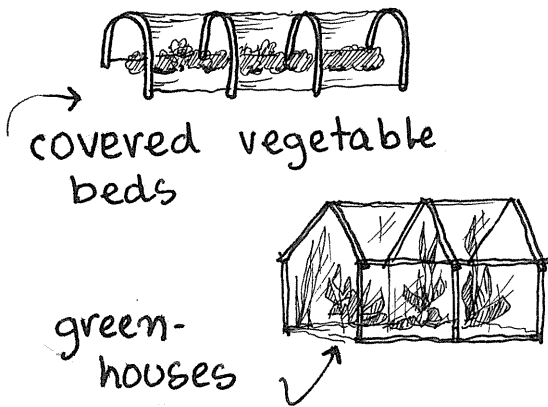
Irrigation Systems

Irrigation systems today are usually covered, making it hard to understand the process of watering the garden. By making it more visible, we can explain its order, and create a conceptual connection to the larger agricultural order.



23. Visual display of irrigation systems

The arbors and pavilions of the old bustan were an elaboration of the modest functional booth. Today's gardens have new sources of inspiration, that can be reflected in the design of structures.



covered vegetable beds

green-houses

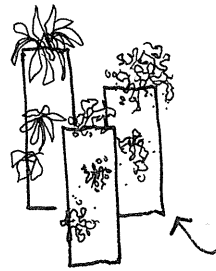
The Landscape of Plastic

can be used as an image for new structures in the garden:

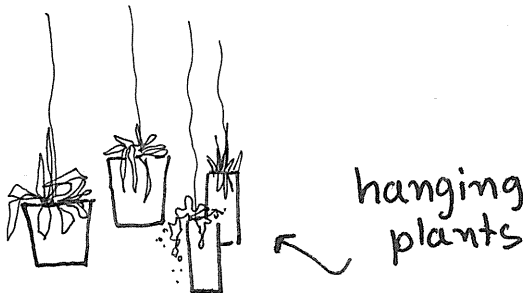
pergolas, sitting places, pavilions, booths, as well as sculptural and play elements.

The 'Vertical Horticulture'

can be integrated into walls, fences, sitting places, lighting, etc.



growing plants in vertical poles



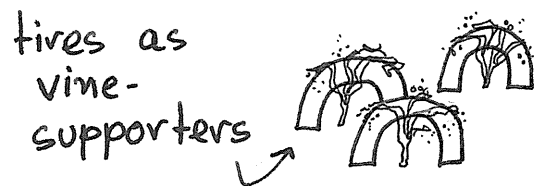
hanging plants

Hanging Agriculture

a new way of creating a 'ceiling' for the garden

Supporting Elements

different materials and recycled elements such as: iron bars, tires, telephone poles, etc. can be used as supporting elements for climbing vines.



tires as vine-supporters

The 'Machine In The Garden'

The introduction of machines into the garden calls for changes in its overall layout. The automation of certain processes such as watering, plowing and fruit processing causes changes in the scale of the agricultural garden. The investment in automation is justified only if the output from the garden is large enough to cover expenses. Therefore, the modern agricultural garden tends to be bigger than the traditional bustan. Is it possible then to create a modern bustan incorporating the new techniques introduced into the garden?

Probably, commercial gardens would not be replaced by the traditional bustan. However, a 'modern version' of the bustan can exist as well. The modifications don't have to be extensive since manual labor is still very much a part of the modern garden and most fruit-picking is done by hand.

In the 'modern bustan' spaces between trees should be wide enough to allow passage of a tractor, hydraulic lift, sprayer, etc. Irrigation can be automatic or computerized. There can be more trees of each kind for convenience of maintenance. This bustan will be different in feeling from the traditional one. It will be less dense and less varied, but it can still be an enclosed, diverse garden, with fragrance, fruits and a restful atmosphere.

Fun and function in the garden

"COME , MY BELOVED,
LET US GO FORTH INTO THE FIELDS
AND LODGE IN THE VILLAGES.
LET US GO EARLY TO THE VINEYARDS
AND SEE WHETHER THE VINE
HAS BUDDED."

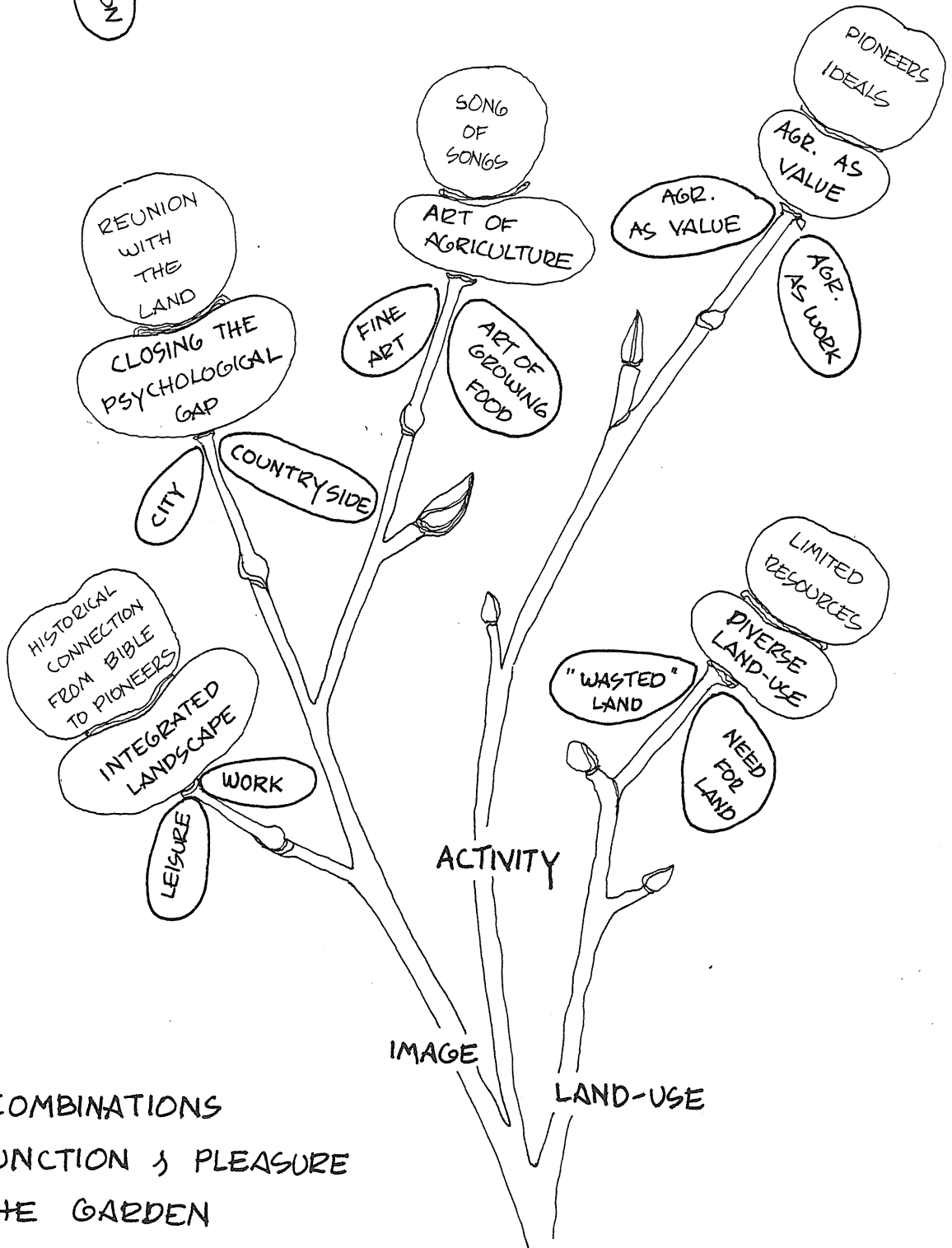
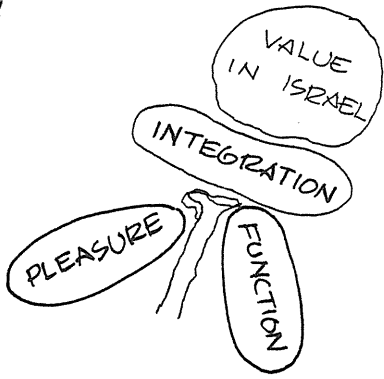
SONG OF SONGS 7:11, 12

Gardens of the ancient Near East were places of both utility and pleasure. The agricultural aspect was combined with social and leisure time activities in simple gardens as well as in aristocratic ones. Gradually, through cultural transformations in the Western world, the two aspects of the garden were separated. This process has reached different degrees of evolution in a variety of gardens. In its two extremes we find opposite kinds of gardens: the pleasure garden, completely divorced from agricultural origins, and the agricultural garden - essentially a utilitarian place. (1)

The bustan, like other folk gardens in the Mediterranean basin, is an example where these two aspects are conceived as reinforcing and complimenting each other.

These two aspects of the garden can be perceived in a variety of ways, while their combinations create a whole new set of values and possibilities. I would like to expand on the value of reintroducing the image, activity and land-use of the combined garden, as related to Israeli landscapes.

KEY OF
DIAGRAM



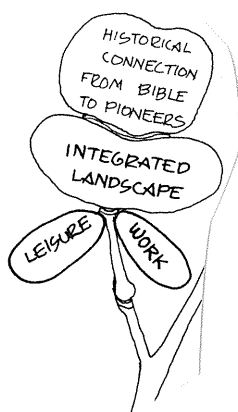
1. THE COMBINATIONS
OF FUNCTION & PLEASURE
IN THE GARDEN

I. Image

Images of places where function and pleasure are combined can be examined from different points of view in relationship to the following:

- (a) Leisure - Work
- (b) City - Countryside
- (c) Fine Art - Art Of Growing Food

A. Work And Leisure



We tend today to separate between landscapes of work and landscapes of leisure, depriving ourselves of the richness of the integrated landscape. The landscape of one function - the "specified landscape" - tells us only one story. The "integrated landscape" on the other hand, tells many stories. It tells about the people's life and work, hardships and pleasures, about struggles and victories, times of sorrow and times of celebration, revealing how different aspects of human life are interwoven.

Historically, landscapes of Israel integrated aspects of work and pleasure throughout Biblical times, the Moslem era and the Pioneering era. By retaining this integrity, we shall create an associative and ideological link to the landscapes of the past.

Biblical Times

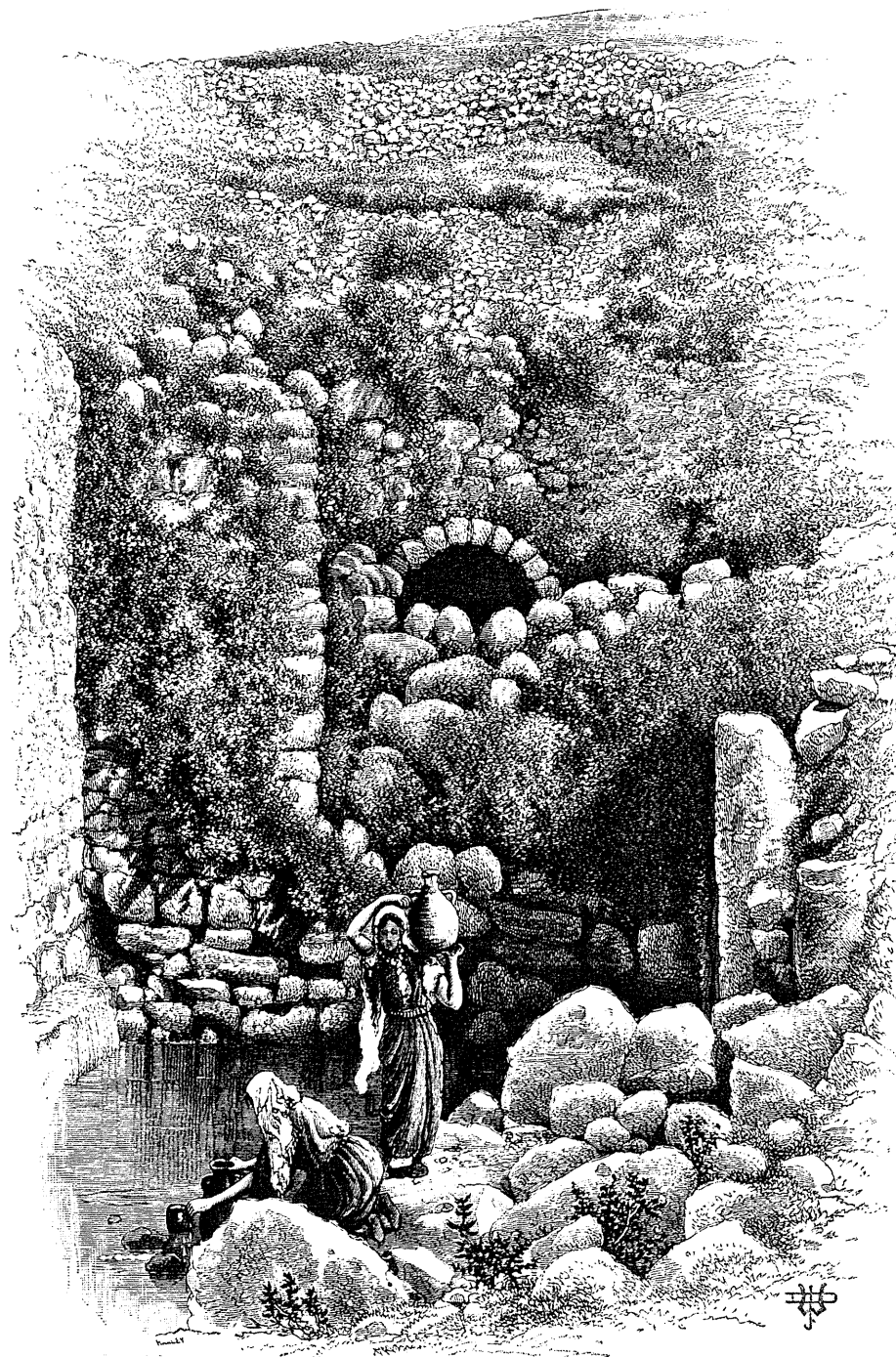
In the Israeli agricultural society of Biblical times, food production was a way of life. People tilled the land, collected its produce and ate the fruits of their tillage, as was said: "In the sweat of thy face shalt thou eat bread." (Gen. 3:19) The agricultural landscape was the immediate environment that surrounded places of human dwellings, and was integrated into all other aspects of life. It served as a setting for different



2. Under the branches of Abraham's oak - near Hebron
(a drawing from about 1870)

In the larger agricultural landscape, the shady enclosed places are especially attractive for household work, conversation, and other social activities.

The water-source was the center of social life in Biblical times and in traditional Arab society.



3. Upper Pool of Siloam

activities: national ceremonies, religious rituals, social encounters, and romantic affairs.

In the vast agricultural landscapes, some places evolved to be the center of social life. The well, or the water-source was

traditionally the meeting place of Biblical times. Jacob met Rachel at the well, and "rolled the stone from the well's mouth," helping her water the flocks. (Gen. 29:10) Isaac's wife, Rebecca, was chosen for him because of her generosity and hospitality at the well: "Drink, and I will give thy camels drink also." (Gen. 24:46) Very little had changed from Biblical times to the 19th century agricultural society of Israel. Many romantic scenes and social encounters took place at the well. "Here, from the neighboring village, come at morning and evening troops of laughing girls or careworn women, with their pitchers on their heads, to draw water. Here too, in the heat of the day come the shepherds with their thirsty flocks." (2)

"O you who dwell in the
gardens
My companions are
listening for your voice
Let me hear it."
(Song of Songs 8:13)



4.

The bustan, usually containing a water-source or located adjacent to it, was especially attractive for times of leisure. It had all the elements that delight the senses: colors, fragrance, delicious fruits and murmuring waters. It was cool and shady, confined and protected from the outside world. The peasant as well as the king, sat "under his grape-vine and his

fig tree," enjoying their blessings. The most beautiful descriptions of the pleasurable aspects of the functional garden are found in the Song of Songs:

"My beloved has gone down to his garden,
to the beds of spices,
to pasture his flock in the gardens
and to gather lilies."

(Song of Songs 6:2)

Beds of spices and flowers, along with fruit trees, represent agricultural and pleasurable aspects of the garden. This was the setting for loving, singing, and enjoying the company of friends.

Pioneering Era

For hundreds of years, the integrity of work and leisure in Israeli landscapes was retained. The lack of royal institutions and a strong aristocratic class, probably prevented the bustan's evolution into a pleasure garden divorced from agricultural function. The change came in the late pioneering era, when the idea of separation of work and leisure was introduced. Gardens for function and gardens for pleasure were conceived as separate places, under the influence of European schools (3) and as a part of a general transition to an urban society.

Nevertheless, the tradition of social activities in working places had continued in Jewish agricultural communities. The barn, the haystack, and the vine-press were idealized as places for social gathering and were associated with love scenes. Songs like "On the haystack in the moonlight," or "When we die, bury us in the vine-press of Rishon-Le-Zion, where the girls serve glasses of red, red wine," were part of the pioneering folklore.

The public gardens of the first settlements ("Moshavot") were functional places that assumed social roles as well. In Rishon-Le-Zion, established in 1882, the orange grove was the center of life for the whole community. It was a working place, containing irrigation channels and a cistern in which the grapes

from the adjacent winery were washed. It was a favorite place for the children's water play and a meeting place for the farmers. Singing and dancing took place at the gathering point near the sundial and official receptions were held there as well. (4) Unlike the enclosed Arab bustan, the garden was open and all were welcome. It was conceived as public property, serving the whole new community, an early concept of the public park.

Similarly, the garden of Rechovot was a functional place that assumed social roles. "In the garden of the settlement almond trees and lemon trees were planted as well as rows of mulberry trees on the two sides of the road." (5) Public gatherings, wedding ceremonies and political assemblies took place in this garden.

Today

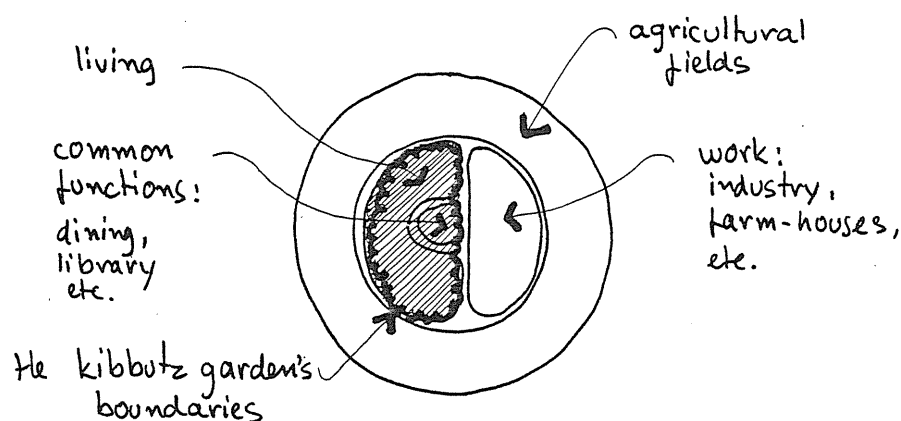
The contemporary integration of work and leisure can relate to different landscapes. It can apply to combining industrial landscapes with recreational ones, or agricultural places with places of leisure. It can be applied to the city, in the countryside or in recreational areas.

In agricultural landscapes, you can still stroll along winding paths between fields, vineyards, and orchards. Few places though, allow for recreational activities beyond that. I would like to expand here on a unique opportunity for combining work and leisure in Israeli landscapes, which is the kibbutz garden. If successful, it can serve as a model for other agricultural communities.

The Kibbutz Garden

In the kibbutz, different aspects of life are closely integrated. Places of work, places of living and places of leisure are condensed and interwoven as in pre-industrial society. The kibbutz garden though, does not reflect this conceptual integrity

in its physical characteristics. The "kibbutz garden" includes all the areas around the common functions and the areas between the houses, apart from small plots which are taken care of individually by the residents.



