

Historic Gardens – Patterns of Nature and Culture

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Abstract

Historically, the way Landscape and the gardens were treated, depended upon the attitude and view of the people towards nature. Landscape and gardens have been viewed and designed differently in the Eastern and Western cultures. Nature can be dominated and controlled and made to serve humans is the view generally attributed to the west. Harmony and co-existence with nature and the action taken not to radically change nature but to live along side it, is the view prevalent in the East. Reverence or respect for nature is the view in which nature is seen to be endowed with extraordinary powers. Indian gardens are more closely aligned to the later view. Landscape or gardens as symbolic spaces can represent culturally constructed desired or imagined scenario representing success, power or subjugation.

Keywords: Formal gardens, Informal gardens, heritage, paradise, renaissance, contemplation

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INTRODUCTION

The wonderful saying by Ian Mcharg^[1] goes like this “*There are many people who look to nature for meaning and order, peace and tranquility, introspection and stimulus. Many more look to nature as an activity in the outdoor, a road to restoration and health. The best symbol of peace might better be the garden than dove.....*”. The faith and expectations from the gardens and natural environment are very well understood. Since the gardens portray mankind’s attitude towards nature, this resulted in multiple styles of gardens adapted by various cultural groups/races across the globe. There is a vast deviation of informal gardens; which is in peaceful coexistence with the nature (Oriental culture) from the formal gardens; which are order and authority imposing (Occidental culture).

The gardens provided an inseparable links to the history of hunting and agriculture;

and have evolved and co-existed since the dawn of human civilization. Historians believe that the first gardening, in the form of an enclosure was a type of barrier for the purpose of keeping out animals and invaders. Gardens reflect in many ways a culture’s knowledge of the natural world and its perception by the people within it. They were molded with the passage of time with ever changing needs of the people. In many cultures, landscapes are impregnated with deep symbolic meaning having been revered since the earliest times. In Indian gardens; certain trees are considered to be sacred and holy^[2]. Various species such as *Saraca indica* (Ashoka), *Anthocephalous* (Kadam) and *Ficus species* are worshiped in the various parts across the country.

Garden-making and design is considered to be a key precursor to landscape architecture; had its beginning in West Asia and it eventually spread westwards^[3].

Vitruvius, a Roman Engineer and an Author of oldest surviving design manual of 27 BC “De architectura libri decem” addressed Design theory, Landscape Architecture and Engineering; asserted that *firmitas* (durability), *utilitas* (utility) and *venustas* (beauty) and considered them crucial for the quality of Landscape Design.

FORMAL AND INFORMAL GARDENS

Formal gardens are precise and often arranged symmetrically around a central axis; which divides the garden in the middle. The central path may have paths crossing at it at right angles, dividing the garden into rectangles or squares. A garden of formal design assumes geometric forms, such as straight line, circle, triangle, square, rectangle or an oval. Formal designs are popular for their economy of space. Hedges are neatly clipped to maintain a uniform height. The beauty of symmetry becomes evident in the well balanced form of a formal garden. Water is essentially a part of the formal garden-it creates an atmosphere of tranquility and helps to add interest with its reflective properties.

The following are the main characteristics of the formal gardens.

1. Confront nature
2. Presents nature in an artificial order
3. Have precise geometry
4. Restore balance and order by axial and symmetrical arrangement.

Informal Gardens are characterized by flowing curves, non-symmetrical arrangements of features and spaces. The plants are allowed to grow into their natural shapes. This style of garden may employ geometry in the absence of rigid lines. The underlying framework is almost entirely disguised by planting and the garden looks as; it has grown up naturally. Efforts are made to produce a natural effect, a skillful departure from

artificiality. Spaciousness is absolutely necessary for informal gardens. Trees and flowing waters are its main characteristics. Evergreen trees, shrubs and foliage plants are its dominant features. The Japanese styles of gardens include ponds, lakes, islets, bridges, stones, pebbles etc. Aquatic plants grown near the edges of the water lend it a natural beauty. The important characteristics of the informal gardens are-

1. Acceptance of nature
2. Presents nature in natural order
3. Tribute to nature
4. Restore balance and order by asymmetrical arrangement of elements.