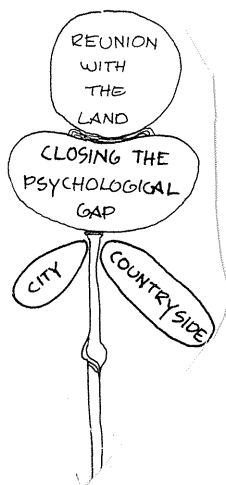
5. A schematic plan of the garden's place in the kibbutz' structure

Generally speaking, the kibbutz garden is designed to create visual harmony, communal feelings, and accommodate social activities. Its productive potential and connection to the agricultural landscape of the kibbutz is hardly emphasized.

Various attempts have been made through the years to turn the kibbutz garden into a functional place. In the formation years of the Kibbutz Beit-Hashita, clover for feeding the cows was planted as a groundcover among the houses. (6) Of more significance was the experiment in Ashdot-Yaakov; its failure has probably influenced other communities. Fruit trees such as palms, olives, avocados, and pecan were the main plants of the garden. Paradoxically, their success created many problems. The few garden workers had to devote all their time to gathering the fruit, neglecting other parts of the garden. (7) It seems to me that if the garden is recognized as a functional place of potential economic value, providing fruits and vegetables for the kibbutz kitchen, this problem might be solved. More workers would be allocated to tend the garden, probably helped by

volunteers from the community. People might be willing to engage in after-duty agricultural work for their own benefit and pleasure.

B. City And Countryside



The agricultural or functional garden might be conceived as representing the countryside, while the pleasure garden is associated with urban society. In the process of urbanization, larger parts of the population were removed from direct connection with agriculture, creating a psychological gap between city and countryside. Integrating these two aspects in the garden might help reduce this gap, and reintroduce the rural knowledge into urban life.

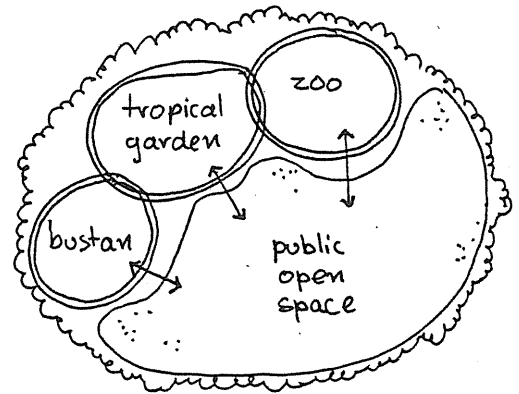
The Urban Bustan

Introducing the agricultural element into city parks and public gardens might enrich the experience of city dwellers beyond regular activities found in these places. Fruit trees as street planting, open productive gardens or enclosed bustanim within an urban park, could all be possible models.

A famous productive garden which was a center for urban life for the Arab population in the beginning of the 20th century was the "Bustan-E-N'Sharach" in Haifa. It contained fruit trees, flower beds, as well as a cinema house that attracted many visitors. (8) The garden was destroyed when a new commercial center was built.

And enclosed bustan, where the public would have to pay admission, would be especially relevant for contemporary gardens. Many urban parks contain special sections such as a zoo, an entertainment park or a topical garden, where public access is

regulated by an entrance fee. Hopefully, people would be willing to pay in order to enjoy a unique place where they can gather fruits and vegetables. The expenses of maintaining the bustan would then be shared by the people who enjoy its fruits.

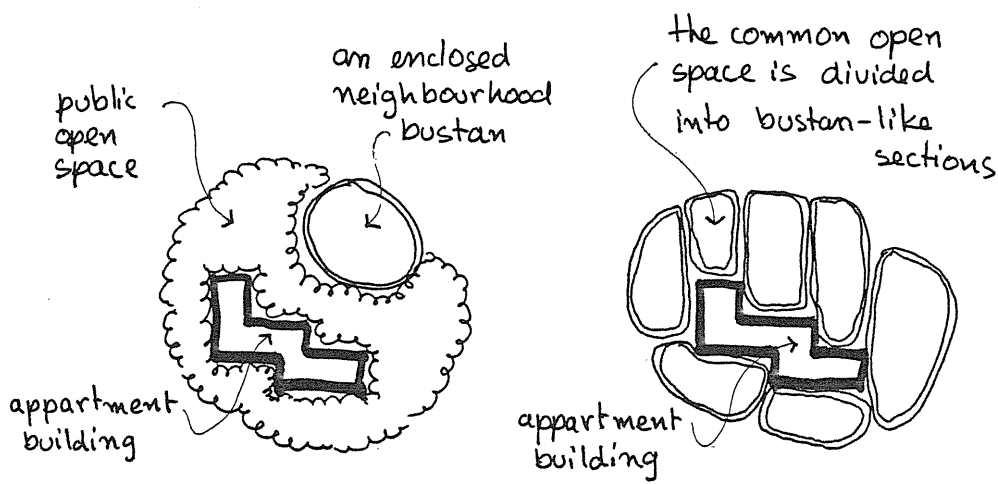


6. An enclosed bustan within an urban park - a conceptual scheme

The "Neighborhood Bustan"

The general detachment of urban residents from the land, is especially evident in open spaces around apartment buildings in Israel. They are typically monotonous, often neglected, and by no means personal or delightful.

Recent trends in America and Europe point to an alternative use for commonly owned spaces in urban environments. In many



7. Possible schemes for integrating the bustan into neighborhood open spaces

neighborhoods community gardens are being planted, where people recreate the basic connection between growing food and living from it.

The Israeli version of the functional community garden could be enriched with "bustan-like" qualities. It can be a place of pleasure as well as a utilitarian place. When integrated into a community center, the "neighborhood bustan" can become an educational center for gardening activities.

Gardens Of Rehabilitated Neighborhoods

A tremendous amount of money was recently invested in creating aesthetic and recreational open spaces in deteriorating neighborhoods. Despite the expense, improvement is not always visible. Social problems, vandalism, and poverty are having a detrimental effect on the gardens. Nevertheless, a conceptual misunderstanding of local culture, I believe, contributes to the lack of success of the rehabilitation project. The "improved landscape," planned by designers from other cultures, is different in its image from the vernacular gardens found in these neighborhoods.

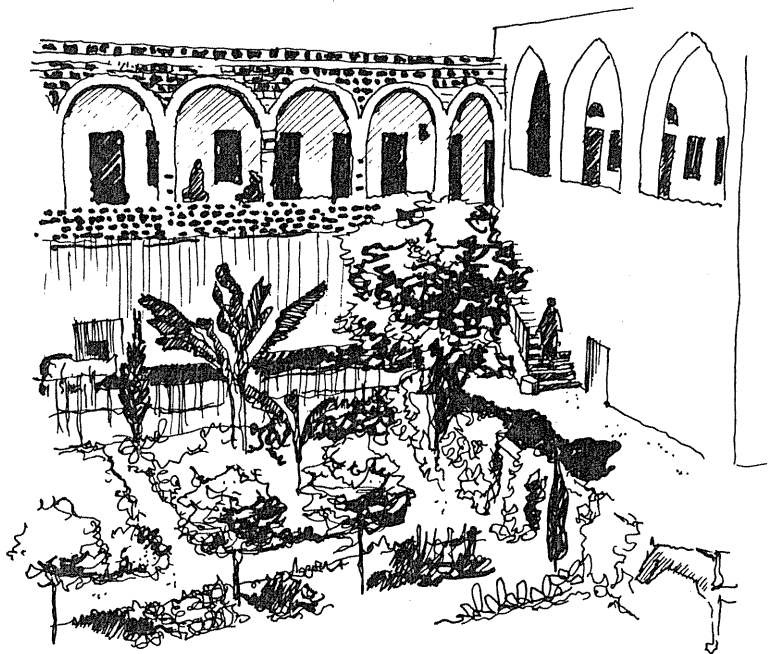
The local population, usually Jews from Islamic countries, build spontaneous bustan-like gardens around their houses, providing some fruits and vegetables for the household. These places are sometimes disordered, not always carefully tended, but they are beautiful expressions of local art and personal talents. People build ornamental iron-work for fences and gates, plant traditional herbs and scented shrubs and decorate the walls with tiles and drawings.

Working with the local population to encourage this folk art in neighborhood gardens seems to me a better way of design in rehabilitation projects.

The Roadside Bustan

A natural meeting place of the city and countryside is the road. Roadside bustanim existed in the old days in Israel within the boundaries of "khans" - places of rest along the way. These were small courtyard gardens which supplied fresh food for the "khan," and served as a place of relaxation for the weary traveler. Our modern rest areas could revitalize this wonderful combination.

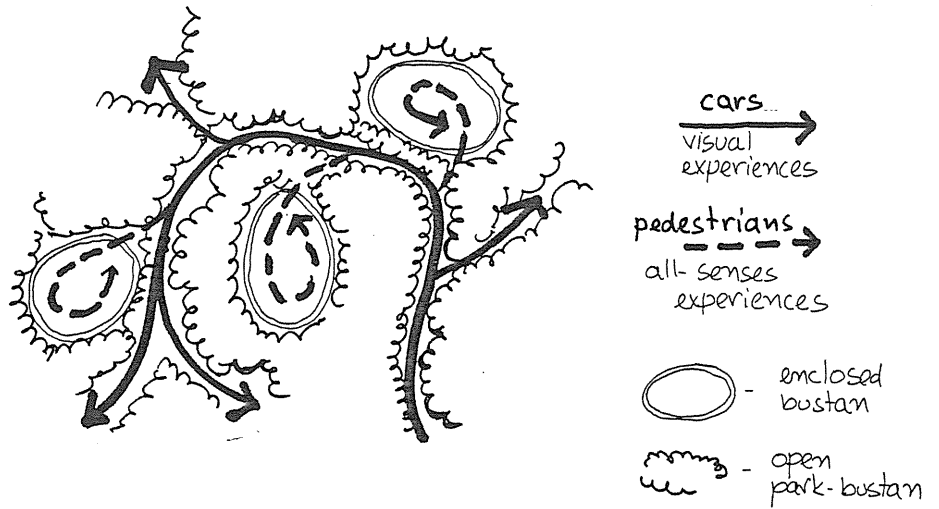
8. The khan of Tiberias at the turn of the century - a small bustan in the inner courtyard provided fruits and vegetables for the khan.



The Drive-In Bustan

Introducing the car into the bustan changes the scale and experience of the place. An existing example of a large scale park-bustan, which is designed for cars as well as pedestrians, is the Kanada Park in the Latroun area. The larger environment of the park is comprised of non-irrigated bustan trees, while unique parts within are irrigated. I would suggest reinforcing this idea by creating small enclosed gardens within the park, in the image of the traditional bustan. These would be places accessible only on foot, allowing for all the senses to take part in the experience. The larger environment, however, should

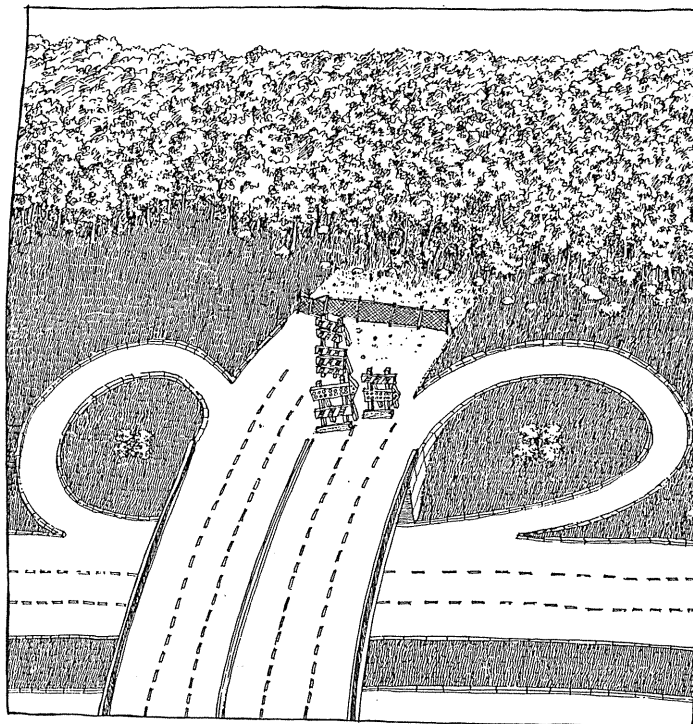
9. Drive-In Bustan

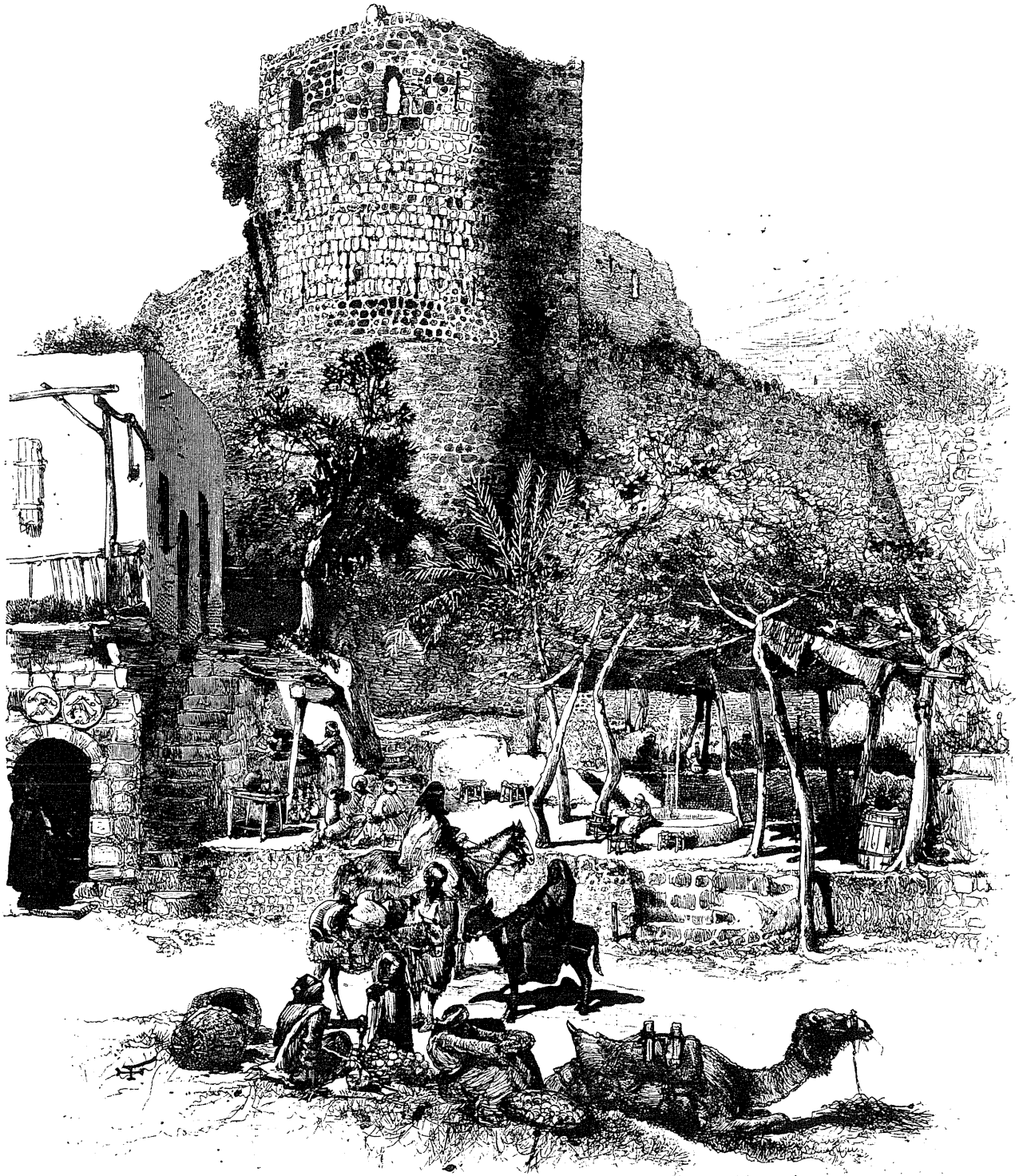


A Conceptual Plan

be designed to be viewed from the car, and could be integrated with the surrounding landscape. A seasonal pattern of using place could be considered as well. In winter, the open areas of the park-bustan covered with wildflowers would be especially attractive, while in summer, the cooler, shady environment of the irrigated bustan would probably be a haven for recreation.

10.





11. A Small Cafe-Bustan In Sidon

The outdoor cafe is located under a shaded arbor, with a small fountain in the middle, and a few plants growing in barrels.

C. Fine Art And The Art Of Growing Food



The pleasure garden is designed to stimulate visual, sensual, and spiritual experiences, while the utilitarian garden possesses less obvious artistic qualities. In the bustan, the art of producing food from the earth is combined with visual and sensual pleasures to create a fuller display of human creativity and nature's blessings.

The pleasure gardens of the Mediterranean developed out of the mastery of agriculture. The intensive agriculture and careful tillage of the land required skills and ingenuity that evolved to the level of art (9). The esthetic value of the garden was always connected to its productive element. In the garden of Eden, the "Lord God made to grow every tree that is pleasant to the sight and good for food." (Gen. 2:9) The beauty of the ripened fruit was appreciated more than the beauty of flowers: "Your shoots are an orchard of pomegranates, with all the choicest fruits." (Song of Songs 4:13) The sight and fragrance of fruits was metaphorically used to praise the beloved: "Oh, may your breasts be like clusters of vine, and the scent of your breath like apples." (Song of Songs 7:8)

In the renewed Israeli society, the functional gardens preceded the pleasure gardens. Later on, the generation of gardeners who mastered agricultural skills were the spontaneous designers of esthetic gardens. The art of the garden was conceived as a "functional art that uses agricultural material and agricultural tools for its creation." (10)

The esthetic quality of the agricultural field and garden was highly appreciated in Israeli landscapes. Blooming orchards in the Judean hills, green orange groves of the Sharon, and wheatfields of the Negev - were praised in songs and hymns. A deliberate introduction of these landscapes into recreation

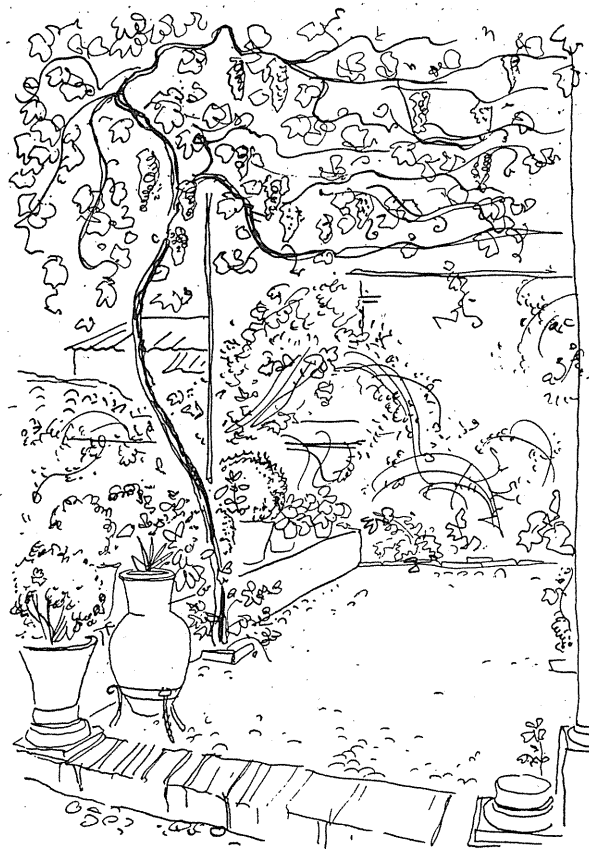
areas has been made in contemporary designs. The Yatir forest in the northern Negev combines wheatfields with pine forest to create a harmonious picture. In Latroun, an old productive bustan was transformed into a recreational park.

Despite the obvious appreciation of the agricultural landscape, the acceptance of the bustan's esthetic qualities is still difficult in Israeli society. For eyes that are accustomed to Western esthetic values, the bustan seems to lack some basic qualities.

Figure 13 which follows is an attempt to analyse the bustan's qualities in relation to accepted artistic criteria. As with any artistic creation, time and a shift in values might change the attitude towards the bustan's esthetic qualities.

12. A vine-arbor in a carmen
in Granada -

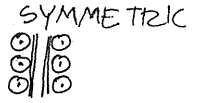


Traditional and personal expressions of art, create places of beauty in the productive garden of the carmen.

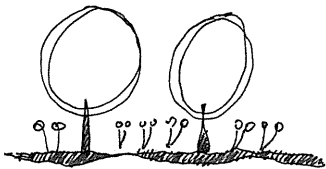


13. AESTHETIC QUALITIES OF THE BUSTAN

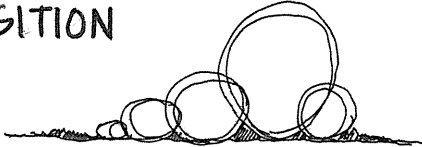
GENERALLY ACCEPTED AESTHETIC VALUES


 **INVISIBLE ORDER**
 AGRICULTURAL PATTERNS SEEMING DISORDERED

PERCEIVED ORDER  SYMMETRIC
 SYMBOLIC  NATURAL

 **INTER-CULTURE**
 PLANTS GROW BETWEEN TREES

TRANSITION
 GRADUAL TRANSITION OF PLANTING




 **INDIVIDUAL PLANTS**
 TREES STAND ALONE, EVEN UNIMPRESSIVE ONES

BALANCE
 GROUPS OF TREES OR ONE IMPRESSIVE TREE.



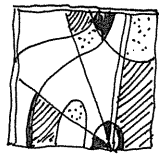
 **SEASONAL DECAY**
 OCCASIONAL BARREN LAND

CONTINUITY
 CONTINUOUS BEAUTY THROUGH THE SEASONS



 **MIXED ELEMENTS**
 DIVERSITY OF PLANTS AND ELEMENTS

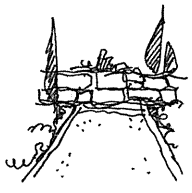
HARMONY
 DELIBERATE COMBINATION OF COLORES, TEXTURES, VOLUMES



 **FRAGMENTED VIEWS**
 INCIDENTAL, PARTIAL VIEWS

FRAMED PERSPECTIVES
 PICTURESQUE, SCENIC VIEWS



 **LIMITED VIEWS**
 THE ENCLOSURE "BLOCKS" THE VIEW

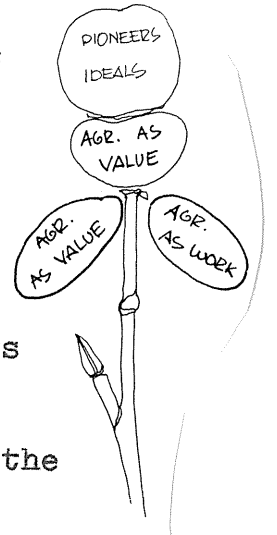
DISTANT VIEWS OF THE "BORROWED LANDSCAPE"



II. Activity

Agriculture As Work And Agriculture As A Hobby

Since Biblical times, agricultural work was appreciated and praised in Israel. For the ancient Israelites, diligence in tilling the land ensured survival. A farmer who neglected his field was a symbol of laziness and stupidity: "I passed by the field of the sluggard, by the vineyard of a man without sense. And lo, it was all overgrown with thorns, the ground was covered with nettles, and its stone wall was broken down." (Proverbs 24:30,31)



The role of agricultural work was idealized in the pioneering era. It was involved with powers beyond ensuring physical survival. Tilling the land was the means of salvation for the Jewish spirit. For a society detached from the land for thousands of years, the rooted Hebrew farmer was a symbol of spiritual strength.

14.



A SONG TO LABOR

Who will keep hunger from our door?
 Who will give us bread and then much more?
 Who'll give us milk as never before?
 Whom shall we praise in song?
 Bless our whole life long?

Labor and toil and spirit strong! (11)

Poem by Ch.N. BIALIK
 English Lyric by OLGA PAUL

Allegro con spirito

Mi ya - tsi - le - nu me - ra -
 Mi yi - ten la - nu k'sus ba -
 Who will keep hun - ger from our
 Who'll keep us warm when we are

We are departing farther and farther from this image. Agriculture is practiced by a small part of the population and its spiritual value is diminishing constantly. Gardening, on the other hand, is practiced by more people as a hobby or as a means of improving the physical environment. Combining agriculture with leisure time activities would create educational opportunities for learning about the value of agriculture in our society.

Seasonal Emigration

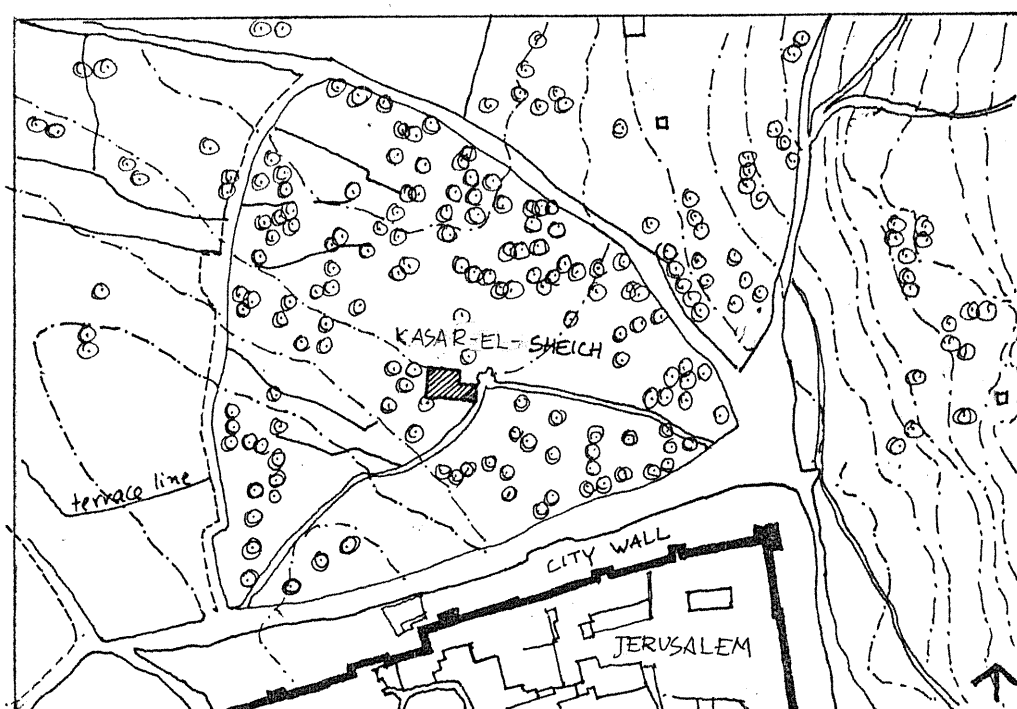
A unique pattern of combining "fun and function" in agricultural work developed in traditional societies in Israel. Summertime was spent in open fields and gardens, gathering fruits and guarding the crops. Families left their houses and came to spend two or three months outdoors in a continuous "picnic" of work and pleasure. "Come, my beloved, let us go forth into the fields, and lodge in the villages. Let us go early to the vineyards and see whether the vine has budded." (Song of Songs 7:11,12)

This seasonal emigration still prevails in some places in Israel. The Bedouin families leave their homes in summer for a temporary residence near their bustanim. Whole families, including their sheep and goats ascend to the higher cooler valley. There they take part in maintaining the garden and gathering its fruits. (12) The peasant families of Hebron spend the summer in the vineyards and gardens. On warm evening nights they sleep in booths or small houses named "Arisa" or "Mintra," guarding the crops. (13)

The more affluent urban residents of Jerusalem in the 18th and 19th centuries developed these agricultural places into real summer resorts. They built stone houses in the agricultural areas around the city walls. These places were called 'kasar' - meaning a castle or a palace, and were located within walking distance of the city, in a beautiful landscape of cultivated land, among bustanim. One of the remaining houses is 'Kasar-El-Sheich,'

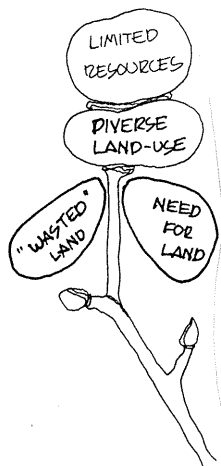
built in 1711 by Sleich-El-Chalily. It is a massive stone structure with a vine-press and an olive-press in its basement. (See Fig. 11) Its residents engaged in agricultural work, enjoying the break in their yearly routine. Another famous place was called 'Kalat-El-Sheich.' It was also named 'mantra' - a lookout point because the owners "used to sit on its flat roof, breathe fresh air, enjoy the beautiful landscape and guard the crops of the vineyards and gardens." (14)

A modern version of this seasonal emigration is found in Israel today - the working camps for youth in kibbutzim and moshavim. I remember my work in the vineyards of Ein-Gev as one of the best summer vacations I have ever had. No doubt, it was my first contact with any real agricultural work. I would suggest extending these working camps beyond the agricultural communities. Summer resorts like the 'kasar' around Jerusalem could be integrated into private and public recreational areas. When reinforced with social activities, the agricultural work could turn into a real celebration.



15. Kasar El Sheich in the year 1876 - a summerhouse in an agricultural setting for the wealthy residents of Jerusalem.

III. The Need For Land And The 'Wasted' Land



The diverse land use of the combined garden makes a great deal of sense in a modern context. Available arable land is continuously decreasing while the need for growing food is increasing all the time. 'Wasted lands' such as private gardens, urban parks, and recreational areas, are being reconsidered for their agricultural potential. In Israel, resources are especially limited. Therefore, the example of diverse land use in the bustan has an important relevance and should be carefully studied.

Throughout the old world, gardens have been places for various activities. The large hunting parks of Mesopotamia were the stage for troop maneuvers, legal trials, and religious observances. (15) Great public festivities were also held by kings in their gardens. We read in the book of Esther how King Ahasuerus held a great feast for "all the people that were present in Shushan the palace, both unto great and small, seven days, in the court of the garden of the king's palace."

(Esther 1:5) The royal Islamic gardens followed the tradition of the vast Persian gardens. They were functional gardens, serving as out-of-the-city court seats for the royal families. A large scale garden in Tunis in the 14th century is described: "One found there a forest of trees, some of which were trained onto trellises, while the rest were left to grow in complete freedom. The branches of the lemon and orange trees mingled with those of the cypress, while below, the myrtle and jasmine smiled upon the water lily." (16) The Marimid sultans in Morocco created vast cultivated enclosures as "profit-making land, enriching the coffers of the sovereign. It also provided a place of recreation and repose for the harem." (17)

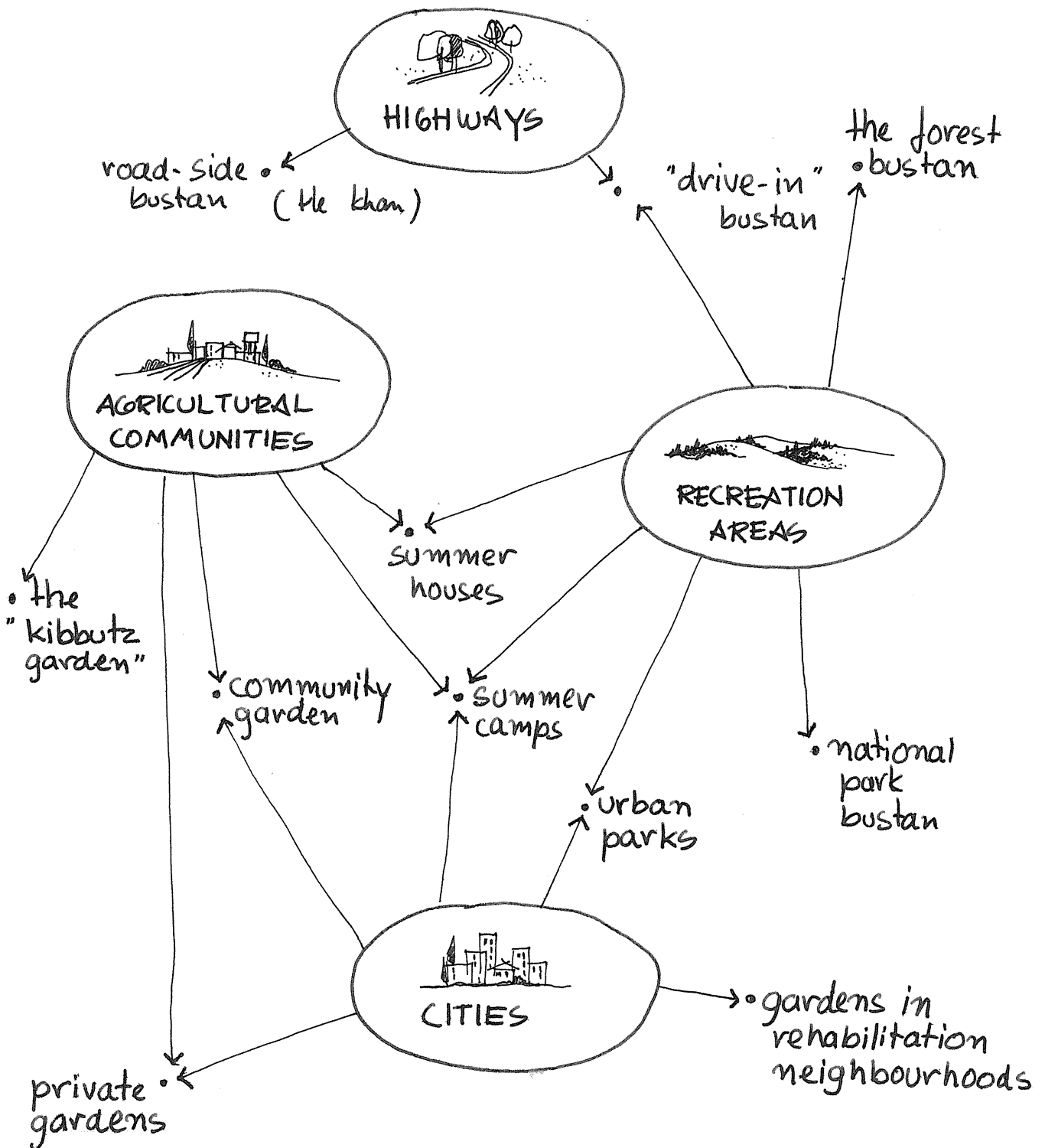
The large scale royal parks of yesterday are the public parks and recreation areas of today. There is great potential for agricultural land in these places. The integrated urban forest

park system of Zurich exemplifies the idea of diverse land use in parks and gardens, in a modern context. Commercial timbering and farming is practiced within these parks. Farmers rent space on common lands for crops, pig farming, and related, small scale agricultural pursuits. The recreational trail system provides access through these areas, as well as through the managed forests. (18)

Much of the large scale recreational areas in Israel are single purpose pine forests. These 'pine deserts' as they are called by planners, eliminate the growth of any other plants in their environment. Recently, natural growth of the native forest has been encouraged by the J.N.F. (Jewish National Fund) to create a more stable and diverse environment. However, the productive potential of these forests should not be overlooked. It is interesting to note that the original concept of reforestation in Israel, as stated by the J.N.F. in 1901, was to create a fruit tree forest. Thousands of almond, fig, carob, and pear trees were planted in the forests of Hulda and Ben-Shemen. (19) The failure of the young plantings, due to hardships and neglect during World War I, caused the postponement of this wonderful idea for at least another 50 years. It is time to resurrect this old idea and reintroduce it into our landscape.

16. POSSIBLE LOCATIONS OF THE BUSTAN IN A MODERN CONTEXT

combining work and leisure in today's landscapes



A place of symbolic connections

"WHAT MAKES THE DESERT BEAUTIFUL"
SAID THE LITTLE PRINCE, "IS THAT SOMEWHERE
IT HIDES A WELL"

"YES", I SAID TO THE LITTLE PRINCE .

"THE HOUSE, THE STARS, THE DESERT- WHAT
GIVES THEM THEIR BEAUTY IS SOMETHING
THAT IS INVISIBLE."

"THE LITTLE PRINCE"
ANTOINE DE SAINT-EXUPÉRY

"A symbol is a repository of meanings. Meanings arise out of the more profound experiences that have accumulated through time. Profound experiences often have a sacred, other-worldly character even though they may be rooted in human biology." (1)

In the pre-modern world, symbolic interpretation was a common way of responding to the world. It gave people a way of relating to the basic questions of their existence as manifested in the physical environment.

Symbolic interpretation of the physical world varied from individual to individual and from culture to culture. A common vocabulary shared by certain cultural groups enabled people to decipher symbols in a similar way. It led to the creation of places which are laden with meaning and symbolic significance. For example, high mountains were symbols of divinity and sacredness for many cultures. Therefore shrines and temples were located on mountaintops.

Our contemporary culture is somewhat ignorant in regard to creating such places, thus depriving us of the richness of the hidden meanings. Understanding the symbolic connections as reflected in the bustan, might provide us with an insight into its rich layering. The following three chapters will elaborate on the symbolic connections to the heavenly world, to the natural world, and to the cultural world.

I. An Earthly Link To A Heavenly World

From very early times, gardens were conceived as places where the relationship between earth and heaven is clearly manifested. Actual places were believed to contain a divine presence, or a symbolic connection to the heavenly world. They were often the location of a hierophony (2) - an act or an event of such overpowering significance that it served to emphasize the sacred aspect of the place. Earthly gardens were the prototypes of imaginary heavenly places, which in turn influenced the design of concrete places.

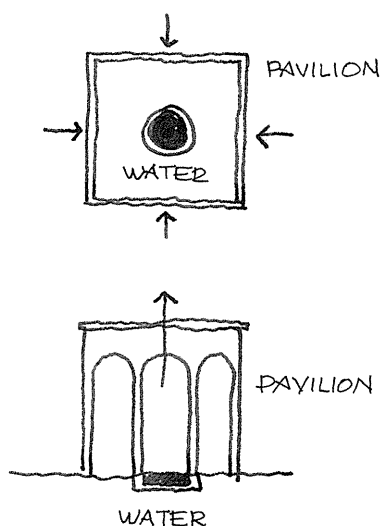
The following is an exploration of a few ideas that are fundamental to the sacredness of gardens: the center, the vertical axis, the order, the entrance, symbolic shapes, spirits in trees, connection with death, and fragrance. These ideas, as expressed mainly in Jewish and Moslem cultures, are examined in relation to the bustan. The last part is an attempt to analyze existing gardens in terms of symbolic connections.