The following formal and informal gardens existed in the centuries written against them-

1. Egyptian gardens – 3300–500 BCE
2. Persian gardens – 600 BCE
3. Greek and Roman gardens – 300–500 CE
4. Chinese and Japanese gardens – 7th Century CE
5. Indian gardens – 1500 BCE onwards
6. Mughal gardens – 16th–17th Century CE
7. Italian gardens – 15th Century CE
8. French gardens – End of the 16th Century CE
9. English gardens – 18th Century CE
10. Public Parks – 19th Century CE.

Egyptian Gardens

Ancient Egypt represented an empire with immense agricultural wealth, harnessing river Nile’s annual flood by ingenious and sophisticated irrigational practices. The gardens showed simple square or rectangular walled enclosures of modest scale having various kinds of trees with an ornamental pool at the centre as a water source. The form of the gardens was like an oasis; Egypt being at the edge of a desert. Like all elements of ancient Egyptian society, the gardens were full of religious symbolism. These gardens were the earliest example of formal arrangement.

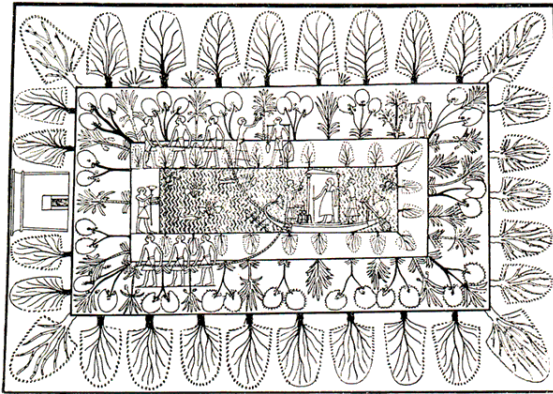


Fig. 1: Schematic Diagram of a Typical Ancient Egyptian Garden.

Persian Gardens

Persian gardens were the reactions to the existing harsh, hot and dry climate, lack of water with largely elevated and levelled barren planes. In reaction to the hostile vastness of the desert, the gardens thus were enclosed; order and tranquillity were the predominant features. The gardens were said to be inspired by the concept of oasis and depended upon an elaborate system of underground canals to reduce down the evaporation. Presence of water, coolness and shade was in reaction to the harsh sun and heat. The garden was usually divided into four or more parts containing flowering and fruit plants. More attention was paid to maintain the symmetry. These gardens were considered to be the marvels of the human genius. The Persian garden, associated with the idea of earthly Paradise, formed a stark contrast to its desert setting.

The planted fruit trees such as orange, lemon, pomegranate, peach, plum, apricot and fig etc. represented symbol of life while the cypress symbolized death and eternity. The Hanging Gardens of Babylon, considered as one of the original Seven Wonders of the World, were built by King Nebuchadnezzar II; who ruled the city for 43 years starting from 605 BCE. The gardens were built to cheer up Nebuchadnezzar's homesick wife Amyitis, who longed for the trees and fragrant

plants of her homeland Persia. The king decided to recreate her homeland by erecting artificial terraced gardens with sound of fountains and birds' voices.

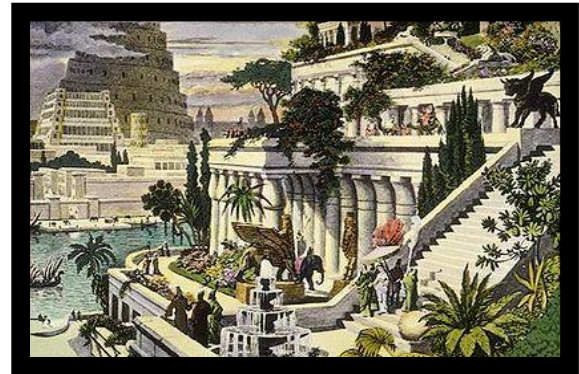


Fig. 2: 16th Century Dutch artist Martin Heemskerck's painting of Hanging Gardens of Babylon.

Greek and Roman Gardens

There is no evidence for garden art in ancient Greece until it achieved its cultural Zenith. The first park of Greece dedicated to the Goddess of Hunting, Diana was laid out by Xenophon (434–356 BCE), the Historian and soldier on his return from a Persian expedition. In this park, the fruit trees were symmetrically planned around the temple, an inspiration from the Persian gardens. The Classical Greek heritage included (5th–4th Century BCE) the Acropolis; an Architectural compositions of important buildings sited to fully exploit the shape of the land. These architectural master pieces occupy the flat top of a steep sided hill, dominating the city landscape^[4].



Fig. 3: Garden Scene Imperial Rome in Ist Century BC to Ist Century AD Pompeii House of the Golden Bracelet.

There is a reference of the olive and oak trees at Acropolis. The site offered the panoramic views of the surrounding countryside. The open air theatre, which was an integral part of the Greek theatrical tradition, was carefully located on valley slopes, so that their profile synchronizes with the existing topography. This period gave rise to a regular rectilinear Grid iron pattern (one of the earliest form of town planning to the western world).

Gardens in Imperial Rome (1st to 3rd century BCE) were designed as retreats for leisure and were often the part of farms owned by the aristocracy. Landscape communicated power of cultivation over the natural environment.

Roman landscape frescoes provided breathtaking views into thick forests, quiet gardens, and bustling cities. Garden scenes are vividly illustrated in the wall Murals at Pompeii (2nd century BCE). By analyzing the iconography, style, and context of these landscape paintings, it is clear that landscape imagery was used to express the power of imperial and elite patrons.

Chinese and Japanese Gardens

For centuries, the Chinese have sought inspiration and self-knowledge in nature. The design of Chinese gardens was to provide a spiritual utopia for one to connect with nature, to come back to one's inner heart, to come back to ancient idealism. Chinese gardens provided spiritual shelter; where the people could live close to nature. It was seeking an escape from the frustration and disappointment from the political problems in China. Man's relationship with gardens is most continuously celebrated in these gardens. Chinese believed that "The wise find joy in water" and "The benevolent find joy in mountains". Thus, the Chinese word for landscape 'Shanshui' means hills and waters.



Fig. 4: YuYan Garden, a Prominent Example of Informal Gardens, Shanghai, China.

According to the concept of Yin and Yang, the two opposite forces governing all life with water representing the feminine Yin, in contrast to the masculine Yang represented by the rocks. Trees, shrubs and herbaceous plants were important in gardens. Bamboo too became famous on account of its beauty and elastic stem in Chinese gardens. Thus, gardening became an effort to bring mountains lakes and trees at one place to suggest an image of nature. Japanese gardens were the product of religious and philosophic worship of nature. The essence of the gardens was living close to nature. The core value of gardening has been largely shaped by Chinese culture and tradition. These gardens were also based on their idea of heaven. More emphasis is placed on natural elements such as simple path, a group of rocks, stepping stones, streams, waterfalls, bridges, stone lanterns, and so on.



Fig. 5: Katsura Imperial Villa, Kyoto, Japan.

As it was observed by the Japanese that perfect symmetry never appear in nature, the garden elements are placed non-axially and asymmetrically with infinite care to symbolize and suggest, to conceal and reveal; and to see through and beyond. The gardens have an influence of the sequential experience, anticipation and visual surprise in every movement. Shintoism is not so much about the worshiping of trees and rocks, but the veneration of the spirit that created those objects.