The Center

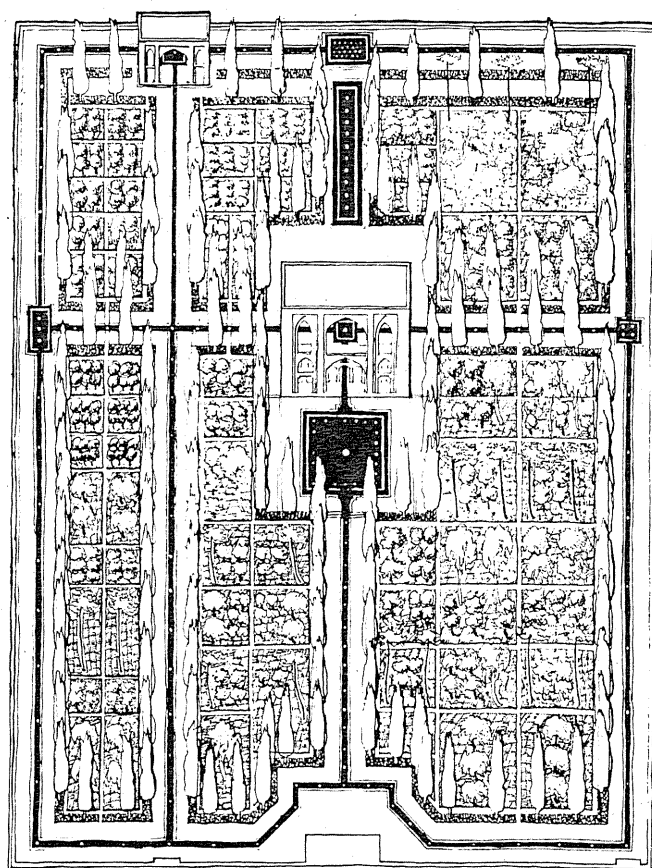
According to Mircea Eliade (3), an early and fundamental idea in the sacredness of a place is that it represents the center, the axis or the navel of the world. In ancient cultures of the Near East the idea of centrality in the garden is represented in actual places as well as in imaginary ones. In the garden of Eden, the source of water of the four rivers is the center of the world. The Canaanite mythology refers to the central point where the god El (Hebrew - Elohim) sits, at the source of streams in the midst of two seas. (4)

In other traditions, the sacred tree within the garden was considered the symbolic axis of the world. (5)

The idea of centrality in earthly gardens is often represented by a central pavilion or a central water source. Water, as the center of life, is both the functional and the symbolic center of the garden. In many traditions it is conceived as the spiritual center of the garden, its depth is like the depth of the unconscious, reflecting the layers of the human mind. In simple gardens the water source was often covered by a built structure for functional purposes such as pumping or protection against evaporation and dust. Its more sophisticated elaboration is found in Iranian gardens where water sources are placed in a central pavilion, creating layers of centrality. (6)

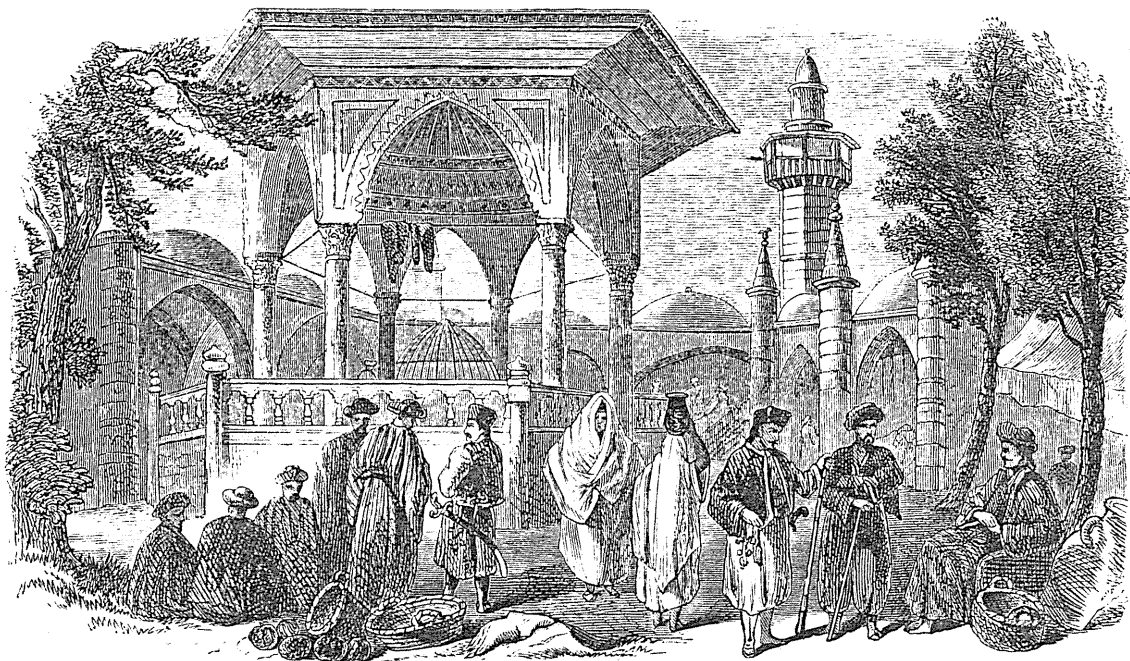
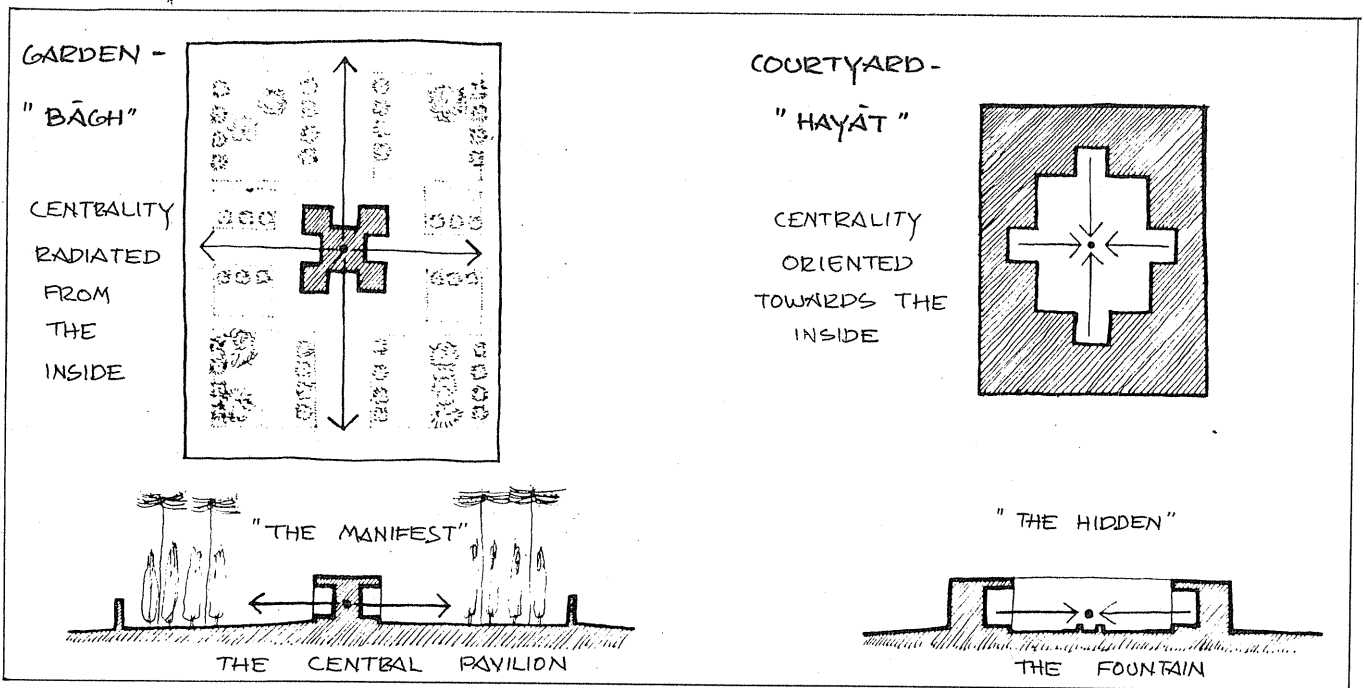


The centrality of the water-source is reinforced by the vertical structure of the pavilion.



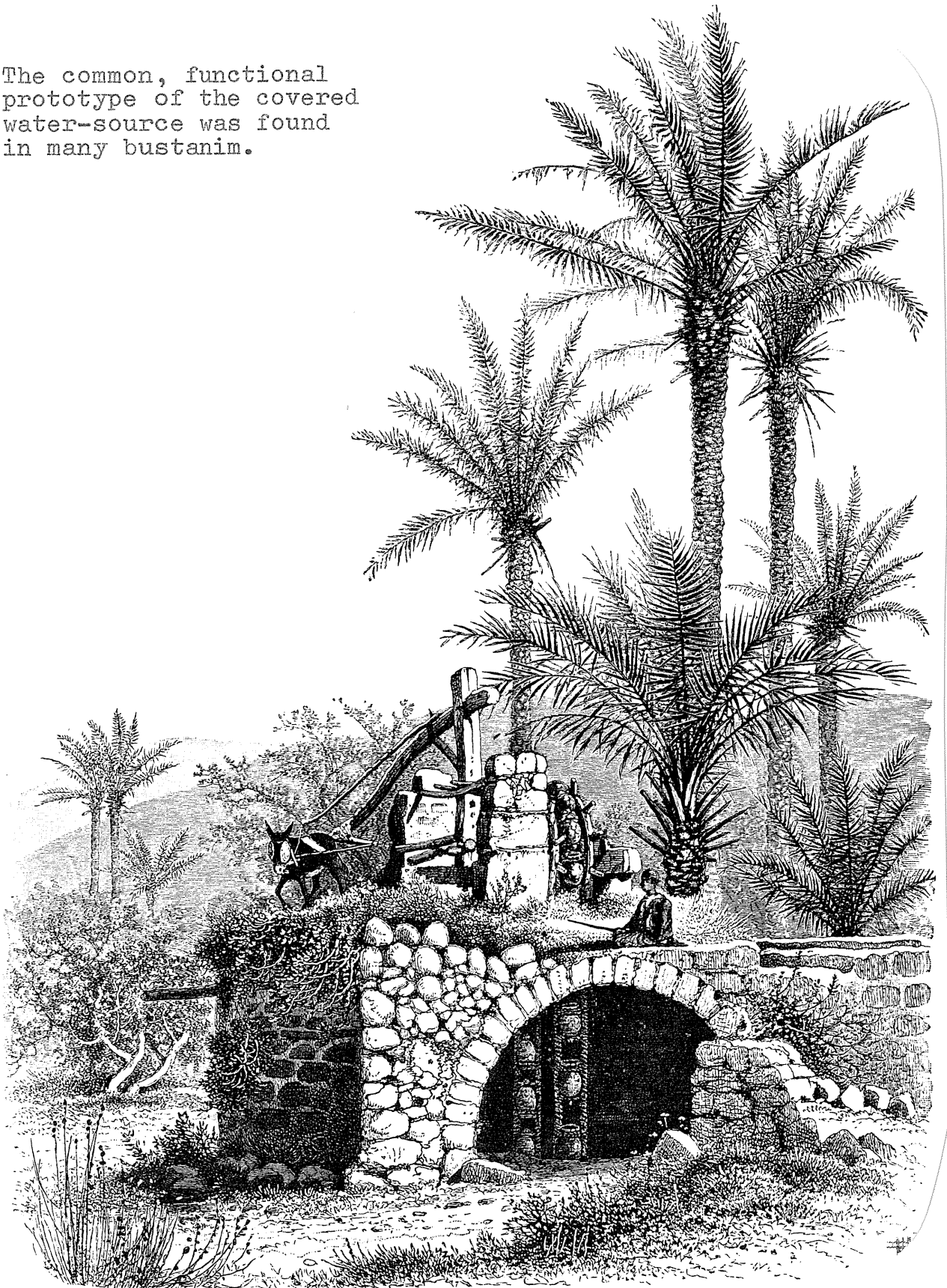
1. Kashan, Bagi-I-Fin, Iran

2. An interesting interpretation shown below of the idea of centrality in Iranian gardens is found in the book "Sense of Unity."



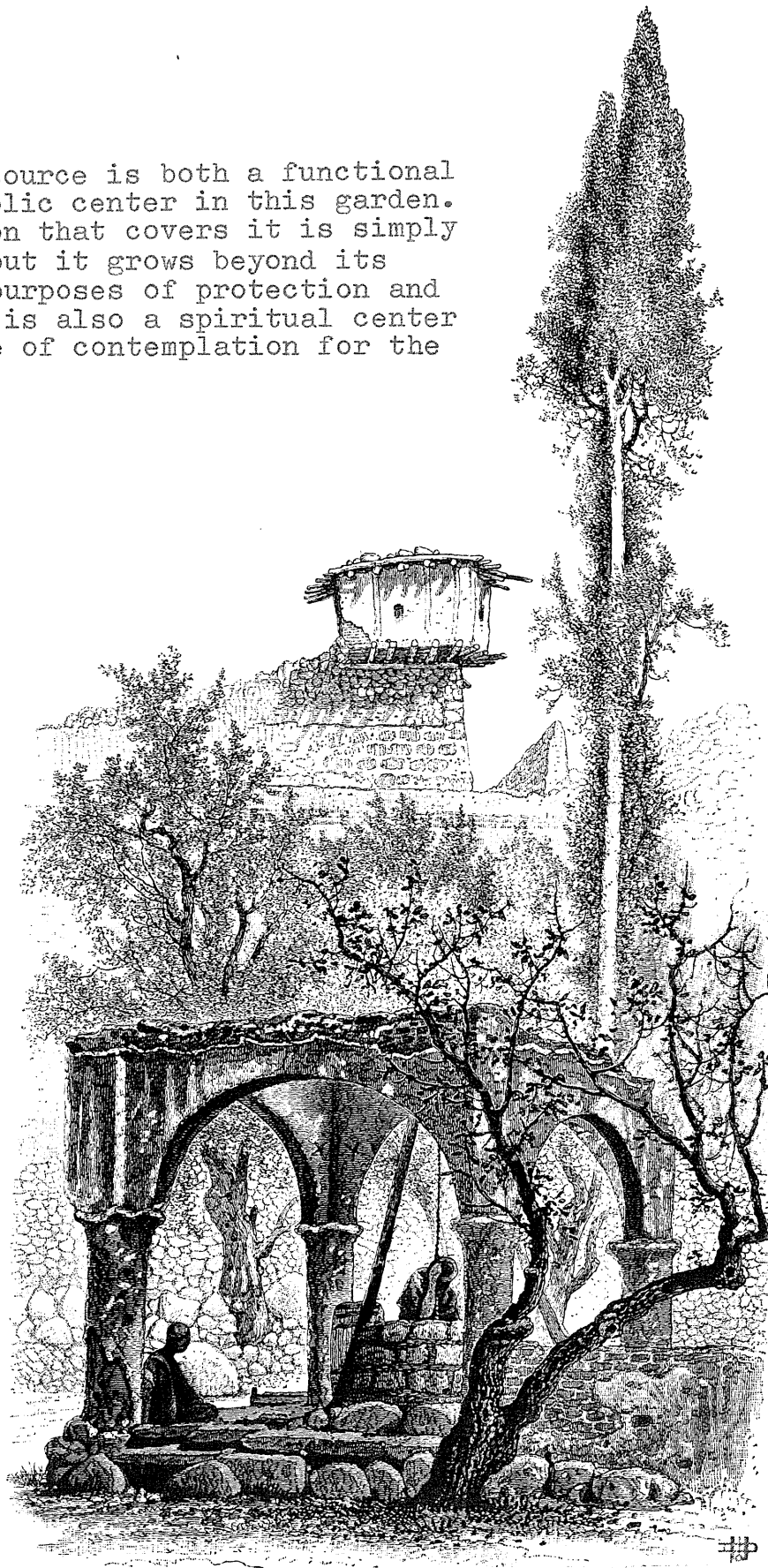
3. A fountain in a garden in Jaffa (a drawing from the 19th century) The ornaments reflect Islamic architectural influence.

The common, functional prototype of the covered water-source was found in many bustanim.



4. A well in a garden in Haifa
(a drawing from about 1870)

The water-source is both a functional and a symbolic center in this garden. The pavilion that covers it is simply designed, but it grows beyond its practical purposes of protection and shade. It is also a spiritual center and a place of contemplation for the monks.



5. The well in the garden of St. Catherine
(a drawing from about 1870)

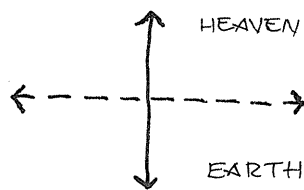
Probably influenced by Persian traditions, the more sophisticated bustanim in Israel contain water sources covered by an ornamental pavilion. (See Fig. 3)

Since the bustan's layout is quite flexible, the location of the symbolic center does not necessarily correspond with the spatial center. Its significance though, remains the same.

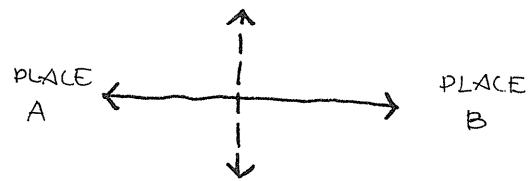
The Vertical Axis

The ancient perception of the world was different from our contemporary one. Life on earth was deeply connected with the heavenly world, thus creating a vertical axis in space, and giving more meaning to it than to the horizontal one.

PERCEPTION OF CONNECTIONS IN THE UNIVERSE:

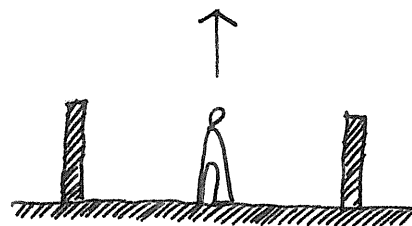


ancient



contemporary

For agricultural people, who were basically sedentary folk, the horizontal space was limited in range. Their world was enriched though, by "the intimacy of knowledge, and by the height of the ceiling." (7) Thus, the small confined space of the bustan was actually a place where the connection with the upper world was emphasized. The only open view is upward, leading the eye and the soul towards the sky.



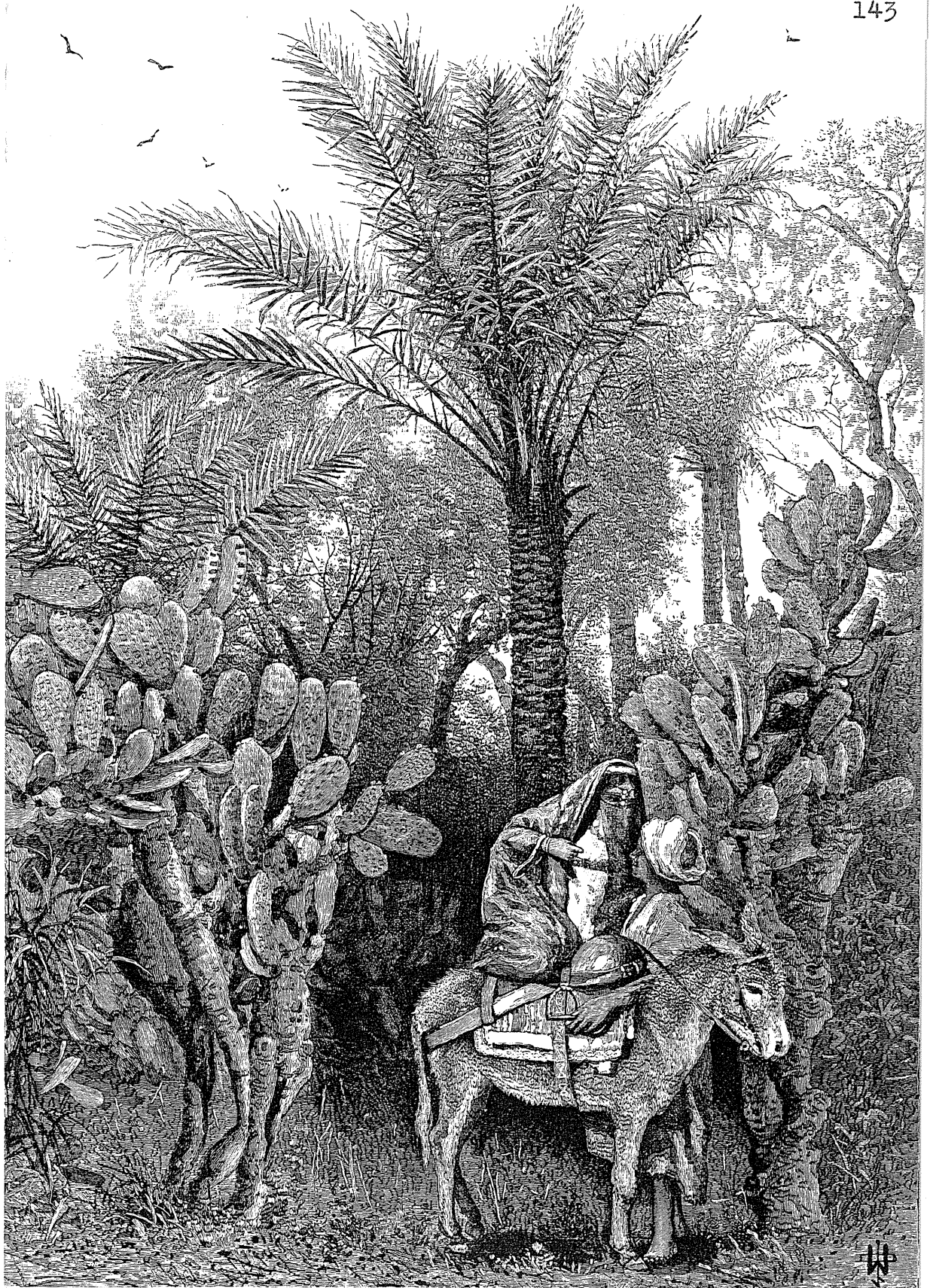
The Order

The order and harmony of places is fundamental to their conception as sacred places. Man was trying to organize his world according to his understanding of the order of cosmological powers. The garden, as ancient people interpreted it, was a place where heavenly powers imposed their order while the wilderness and desert were the kingdoms of chaos and demons.

Interestingly, the bustan is often described by Western observers as a place of "disorder." Its subtle, agricultural order does not correspond with familiar and conventional concepts of symbolic, symmetrical, or natural order. Its "hidden order" though, reflects a deeper perception of the cosmological world shared by ancient cultures. The apparent chaos of the individual parts is like the "chaos" of natural phenomena, nature's intricate harmony appearing to our eyes as clutter, or lack of order.

There is, however, an overall unity and order in the garden, dictated by the sensitive natural systems, just as the individual natural phenomena in the world are controlled by heavenly powers. This idea of apparent disorder and overall harmony was expressed in the Bible, particularly in the book of Job. God's deeds are often inexplicable to human reasoning. The ostrich, for example, "deals cruelly with her young, as if they were not hers . . . because God has made her forget wisdom." (Job 39:16,17) God puts everything in place and in order, creating the harmony of the universe, which man cannot grasp with his limited understanding.

A similar idea is expressed in relation to the Persian garden: "The disorder of daily life is balanced by the larger order of natural cycles, and this contrast is graphically displayed in the arrangement of the Persian garden, where its chaos of individual flowers is framed and controlled by the larger order imposed upon it." (8)



6. The entrance to this Cairo garden, although of informal character, is strongly defined by the thorny hedge - emphasizing the act of penetrating the garden.

The Entrance

The garden entrance is a place of transition between the profane and the sacred, between the earthly world of the outside and the heavenly realm inside. The enclosed garden accentuates this experience by limiting the entrance to one well-defined place. By crossing the threshold, one is immediately drawn into a different world. One interpretation is that the act of penetration is symbolically a means of freeing man from the earth's gravity, leading him from the periphery to the "sacred center." (9) Likewise, the exit is a dramatic step, placing one immediately in the world of reality. This sharp transition echoes man's exit from the garden of Eden, where the way out marked the punishment of humankind.

In a sense, any garden is an "Eden," a reenactment of paradise in which the entrance is part of creation while the leaving is part of the fall. In the garden of the bustan with the entrance such an important part of the structure, this is even more emphatically so.

Spirits In Trees

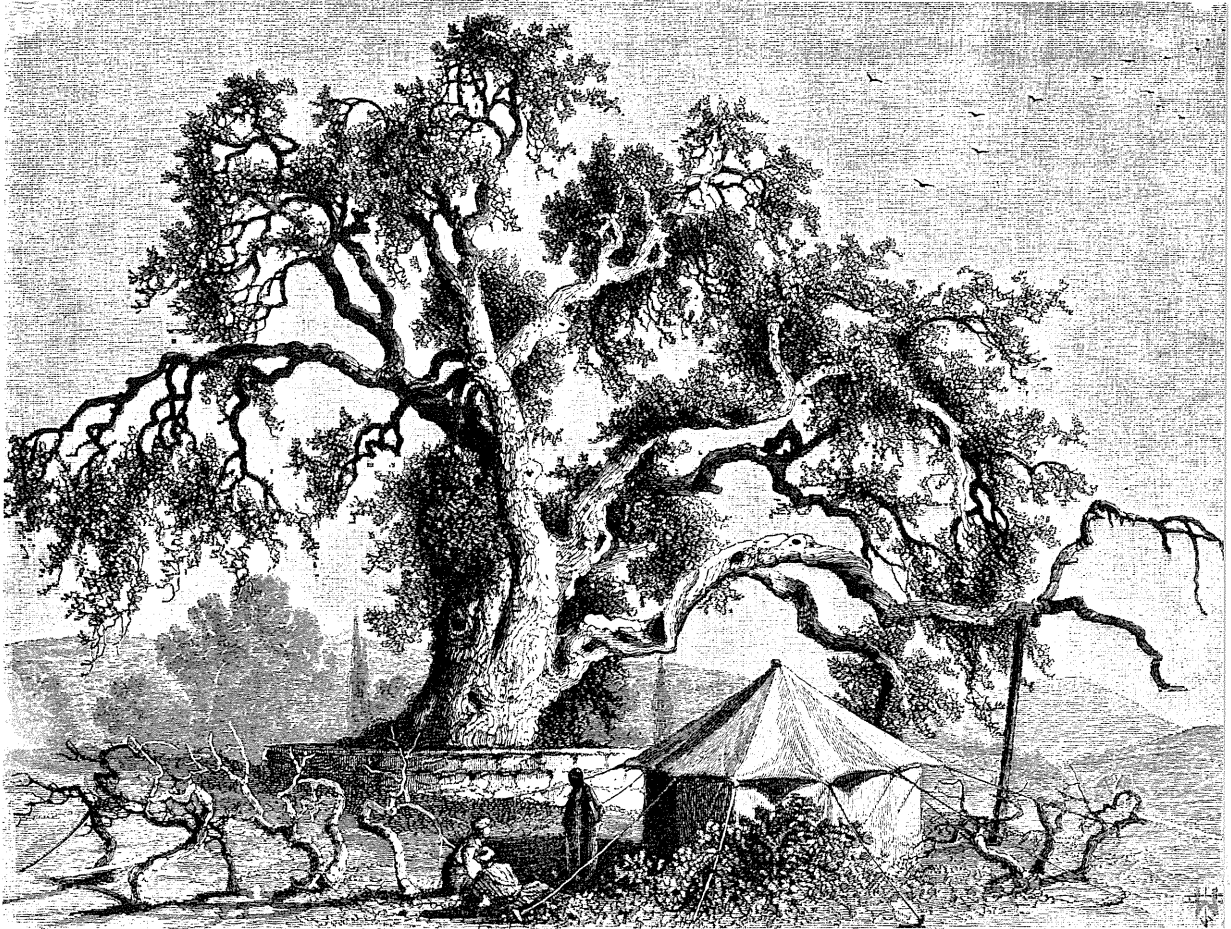
The reverence for trees, and their symbolic meaning as manifested in the bustan, can be traced back to nature myths of the ancient Near East. The primitive animistic philosophy attributed to trees a man-like soul and consciousness. Later on they gained the higher status of vegetation deities and were believed to contain divine powers. Thus, trees were closely associated with divinity and sacredness and their planting became a sacred occupation.



The prophets of Israel had to preach constantly against worship of trees which was a common practice among the Canaanites and Hittites. Jeremiah warns, probably unsuccessfully, the people who are: "Saying to a tree, Thou art my father, and to a stone, Thou hast brought me forth." (Jer. 2:27) Although subject to allegorical interpretation, some of the ancient myths regarding the spiritual power of trees, have found their way into the Bible. Jotham's fable, featuring a dispute among the trees on the issue of rulership of the forest, is one example. (10) Of more importance, is the story of the legendary tree of life in the midst of the garden of Eden. This is a common mythological motif, found in many traditions and religions. The Persians believed in the miraculous sacred tree which contained the seeds of all. The Koran mentions the tuba tree in paradise symbolizing immortality and a means of ascent to heaven. (11) This myth persisted even into medieval times, and was used as a metaphor in Kabbalistic writings. There it took the form of an inverted cosmic tree with its roots in heaven -- drawing power from the divine eternal source.

The ancient belief in spirits in trees has been diffused into the folk-religion of the Islamic population of Israel. Due to their sacredness many ancient trees have been preserved. Sacredness was never attributed to the tree itself, but to the spirit of the holy person who dwelt in it. The religion of the "Makam" -- the sacred place -- existed side by side with Islam, often more deeply rooted in the local folklore than the official religion. (12)

Trees that grew near the "Makam" were always sacred. Amongst them, the oak was the most important. An ancient sacred oak near Hebran was also a place of social gatherings: "This tree is a favorable meeting place for the people, who gather to sit and smoke under its shadow in the heat of the day, while the women engage in conversation and the children play under the sacred tree." (13)

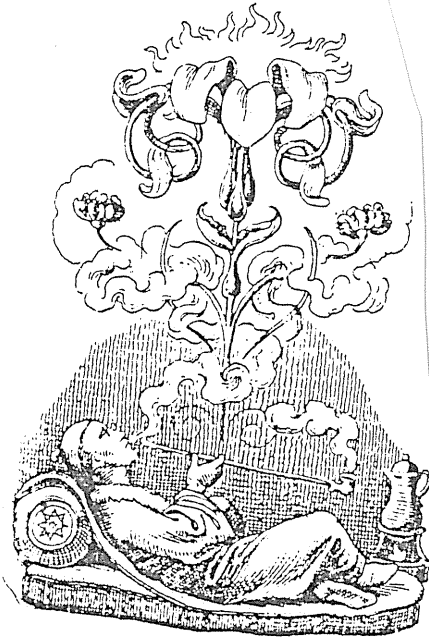


8. The sacred oak near Hebron is surrounded by a stone wall which protects it. Thanks to its sacredness it has been preserved from destruction for hundreds of years.

An echo of the reverence for trees is found in the bustan. Each tree stands alone, as if it had its own spirit. Clustering them together would take away from the individual importance of each one of them.

Fragrance

The bustan, by definition and etymology, is a place of fragrance. Its scented air is one of its main characteristics, often mentioned in different writings. The importance of fragrance in the bustan and in ancient gardens in general, stems from the value of fragrance in ancient cultures. Unlike today, when

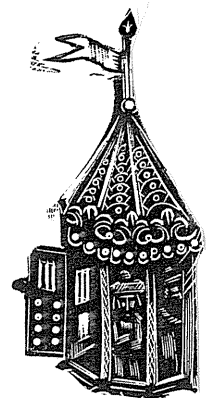


9.

The deliberate use of scent in the garden, has helped in my mind, to create the symbolic connection between the earthly and heavenly worlds. "A garden, whose trees are aloes and sandal, and whose fragrant herbs are like coral . . . you would find paradise here." (14)

In the Jewish tradition with its affinity for the abstract, fragrance was often a metaphoric symbol for spiritual values. "Like a bed of fragrant spices is Israel, for the sweet savour of piety ascends on high, the perfume of learning lingers on the passing breeze." (15)

According to the mystical theories of the Kabbalah, man has an additional soul which departs at the conclusion of the Sabbath. The only way to unite it together with the body, is by smelling aromatic herbs: "The soul and the spirit are separated and sad, until the smell comes and unites them together." (16) A traditional Jewish custom is to smell a "box of spices" at the conclusion of the Sabbath, symbolically uniting body and spirit.



A BOX
OF SPICES

fragrance is associated mainly with 'sensuous' pleasure, fragrance was once imbued with conscious symbolic and religious significance.

The use of incense in religious rituals, and the physiological influence of the intoxicating fumes on the worshippers probably reinforced the associate connection between fragrance and supernatural powers. Moreover, the very essence of fragrance, its invisible presence and slow disappearance in the air, suggests its connection with the indefinite essence of divinity.

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Thus, a place where fragrance can be experienced in a unique way, becomes a place of spiritual value, conveying moral virtues and divine powers.

The bustan, with its confined enclosed space, is designed to communicate the slow, subtle effect of fragrance. In it, one is not supposed to stroll and enjoy visual spaces and receding perspectives as in Western gardens. Rather, one is invited to sit quietly, relax, and inhale the scented air. A Western traveler to Cairo was amazed to observe that Egyptian ladies do not take much interest in the flowers of their wonderful gardens: "They never dream of tending or even plucking the flowers themselves. Nevertheless, they enjoy "smelling the air," as they call it, amid the irregular parterres of Cairene horticulture." (17) By inhaling the scented air one lets his profane state of mind be transformed into a more spiritual, lofty one. The earthly existence gives way to meditation on heavenly worlds.

Symbolic Connection To Death

Since early times, gardens were related to places of burial. In many cultures, trees were believed to possess an animating power, and their resin was accredited with 'soul-substance.' The soul of the deceased was believed to dwell in the trees that grew near its tomb. Even Judaism, which denied the attribution of other forms of sacredness to trees, has absorbed the traditional connection between gardens and graveyards.

When Abraham wanted to bury his beloved wife Sara, he bought from Ephron "the field, and the cave which was therein, and all the trees that were in the field." (Gen. 23:17) The kings of Judea were buried in a garden close to the royal house: "And Manasseh slept with his fathers, and was buried in the garden of his own house in the garden of Uzza." (Kings 21:18) Jesus, too, was buried in a private garden belonging to Joseph of Arimathea. (18)

These places have assumed sacredness because of the presence

of the holy figure. Holiness was centered on the tomb, but its surroundings were considered sacred as well.

These sacred places and surrounding gardens were venerated for ages, and became sacred in their own right. In this manner, many oak trees which grew near holy tombs of Islamic figures were preserved for ages, even after the reason for veneration was forgotten. Gardens that surround places of burial, like the bustan of St. Catherine, are regarded as sacred even into our time.

Symbolic Shapes

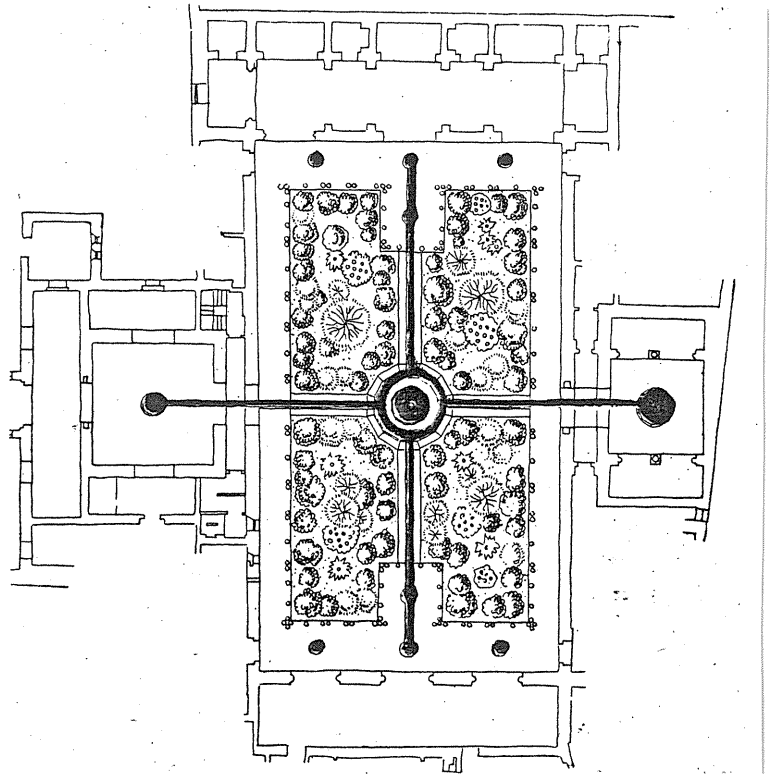
Although the bustan does not follow any geometric symbolic order as a rule, some gardens contain symbolic shapes and numbers, probably influenced by Islamic and Christian traditions. Understanding this symbolism might enable us to relate to the religious and cultural influences that have affected the garden.

The square represents the cosmos or the earthly world of man in many ancient cultures. Four is a sacred number in Islam. The four corners of the square represent the four corners of the world, the four winds, the four basic elements of earth.



Related to the square is division into four. The division of the earth into four quarters is an ancient mythological motif. The Islamic garden in particular employs this motif. The classic example is the Court of the Lions in Alhambra, Spain, where irrigation channels flowing from a central water-source dissect the space into four quarters. (See Fig. 10)

In the Christian tradition, the division into four was associated with images of the cross and heavenly Jerusalem. (19) It was carried into inner courtyards of monasteries - cloisters - in the form of four paths dissecting the space, as found in the garden of Gethsemane in Jerusalem.

The classic division into four is typical of the Islamic garden, symbolizing the division of the earth into four quarters.

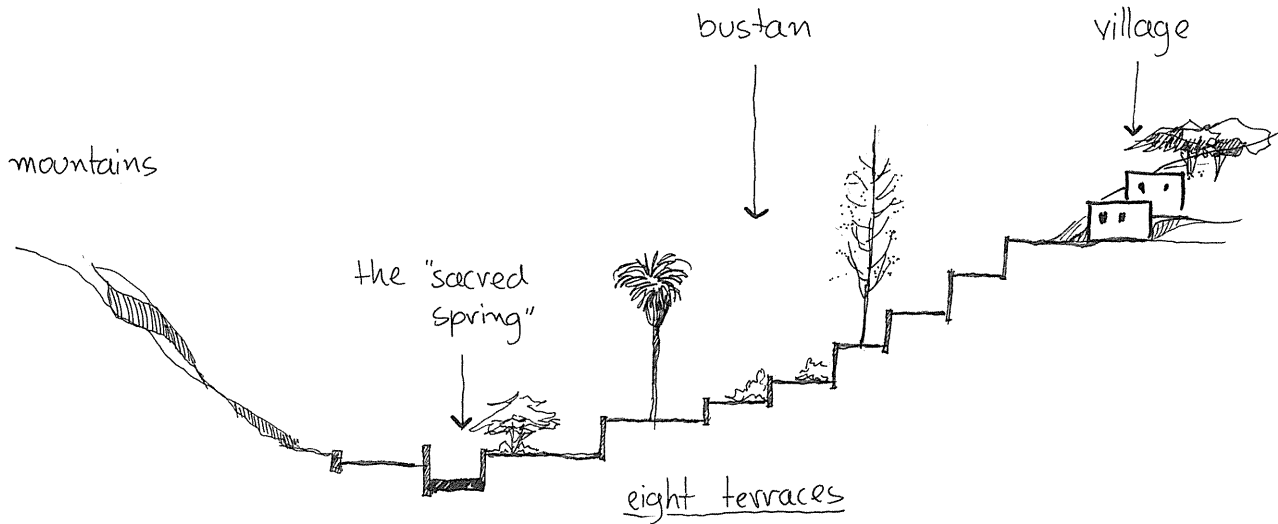


10. The Court of the Lions
Alhambra, Spain

The circle as opposed to the square, symbolizes perfection and in many cultures it represents heaven or nature. The interaction between the circle and the square in traditional art is the mandala.  It represents unity between earth and heaven, and the interplay of cosmological powers. In Islamic perspective, it becomes related to the dimensions of the universe, the divine names and qualities. (20) The transformation of square into circle generates the octagon  , which is found in many Islamic shrines and gardens. It represents the eight different heavens or degrees of bliss in the Koran, (21) the eight angels and the eight "roses of the winds."