Indian Gardens

Indian Gardens are guided by the principal that everything in the universe is sacred. In Indus valley civilization there are many sites; there is a mention of water channel, gardens, public bath and artificial pool etc. Irrigation systems were also developed and were in use. Large gardens, artificial mountains and reservoirs have been mentioned in some of the old epics of Ramayana and Mahabharata.

In *Ashok Vana*, there has been a description of the design elements such as Boundary wall, Trees, Shrubs, Flowering plants, Pathways, Pools, Vine Covered Pergola, Building in shape of caves, Fountains, Running Water channels, Plinth under trees.

It gives the account of the trees such as *Saraca indica* (Sita Ashoka), *Terminalia arjuna* (Arjuna), *Ficus benghalensis* (Indian banyan), *Ficus religiosa* (Pipal), *Michelia champaka* (Champa), *Butea monosperma* (Palasa), *Casia fistula* (Amaltas), *Dalbergia sissoo* (Sheesham), *Plumeria* (Champa) and *Cordia dichotoma* (Lasoda). The association of Lord Krishna with the Kadamba tree (*Anthocephalus indicus*) is well known. A description of the layout of gardens, parks and artificial lakes in the city of Indraprastha is given in the Sabha-Parva.



Fig. 6: Sita at Ashokavana under Ashoka tree (*Saraca indica*) in Epic Ramayana.

Plants are particularly held in high regard. The Aryans recognized the value of certain trees such as *Ficus Religiosa* (Peepal), *Ficus Benghalensis* (Banyan), and *Saraca Indica* (Ashok). These trees were planted near temples, ashrams, cremation grounds etc. Planting of trees was done for religious, sacred, economic, utilitarian and for aesthetic purposes. Ancient Vedas are full of description of glory of trees. The planting of roadside avenue trees (*Margeshu vriksha*) was an important contribution of the king Ashoka (233 BCE) *Shudraka* has also given an account of gardens and flowers in the *Mrichhakatikam* (100 BCE).

In the 6–7th century Bana, a writer, gave many picturesque accounts of the garden, rockeries, artificial water courses, ever revolving peacock fountains etc. In 12th–13th century Sarangdhar wrote in his book *Saranghar Paddati* about various nourishing plants and trees.

In Indian gardens, planting of trees was done as per the directions:

1. Banyan Tree (*Ficus bengalensis*) – Planted in the East direction.
2. Ubambara Tree (*Ficus glomerata*) – Planted in the South direction.
3. Pipal Tree (*Ficus religiosa*) – Planted in West direction.
4. Plaksha Tree (*Ficus lacor*) – Planted in the North.

There is a mention of trees and gardens in early epics; *Kalpka vriksha*-tree which fulfilled each and every wish. *Kubera* Garden-Possess trees which flowered throughout the year. *Alaka* Garden-mentioned in the *Kalidas Meghdoota*^[5]. Different types of gardens included-

1. *Greha-Arama* or *Nishkuta* place of rest near the house.
2. *Arama* or *Upavana*- Used in city and town
3. *Virkshacatika*- for ministers and noblemen.
4. *Udyana* or *Akreeda*- public parks.
5. *Viswavatika* - king's garden for public use on certain occasions.
6. *Pramadavanam*- ladies gardens.

These gardens developed as a basic need for shelter. Classification of open spaces is in the form of Forests, Gardens, and Mountains and Caves. *Kunds* and *Ghats* symbolized rebirth.

The descending to earth is considered analogous to submission of earth to water. *Ghats* are water land interface design, used by Indians for ages e.g., Varanasi *Ghats* Terraced buildings and landings lead down to the River Ganges in Varanasi, a city in Uttar Pradesh. Many Hindus believe that immersion in the Ganges cleanses them of sin.

Formal gardens were designed both in hillside and plains. Trees were planted along the road side and were associated with prosperity, love and source of inspiration, treatment of open spaces, and treatment of land in form of landscape. The presence of sacred groves (thick belt of trees) was meant for meditation, moksha etc., and were also given religious and spiritual importance.