In the garden of Beit-Dagan (near Tel-Aviv) designed like an Oriental bustan by a Jewish gardener for a rich Arab client in 1930, similar shapes are found. The main water-feature, which

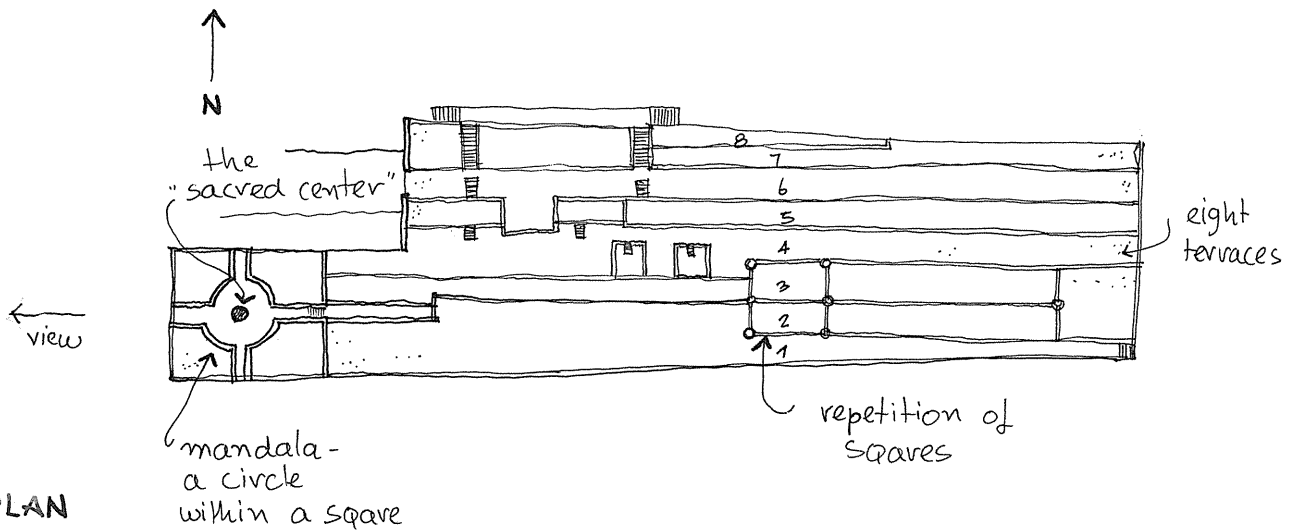
- approx. time of creation - the beginning of the 20th century.



SECTION
(not in scale)

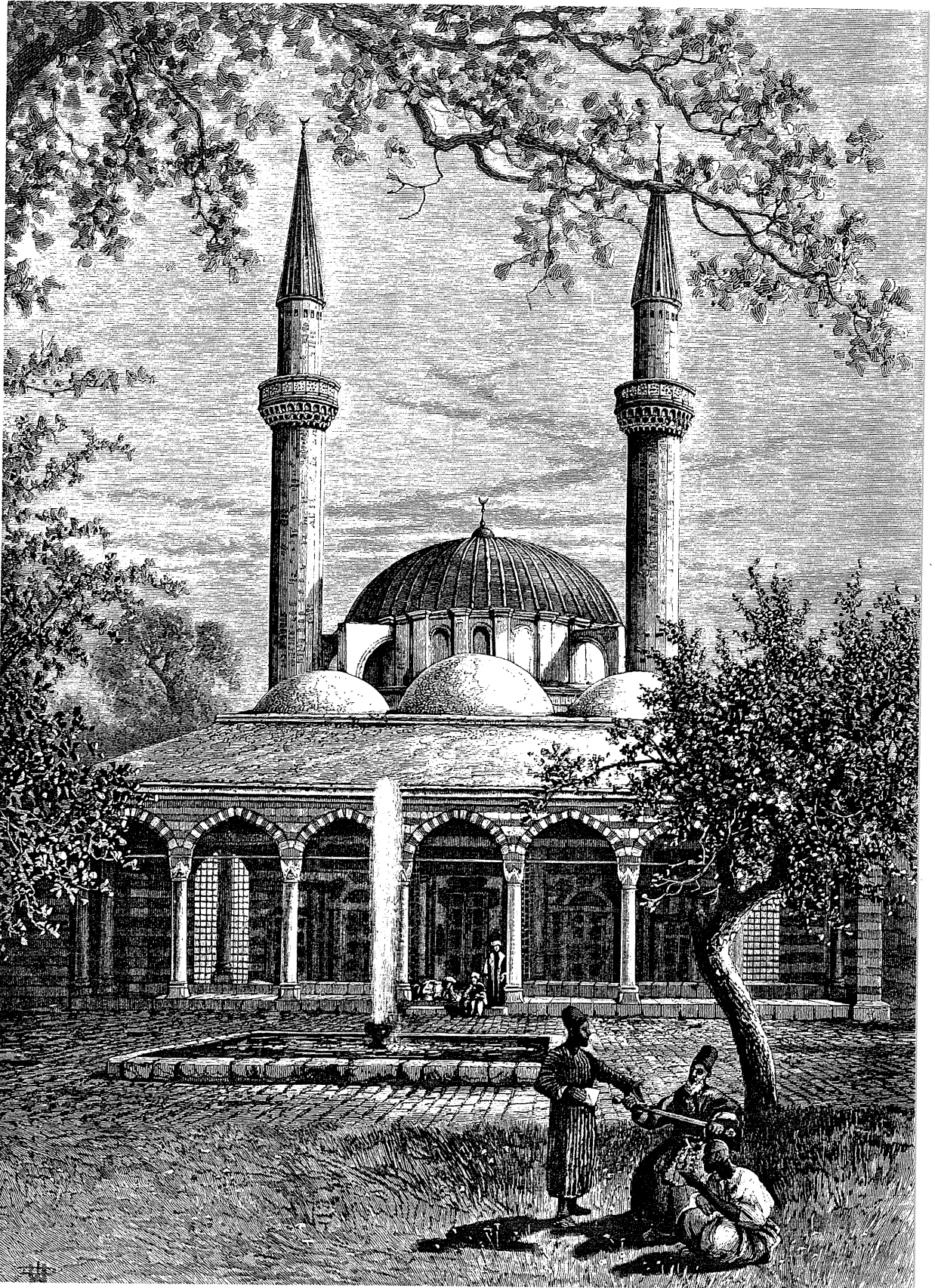
eight terraces

- As the garden was created by an Islamic gardener, the eight terraces might suggest a symbolic connection to the eight heavens described in the Koran, the last one is paradise. Similar ideas are found in other Islamic gardens.



PLAN

11. THE BUSTAN IN VADI-SIACH , HAIFA
SYMBOLIC CONNECTIONS



12. Mosque of the Tekiyeh, Damascus

(a drawing from the 19th century)

Where water was abundant, Islamic shrines were surrounded with gardens. Walnut trees are especially revered by local traditions.

still exists, is an octagonal pool located at the top of the hill. The water then is led into another pool in the shape of a square. (22)

Some Islamic gardens are designed as a succession of eight terraces, corresponding to the eight heavens in the Koran - the last one is paradise. Possibly, the bustan in Vadi Siach, Haifa (see Fig. 11), which consists of eight terraces, manifests a similar idea.

The Bustan As A Sacred Garden In Israel

Many of the bustan's elements, as explained previously, bear a religious or a sacred association. However, the bustan as a sacred place, is not prevalent in the landscapes of Israel.

Jewish ambiguity towards gardens did not encourage their existence as parts of sacred places. On the one hand, Jewish life and festivals in the era before the exile were closely integrated with natural cycles, and with the garden as part of the agricultural landscape, and they were thus reflected in sacred literature and imagery. On the other hand, the heathen practice of worshipping their nature gods in gardens was the reason for a strong opposition on the part of Jewish religion to the recognition of gardens as sacred places. Probably, this was one of the reasons why no sacred Jewish gardens were preserved into our time.

In the Islamic tradition, gardens are sometimes perceived as part of sacred places. In places where water was abundant, the bustan became part of the "Makam" - the holy environment that surrounds the tomb or the shrine.

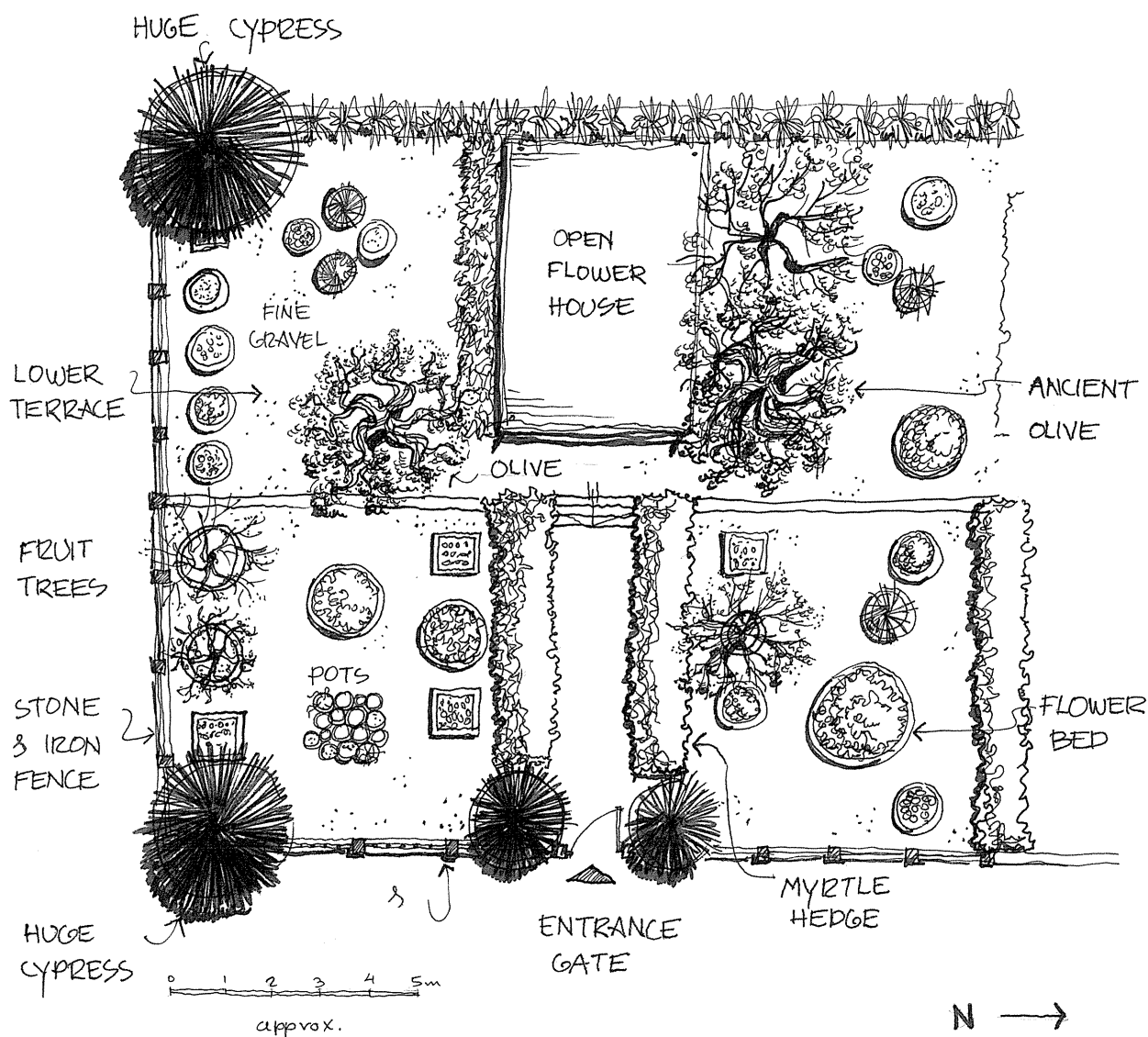
The most easily recognized as sacred gardens, are the bustanim of monasteries and churches in Israel. The bustan of Gethsemane in Jerusalem is significantly sacred in Christian tradition. It is located near the Church of the Tomb of the Virgin, across the Kidron Valley. Here Jesus often retreated

for rest, prayers, and fellowship with his disciples. According to the New Testament (John 18:1), this was the place where he met his betrayer.

The layout of different parts of the garden (as shown in Fig. 14 and Fig. 15) correspond with universal and Christian symbolic connections. The symbolic elements, along with ancient trees and fragrance, have probably combined to create the religious experience described by many: "It is here, in this quaint and carefully tended garden . . . that we find for the first time that which we have come so far to seek - the soul of the Holy Land, the inward sense of the real presence of Jesus."
(23)

Of a different nature is the garden of the Monastery of St. Catherine in Sinai. It is divided into an agricultural profane part, and into a sacred part which surrounds the cemetery and the charnel houses. Its layout is derived from the topography, yet it contains different symbolic elements that emphasize its sacred connections (see Fig. 15). It seems to me, that the siting of the garden, almost squeezed between the giant mountains, reflects the importance of the vertical connection to heaven.

- The garden, although mentioned already in relation to Jesus, exists probably in this site from the 4th century. The oldest tradition, dating from A.D. 326, fixed the site of Gethsemane at this place, by the Church of the Tomb of the Virgin.



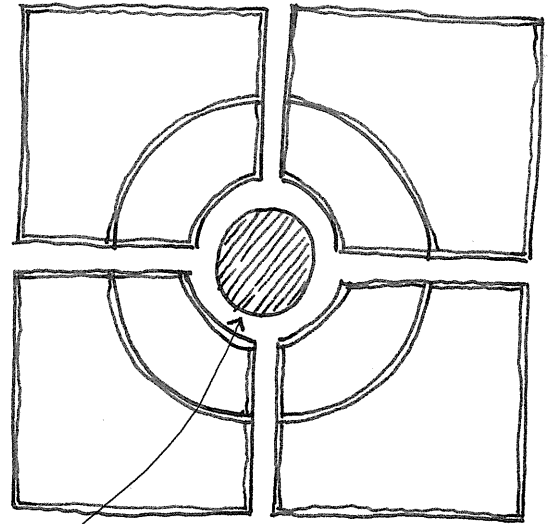
13. THE GARDEN OF GETHSEMANE

A PARTIAL PLAN

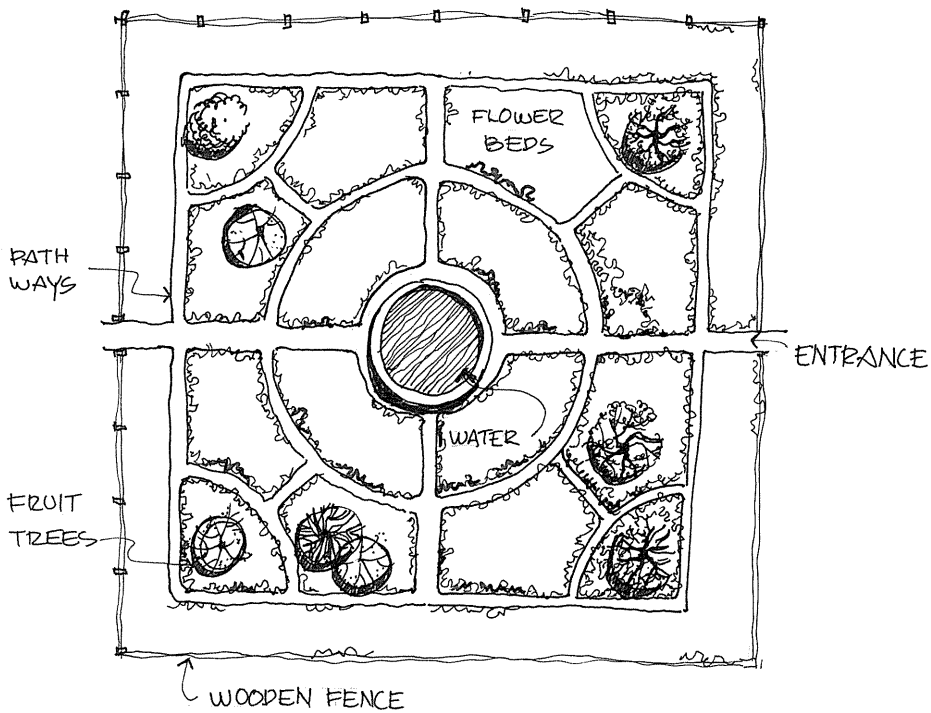
(AFTER A PHOTOGRAPH FROM THE YEAR 1908)

SYMBOLIC STRUCTURE

- The division to four- symbolic in many religions, represents the four corners of the world and the cross in Christianity.
- The mandala- combination of a circle and a square, is a universal symbol of unity between heaven and earth.



- The water-element represents the "sacred center."

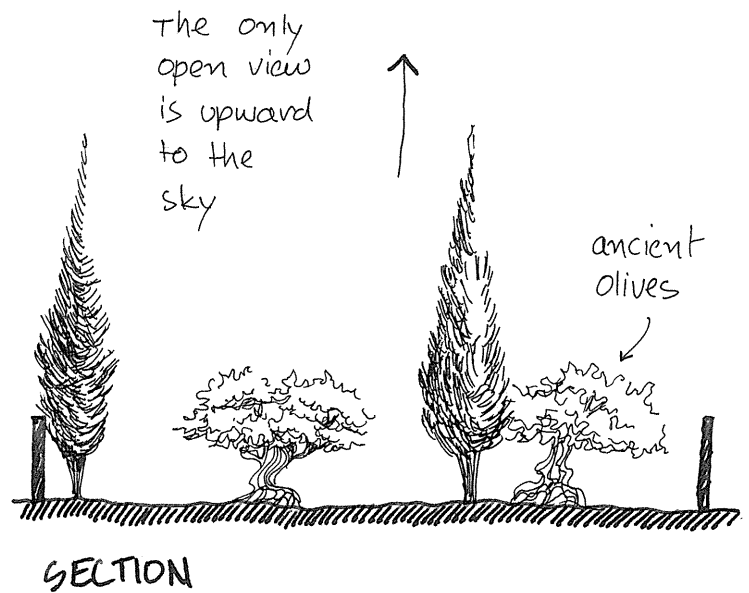


14. THE GARDEN OF GETHSEMANE

A PLAN OF ONE PART

(AFTER A POSTCARD FROM THE TURN OF THE CENTURY)

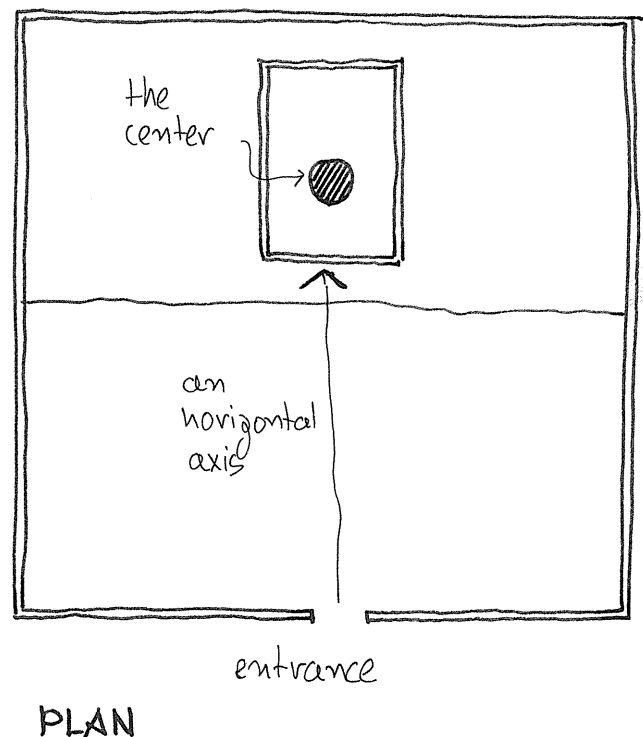
- The ancient sacred olives are believed to date back to the times of Jesus. This tradition is probably not well founded, since Titus (70 A.D.) cut down all the trees east of the city.



- The enclosed, secluded space of the garden, where the exterior world is being screened out, is a place for contemplation and prayers for the monks.

- The "sacred center", represented by the fountain and the flower house, is not located in the middle of the garden. Nevertheless, it is conceptually perceived as the center.

- The entrance, strongly emphasized by the gate and the cypresses, marks the transition into a different realm.



15. THE GARDEN OF GETHSEMANE - SYMBOLIC CONNECTIONS

vertical axis

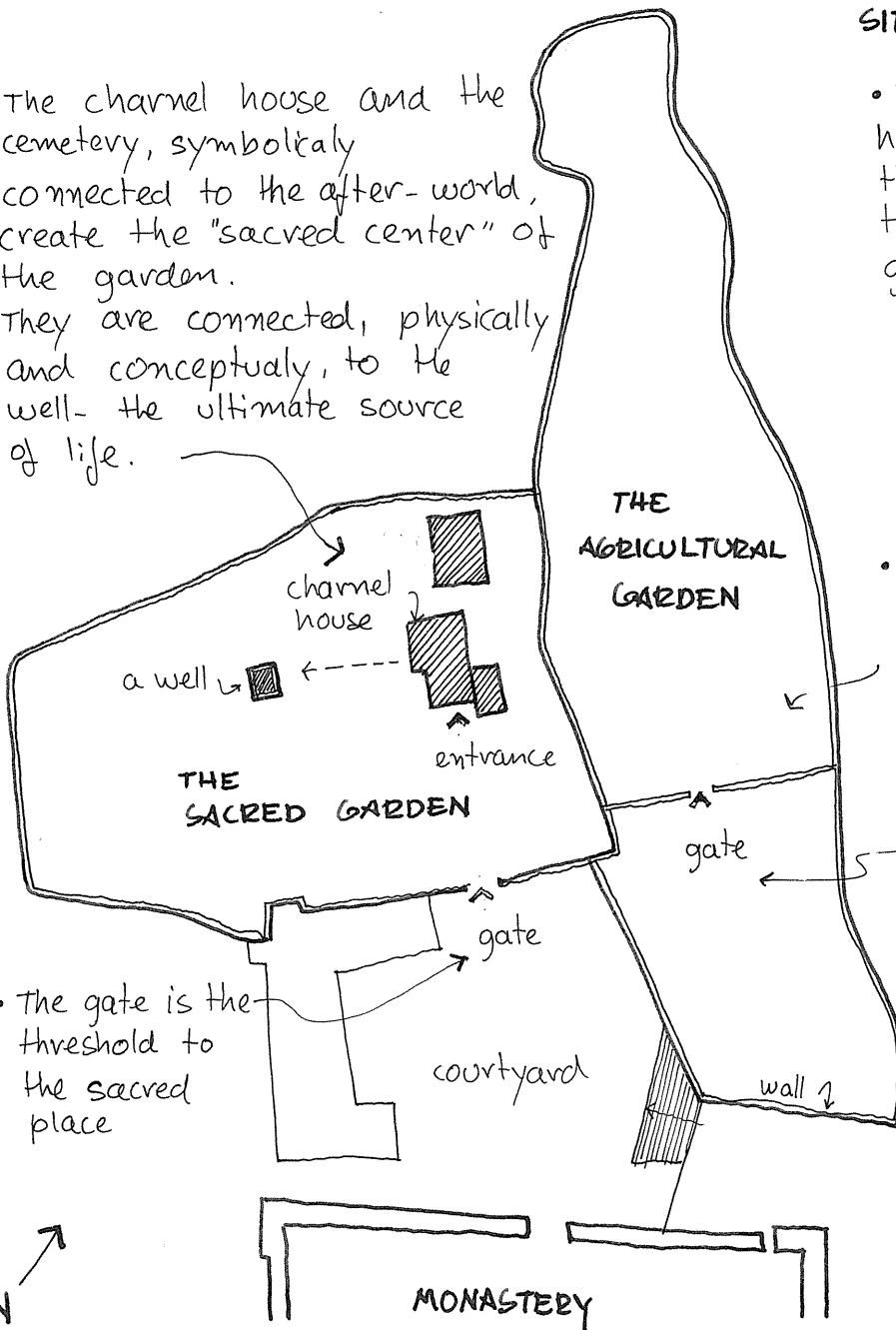
- vertical elements, such as cypresses and structures - lead the eye upwards to the sky.



SECTION OF SITE (not in scale)

- The charnel house and the cemetery, symbolically connected to the after-world, create the "sacred center" of the garden. They are connected, physically and conceptually, to the well - the ultimate source of life.

- The vertical connection to heaven is accentuated by the topographic location of the garden, squeezed by giant mountains.



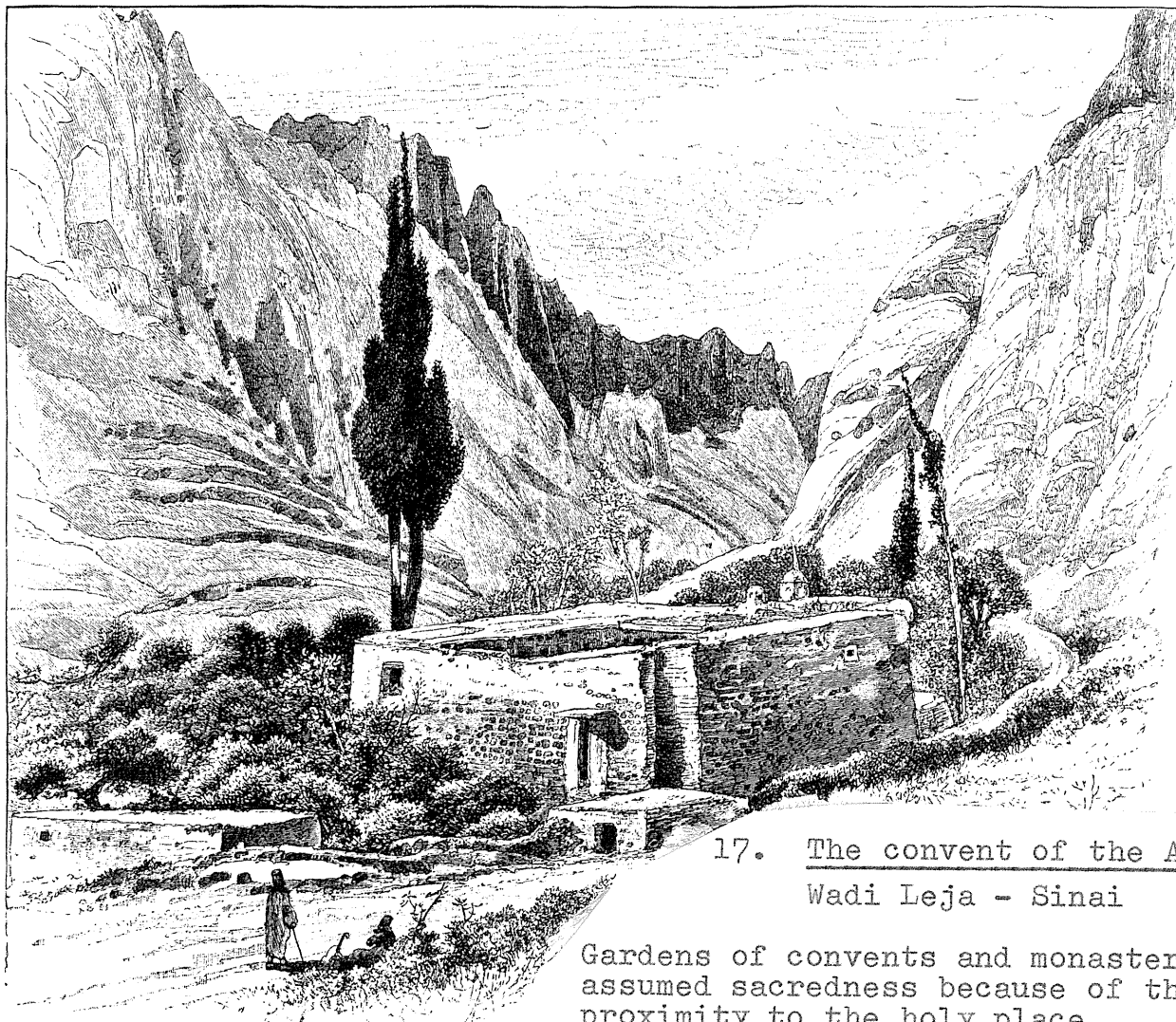
- The secular garden is separated from the sacred one.

- layers of penetration within the garden increase the dramatic effect of reaching the center.

- The gate is the threshold to the sacred place

note: for a detailed map of the garden see fig

16. THE GARDEN OF ST. CATHERINE - SYMBOLIC ELEMENTS



17. The convent of the Arba'in
Wadi Leja - Sinai

Gardens of convents and monasteries assumed sacredness because of their proximity to the holy place.

II. Symbolic Connections To The Natural World -

The Garden As A Microcosm

The garden can be conceived as a miniature of the world, where all elements of the universe are represented. Its existence is a result of the interplay of the four basic elements: water, air, earth, and fire (sun). Natural processes, as they take place in the garden, represent the eternal cycles of transformations of the natural world.

The garden of the bustan is a mirror of the natural world, since it is a place of diversity and ambiguity, a place where life is transformed and time is layered. Man is conceived as a part of the natural order. Although man controls and directs his small world, cosmological powers vast and beyond his control create the overall and invisible order of the universe.

Diversity And Its Symbolism

In its mythical representation, the garden contained all kinds of animals and trees, reflecting the variety of species in the world: "And out of the ground made the Lord God to grow every tree that is pleasant to sight and good for food." (Gen. 2:9) The bustan contains different trees, flowers, and herbs, a few of each kind. Every kind of tree and plant delivers a special message. The palm is an emblem of life, the fig of abundance, the rose's scent is love, and myrtle has the fragrance of fertility. Olive represents peace and stability and a blossoming vine is a symbol of success. The cypress, reaching out to heaven, is forever a symbol of immortality.

18. The palm is an emblem of life





19. The olive is a symbol
of peace and stability

However, not only ideal life and hopes for the future are portrayed in the garden. Difficulties and challenges are represented as well. The nut is a symbol of intellectual challenge, the shell of which must be broken to reach the inner truth. The prickly pear is thorny outside, symbolizing external difficulties that one should face in order to reach the sweet reward inside. Thus, for the lucky one who can decipher the messages, an overall picture of human life as represented by the natural world, is portrayed.

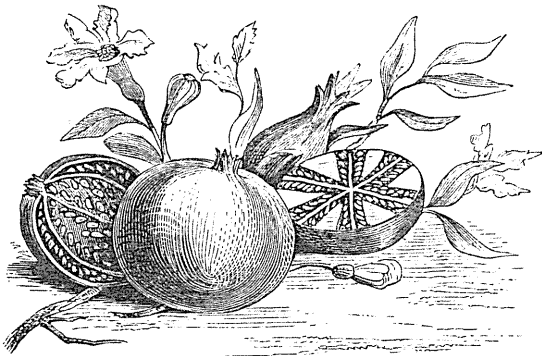
Ambiguity

The garden, like the universe, was rich in ambiguities and multiple meaning for pre-modern man. The bustan is a place of diversity and contrast. It is a place of very earthly pleasures on the one hand, and purely spiritual ones on the other; it is a place of utility and a place of pleasure. Chaos and order exist in it side by side. Above all, it is a place of interplay between human control and natural power. This is the place where man harnesses the natural forces for his own benefit, yet he is always aware of his limited power to control them.

Water is the most powerful natural element in the garden that is transformed by man into a life-giving source. The presence of water in the garden conveys this dual message. On the one hand it symbolizes fertility and security. Balaam blesses Israel that, "He shall pour out of his bucket, and his seed shall be in many waters." (Numbers 24:7) On the other hand, it represents sudden destruction by the uncontrolled power. Job's troubles come upon him as a "wide breaking in the water." (Job 30:14)

The tension between human control and the power of nature or God, is present in the garden as in the whole universe, but the garden as a defined controlled space accentuates our awareness of this tension.

Fertility



20. Pomegranate - a symbol of fertility

Every garden represents the miraculous transformation of seeds to plants, of flowers to fruits. The bustan, which provides fruits and vegetables for human survival, is an even more emphatic demonstration of these miracles. It became both the place and the symbol of the process of fertility. The close relationship between the words 'fruit' and 'fertility' (פרי - פרייה in Hebrew) reflect the importance of fruit as an image of the whole process of transformation.

Throughout the ancient world, human fertility was closely related to the fertility of the earth: "And he will love thee, and bless thee, and multiply thee. He will also bless the fruit of thy womb, and the fruit of thy land." (Deut. 7:13) Most earth goddesses were conceived as feminine figures bringing forth the fruits of their womb.

For humankind, the simple and visible process of transformation of flowers into fruit, is a constant reassurance of the regeneration of nature and of himself as part of nature.

The Dimension Of Time In The Bustan:

Cyclical Time

Along with a different perception of space, pre-modern society shared a perception of time which is very different from ours. For modern man, time is linear. There are seasonal changes, but the movement is always forward. For ancient people, time was cyclical. (24) The circle symbolized perfection. The movement of the universe was in a circular path, always repeating: "What has been is what will be, and what has been done will be done, and there is nothing new under the sun." (Eddl. 1:9)

LINEAR TIME



MODERN

CYCLICAL TIME



ANCIENT

The work of the farmer was dictated by this rhythmical change, and his festivals marked the repeated cycle. The seasonal rhythm on earth reflects the general order imposed by cosmological powers. Thus, it acquired mythical and religious meaning, as well as the agricultural one.

Jewish Festivals

Judaism, in particular, is a religion of time. Very little emphasis is placed on sacred things and places. Time and events are holy. "Jewish ritual may be characterized as the art of significant forms in time, as architecture in time. Most of its observances - the Sabbath, the New Moon, the festivals, the Sabbatical and the Jubilee year - depend on a certain hour of the day or season." (25) All of the Jewish festivals are part of the cyclical rhythm of agricultural life. Only later have they been transformed to commemorate historical religious events, and thus have been carried out through the whole period of exile.



21. The Sabbath -
represents the
holiness of time in
Jewish religion

Some of these festivals are closely related to the garden. On the feast of Harvest (Shavout - Pentacost) in the beginning of summer, the people of Israel were to gather in the temple in Jerusalem, and bring the first fruits of their fields and gardens. "The first fruits of thy land thou shalt bring into the house of the Lord thy God." (Ex. 23:19)

The festival of Ingathering (Sukkot - Tabernacles) marks the end of a long summer season during which many crops and fruits ripen and are harvested. This is the time to bring all the crops into storehouses quickly to prevent their spoiling during the approaching winter rains. The celebration of this festival is marked by sitting outdoors in booths, which are like the temporary structures used by the gardener and farmer.

Part of this ritual involves four species of plants: "And ye shall take you on the first day the boughs of goodly trees, branches of palm trees, and the boughs of thick trees, and willows of the brook." (Lev. 23:40) These plants are traditionally identified as citron, palm, myrtle, and willow, most of them plants of the garden. The willow, although not a garden plant, grows naturally near water-sources, representing the element of water in the garden.

The garden then becomes a place where the divine presence is manifested through the cyclical change of seasons, and marked through the religious festivals. The place itself is not sanctified, but the events connected to it become sacred. A unity of man with nature and with God is periodically repeated to create a continuous bond.

Layering Of Time

Along with cyclical events, the progression of time is evident in continuous changes in the garden. Small trees grow and mature, perennials age and die, stone walls wear out and are rebuilt. There is a process of aging and regeneration that is part of an overall natural order. The pace of change is different for each part of the garden, interweaving what appears eternal with the quickly passing.

The bustan, with its variety of plants, is a wonderful display of the effects of time. Trees like cypresses, olives, figs, and carobs seem to stand forever. Their existence in the garden is an echo of earlier times and reminds us of the continuity of mankind. The deep belief in this continuity, which we hardly find in modern times, allowed for planting the slow-growing trees. A story from the Mishna tells about an old man who plants a fig tree. When the Emperor Adrian asks him whether he expects to eat from this tree, the man answers: "If not, I will leave it for my son, as my father left the fruits of his labor to me." (26)

Other trees, like almonds, apples, plums, pears, etc. live for a shorter period and cease to be fruitful after a few decades. Their time-span can be measured against human life, reminding us of our own mortality. The bustanim of Sinai, for example, consist of a variety of trees ranging from one year to very old ones. A continuity of cultivation and regeneration assures the existence of the garden as a whole.

Stone, used in the bustan for terracing and walling, ages

slowly and gracefully. Some stone terraces on the Judean hills are more than 2,000 years old. An old stone is distinguished from a new one by its color and its texture. Its quality, though, is not reduced. The old stone lends itself to renovation and reinforcement with new stones. The existence of old and new, side by side, reflects both change and continuity in the garden.

Along with natural changes, cultural changes take place, transforming the garden. Throughout history, changes in cultural perceptions have caused gardens to disappear or lose their distinctive character. The French formal garden, for example, gave way to the English romantic style in many places in Europe during the 19th century. The bustan, being such a flexible pattern, can accommodate cultural influences and changing styles. It absorbs the various novelties, reflecting the passage of cultural time, yet retaining its basic character. The bustan of Gethsemane was transformed into a design somewhat reminiscent of a terraced Italian garden during the 19th century. Its enclosure took different forms: stone walls, wooden fences, and iron railings. Ornamental flowers have been introduced - just for their visual qualities. Its overall character though of an enclosed, mixed garden with the qualities of the bustan - have not changed.

Technology has also caused changes in the bustan. The use of plastic pipes in the Bedouin bustan in Sinai, has eliminated the need for irrigation channels. Concrete walls have been introduced into the bustan of Vadi-Siach in Haifa. Nevertheless, the bustan as a place of production and pleasure, a place of enclosure and fragrance remains unchanged.

III. SYMBOLIC CONNECTIONS TO THE CULTURAL WORLD

The Bustan As A Part Of Folklore

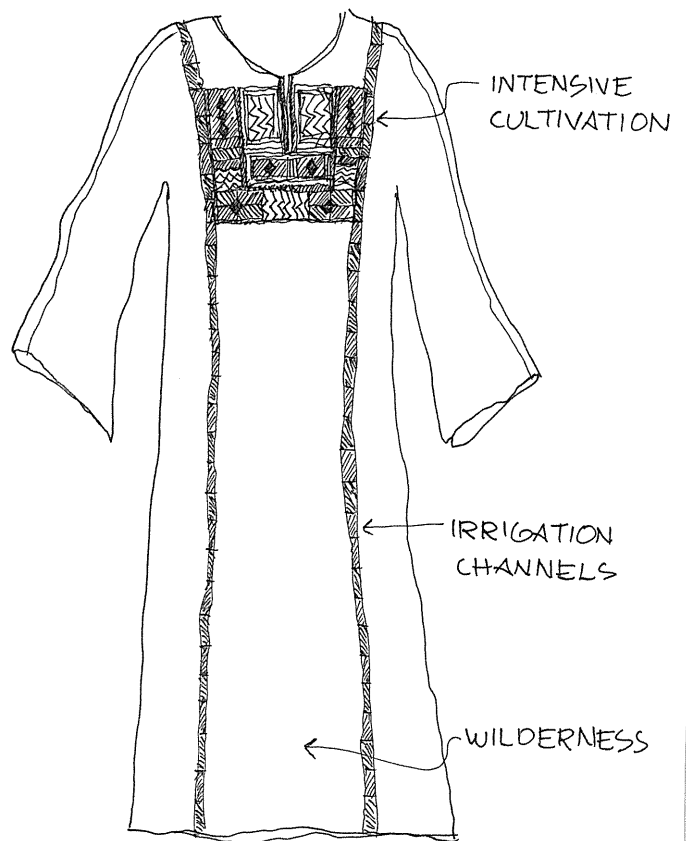
The bustan is a folk garden, deeply rooted in folk art traditions of the Arab-Israeli region. Part of a delicate pattern of life, it cannot be separated from other works of art that grow out of long-lasting traditions and rituals.

The folklorist perspective of understanding a culture is done from the inside out. Details of any folk creation which is examined are connected to other examples and other kinds of folk art so that it may be understood as an organic unity with the character of the people and the character of the land.

Without engaging in cultural research, but simply from my own observation and experience, I would like to suggest some associations and connections between the bustan and other forms of popular art. These connections, I believe, demonstrate similarities in attitude towards life, towards time and space, towards imagination and reality - that are part of a whole culture.

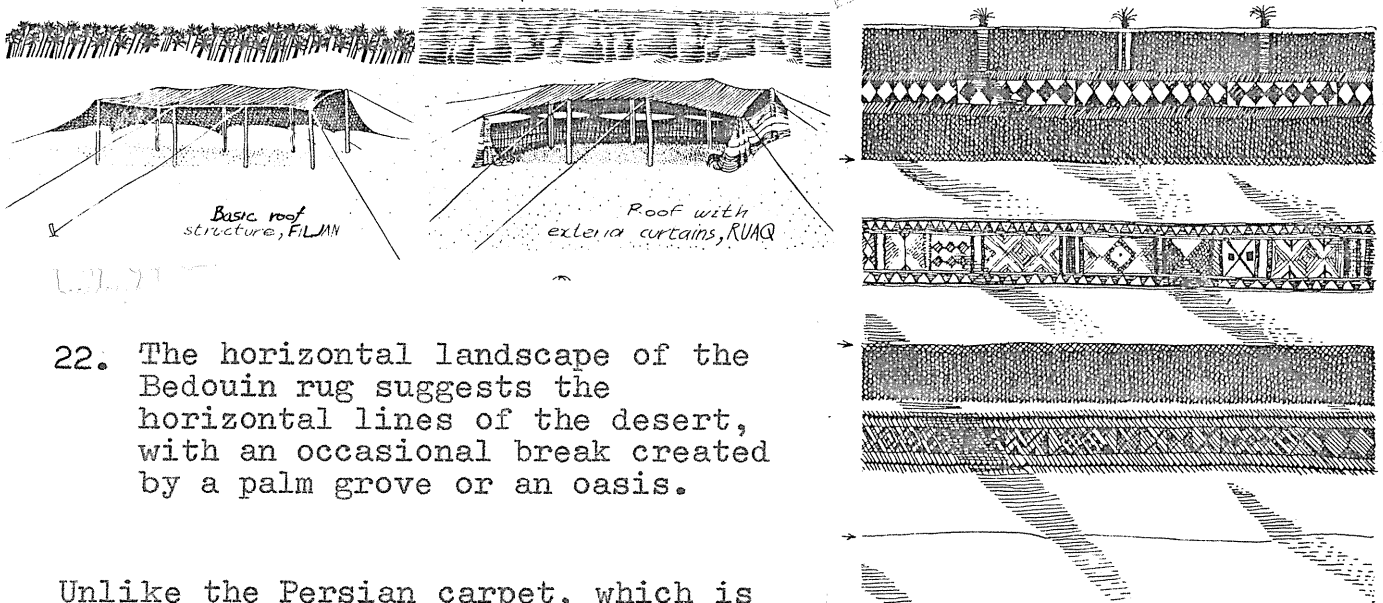
The Landscape Of Embroidery

The Arab Bedouin dress is like the landscape of the country. Mostly natural, wild with small patches of man-made intensely cultivated areas. Long stripes, like irrigation channels, dissect the wilderness, leading to the colorful paradise of the embroidered piece.



The embroidered patch, like the garden, is simply shaped in a square or rectangular form.

Similarly, the Bedouin rug is made of highly ornamented pieces connecting large barren pieces of landscape.

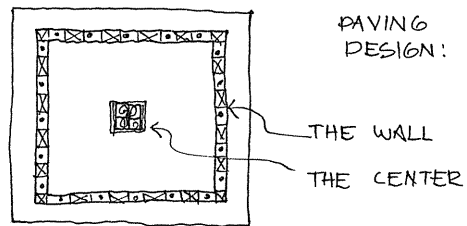


22. The horizontal landscape of the Bedouin rug suggests the horizontal lines of the desert, with an occasional break created by a palm grove or an oasis.

Traditional woven designs on the dividing curtain, QATA, of a well-to-do man's tent. note seams.

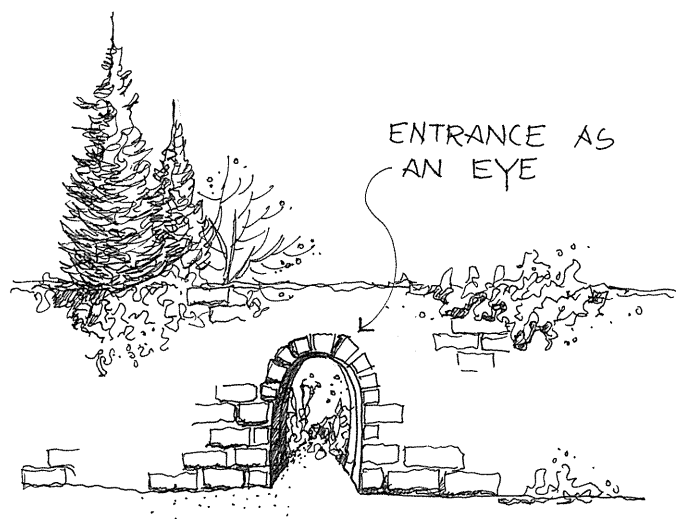
Unlike the Persian carpet, which is covered with designs and images over its entire surface, the Bedouin rug, like the bustan, is economical in its use of ornamentation.

One can trace similar ideas in paving patterns in Judea and Samaria. Generally, the ornamented tiles do not cover the whole surface. They create an enclosure or a frame around a room, while a more elaborate design marks the 'sacred center' of the space.



The 'Enclosed Woman'

A woman, like a garden, is a hidden treasure to be concealed from the curious observer. The enclosure of the veil keeps her beauty unrevealed, leaving only the eyes to communicate with the external world.



THE VEIL IS LIKE THE GARDEN'S WALL,
AN ENCLOSURE OF A HIDDEN BEAUTY

Jewish phrase says: "The dignity of a princess is on the inside." Like the garden wall and the woman's veil, this is an expression of a culture which emphasizes internal values above external expressions of beauty. The enclosures of the garden and the woman, are also statements of ownership, in a culture which regards woman as the man's private property. She, like the garden, should be protected and concealed rather than displayed.

Fragrant Food

Eastern food is rich in colors, textures, and most of all - in fragrance. The generous use of spices and herbs such as zathar (Syrian marjoram), saffron, cinnamon, and sage gives the food its special quality. Even cakes and pastry are perfumed with rose scent and almond blossom.

Accordingly, the food is to be enjoyed slowly. An Eastern meal can last for hours. Food and drink is served in small dishes, continuously refilled. That way the diner can enjoy it fully - using all senses - seeing, smelling, touching, and tasting.

One has to 'take his time' and indulge oneself fully in the delights of the experience, absorbing all the subtleties and variations.

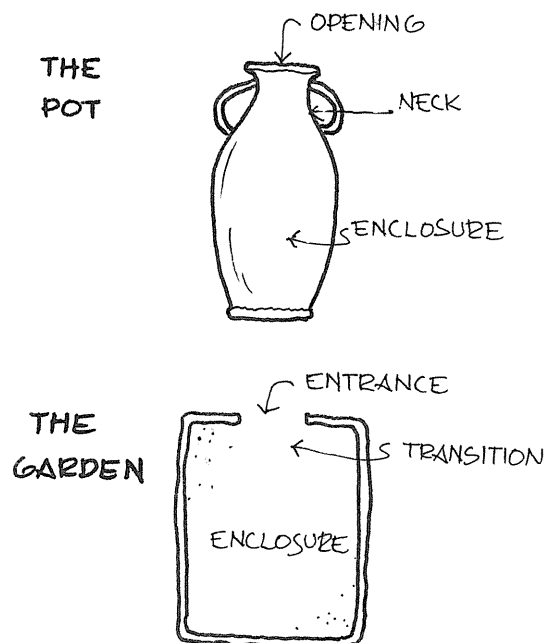
Story Telling

Mid-Easterners are known for their vivid imaginations. Reality and fantasy are blended together in literature as in daily life. The term 'Eastern imagination' is used in Israel to describe the fine line between fiction and fact, often crossed by Mid-Easterners. I am reminded of the imaginative perception of the garden in Eastern literature, where the mystical and symbolic connection overrule the reality of the place. It is not hard to imagine how these earthly places have been perceived as heavenly images, by minds that were trained at looking beyond the obvious reality. The mystery of a place, its hidden qualities, are an important part of the character of the bustan, leaving an open area to be filled by the imagination.

Pottery As A Functional Art

Pottery is an art that grows out of the earth. The clay is the earth transformed for man's needs. The pot is an enclosed space, where the mouth is like the entrance to the garden - the only connection to the exterior world.

The art of pottery grows out of its functional use - to contain water and to carry it. Arab women carry pots on their heads with an amazing sense of balance. The Arab pots of the Judean hills, like the bustan, have never departed from their functional design. They are plain,



simple and minimally ornamented. It is an art which is part of daily life, growing out of long lasting traditions and rituals.

* * *

Of a much less explicit nature, and probably more debatable, are my associations and connections between the bustan and folk dance and music. However, the use of gardens as a setting for dancing and singing suggests in my mind, the following links.

'Intensive Dancing'

Druze dances, Bedouin dances, and Arab dances in Israel are economical in their use of space and strong in movement. They are rhythmical and emotional, but very restricted in spatial composition. They were generated in landscapes where open spaces were small and confined, allowing for more vertical than horizontal movement. In this sense, they correspond with the bustan, in which the only open undisturbed space is upward.

DANCES THAT WERE GENERATED
IN CONFINED SPACES



"DEBKA", SHEPHERD
DANCES

DANCES THAT WERE GENERATED
IN CONTINUOUS SPACES



WALTZ, MINUET

Music

Arab melodies often sound discordant to Western listeners, just as the bustan appears disordered to Western viewers. The subtle intonations and variations are unfamiliar to an untrained ear which is used to certain spaces between the tones.

The repetitious cyclical Arab music reminds me of the cyclical perception of time in pre-modern societies. Western music builds up to a certain progression of themes, peaks at a certain point and then comes to a finale, corresponding with the perception of

time as a linear progression. Arab melodies, on the other hand, consist of repetitious cycles, which are like the seasonal cycles of nature manifested in the bustan.

* * *

The list can go on. Even this short and preliminary review, however, makes it clear that the bustan is a part of a larger cultural context. It is obvious that similar attitudes towards life, generated in similar landscapes, are reflected in many ways in the art of daily life.



23. Coffee making and drinking is a ritual to be performed carefully and slowly. The delights of the experience, like those of the bustan, are fully achieved in the slow pace of the Orient.

The attitude towards time, the slow pace required to enjoy the food, the coffee, and the garden - was probably influenced by the climate and the landscape as well as by long-lasting traditions. The economical use of space, and the intensive use of the land, characteristic of the bustan, are reflected in embroidery and in paving patterns as well.

The tendency to enclose one's property, and to conceal it from passersby, is demonstrated by the bustan's wall and by the woman's veil. Sensual pleasures, such as smelling and feeling are an important part of the culture, and are present in gardens, in markets, in shrines. Imagination and story telling are part of daily life, enriching the experience of the garden too, with another dimension. To what degree and in what ways the harsh reality of everyday life has encouraged this refuge to imaginary worlds is left to our imagination

Hopefully, the above ideas will stimulate the interest of others and generate more comprehensive research in these areas.

The Bustan Today - A Place Of Symbolic Connections?

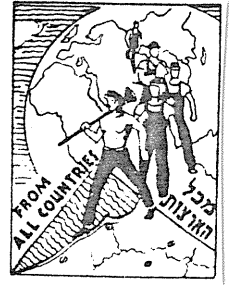
Although of a different nature than in the past, our contemporary culture is continuously creating places that manifest symbolic connections. The need to substantiate abstract ideas through physical form is as strong as ever. The means have changed however. Whereas in ancient cultures, spiritual values were commonly shared by many and easily recognized in the landscape, our modern society needs a more explicit manifestation of symbols. Thus, today we create places such as "The Peace Park," the "Statue of Liberty" or the "War Memorial," where the definition of the place is an important means of conveying its message. Of more implicit nature are environmental art works, where the artist tries to hint at a reality different from the obvious one, through transformation of the landscape. In any case, it is clear that we still look for physical forms to be imbued with symbolic meaning in the fields of art, architecture, and environmental design.

Is it possible then, that a place such as the bustan, so rich with significance for ancient cultures, will be a vehicle for conveying symbolic connections in our modern society? Is it possible that we could 'read' it and decipher it the way our forefathers did? Or is it in the nature of the place to convey other messages derived from our own contemporary culture?

One can relate to these questions, it seems, on many levels.

One can think of the symbolic elements of the bustan as universal and eternal, overcoming boundaries of ages and cultures. Thus water is forever a symbol of life in arid countries. The transformation of flowers into fruits will always be perceived as a symbol of fertility, while the connection between fragrance and romance has not faded through the ages. The existence of ancient trees and aging stones adjacent to young fruitful trees and new materials, possibly symbolizes to modern man the mortality and continuity of life, and the layering of times and ages, as it did to previous generations.

Beyond that, the bustan can be perceived as a place of contemporary connections. Its drawing from both Jewish and Arab origins imbues it with the power to be a connection between these two cultures. If a "peace garden" is to be designed in Israel, the bustan could be an appropriate model On a



24.

different political level, the bustan can be perceived as a "bonding agent" between the different ethnic groups in Israel. The Sepharadic group can easily identify with the bustan as a part of its cultural heritage, while the Askenazie group will find in it echoes of ancient times. I can already imagine the celebration of the "mimona" - a traditional outdoor festival of the North African Jews - taking place in the bustan.



25.

Other festivals as well, such as Tabernacles and Pentacost might gain more significance when celebrated in such a garden. The connection to the land, and to the agricultural origin of the festival is all the more emphasized when celebrated in its original setting. In many kibbutzim, a custom has evolved of going "out into the fields" during the feast of Pentacost ('Shavout'), symbolically gathering the first fruits of the crops. The bustan can provide the agricultural setting of the traditional celebration in urban environments as well.

Celebration of festivals in their agricultural setting, brings up another issue of great importance to Israeli society. The idea of the renewed bond between the people and the land, lies at the basis of the establishment of the country. Biblical images such as "every man under his vine and his fig tree" and "I went down to the orchard of nuts" are part of the common cultural background which unifies the people. Places which evoke such memories can create a continuing awareness of the historic connection to the land. Plants such as grape, fig, pomegranate, olive, and palm, which are from the traditional "seven species" that Israel is

blessed with, are to be used deliberately in the bustan if this connection is to be emphasized.

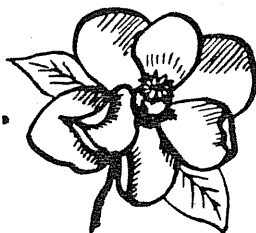
Of similar importance to Israeli society is the idea of "making the desert bloom". Places that have been deserted and neglected for generations, have been turned into "flourishing gardens" by Israeli farmers. The "desert bustan" can be a wonderful model for creating gardens in the desert, with minimum use of irrigation and maximum use of rainwater. These places can come close to the Biblical vision of: "The desert shall rejoice and blossom" (35:1)

A question I often ponder, is whether the integration of the bustan with sacred places is appropriate today. Although it has various religious connotations, the bustan was never a sacred place in Jewish traditions. As explained before, the Jews were reluctant to use plants in places of worship because of heathen customs. However, sacred places of burial were surrounded with gardens and trees throughout Jewish history. It is interesting to note that this traditional connection between graves and gardens has been carried by the Jews to their places of exile. The Jewish cemetery in Vienna in the 14th century was called "The Garden of the Jews." (27) The Jewish school of gardening and planting in Budapest, Mikeje, which operated in the beginning of the 20th century, was also connected to the Jewish cemetery.

Is it possible then to renew these traditional connections in a modern context? Instead of the hardy, low maintenance plants employed today in cemeteries, fruit gardens would surround the graves, tended and cared for by the families, in memory of their beloved ones.

Recently, war monuments and memorials have been replaced by parks and gardens where families can gather and socialize while commemorating their dead. Can these places be planted in the image of the bustan where the flowers and fruits will be a living symbol of the continuity of life and hope for the future?

Obviously, all those symbols grow far beyond the intimate, modest character of the bustan. It cannot and should not represent them all to all the people. However, at the very least and this is far from insignificant, it is still a place of beauty and quiet, of fragrance and fruits - a piece of nature, a hint of Eden.



Thoughts Of The Future With The Bustan In Mind

". . . Marco Polo imagined himself interrupted with a question such as: you advance always with your head turned back? or: is what you see always behind you? or rather: does your journey take place only in the past?

. . . All this so that Marco Polo can explain that what he sought was always something lying ahead, and even if it was a matter of the past it was a past that changed gradually as he advanced in his journey."

(Invisible Cities, Italo Calvino)

While doing this work, the relevancy of pondering the past was often questioned by me and others. In this world of spaceships and computers, of fast food and television, can we really restore values of the past? Isn't it mere nostalgia to imagine places of the past to be better than ours? Moreover, can we extract from the past only what is relevant and appealing to us, leaving out the cultural context which generated it? Can the bustan, as a part of a whole intricate way of life that has almost vanished, be of significance for us today?

In its simple house garden form, the bustan still functions in many places the same way it has for centuries - as a place for growing food, for household work, for social gathering, and for relaxation. However, the bustan's value today lies not in what it represented to ancient cultures, but in the answers it may provide for contemporary problems, and the opportunities it presents to respond to our own quests.

The bustan, I believe, has some qualities that we lack in our modern gardens. Places like the bustan lend themselves easily to spontaneous expressions of culture and folk art, and can be a window for local traditions. The 'orchard of nuts' can evoke images and memories, can make people hum a song, remember a place they have never been to, feel part of a place, of a culture, of history. Its protected, secluded environment invites one to slow down, relax, inhale the fragrant air. In a world of

rush, it is a place of quiet. In times of instant and obvious pleasures, it is a refuge for the imagination, a corner of mystery.

Some of its more practical aspects should not be overlooked. Appropriate plant selection, ecological balance, adjustment to climate and topography, and economical use of resources are valuable aspects of the bustan that are not always present in modern gardens.

The question then, as I see it, is not whether the bustan should be incorporated into contemporary designs, but how we can do it without losing its special essence. How can we design intimate places to be uniquely experienced in an era of mass recreation? Can a productive garden exist in a commonly owned space without being vandalized or neglected? How will the car, the tractor, the barbecue effect the bustan? These questions, and others, have been partially addressed throughout the work. I have proposed several conceptual plans - partially based on existing examples, that envision possible adaptations of the bustan in public parks, neighborhoods, cities, and recreation areas. The proposed bustan is not like the traditional garden. It is more of a revised version or versions, a 'new bustan' which combines, I believe, the qualities of the past with the needs of the present.

Much remains open as a challenge for future designers. The elaboration of these ideas and their application to specific places is yet to be done. Hopefully, this work is part of the emergence of the 'new bustan' in people's minds and in the landscape.

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FOOTNOTES

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(* All the drawings which are not mentioned here were drawn by me.)

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