There was an inclusion of the following types of forests. *Srivan*- provided prosperity, *Tapovan*- place for meditation of sages and *Mahavan*- great natural forests.

Mughal Gardens

The Mughal gardens were inspired by the Persian gardens of the Islamic world. The concept of setting monumental tombs within a large enclosed *Char-Bagh* (The rectangular garden of paradise) was an important contribution of Mughals to garden architecture, influenced by Persian gardens. Islamic gardens were symbolic of paradise.

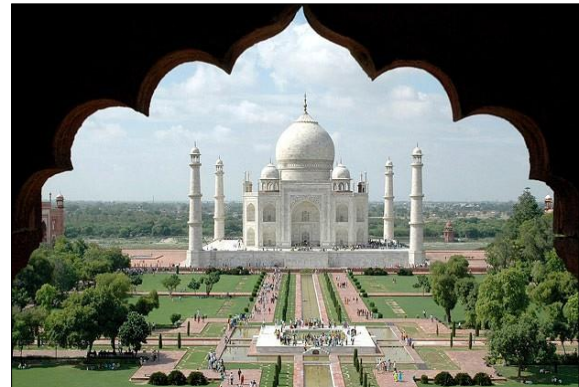


Fig. 7: Taj Mahal, Agra.

The symbol of four rivers, which branch out from a common source or centre in the direction of 4 cardinal points, stand for fertility and timelessness. This image embodies in all the Islamic structures are a courtyard or a pleasure garden, the four water channels not only symbolize the four rivers of life, but to a Muslim, their intersection also represents the meeting of man and god.

1. A Square represents earth and the material things.
2. Alternate cypress and fruit trees represent immortality and renewal of life.
3. 8 divisions of garden represent 8 chapters of Quran.
4. 12 divisions of garden represent 12 zodiac signs.
5. Presence of water, coolness and shade was in reaction to the harsh sun and heat.
6. In reaction to the hostile vastness of the desert, order and tranquillity were the predominant features.



Fig. 8: Nishat Bagh, Kashmir.

The Mughal gardens of Kashmir are perhaps the finest existing examples of the adaptation of established garden tradition to new site conditions. The foremost attribute of the Kashmir pleasure gardens is its Sitting; these gardens located in the site already having a 'geographical identity'. These gardens are located at the foothills and exude sensitivity towards the natural landform by utilizing terraces and providing views in and around the landscape.

Italian Gardens

The Italian gardens of the Renaissance were believed to be an important period in the garden history of the world. It was a new style of garden, emerged in the late fifteenth century; which was inspired by classical ideals of order, beauty and contemplation.

The Italian gardens developed at a time when Europe was seeing a new resurgence, 'the Renaissance'. Italian gardens were characterized by the abundance of architectural features or built features in the garden such as; Staircases, balustrades, cascades, pavilions and pavements. Even the cypress avenues are the imitations of colonnades^[6].



Fig. 9: Villa Garzoni, Collodi, Tuscany, Italy.

Symmetry was paramount in Italian gardens. Flower beds or parterres were shaped geometrically in squares, rectangles or triangles eschewing the curves and sweeps; common to English borders. Many Italian gardens were on hillsides, they were laid out on several levels or terraces, offering places to stand and enjoy the surrounding view. Order and balance were the design goals, illustrating man's power over nature.

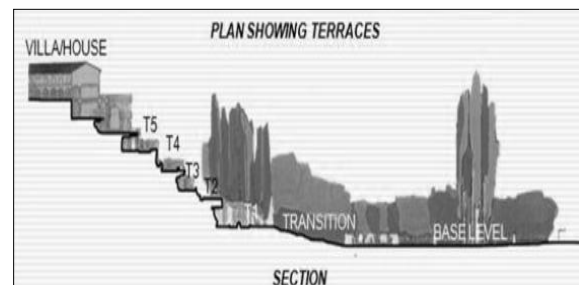


Fig 10: Representation of Italian Gardens.

The villa formed the principal focus of the spatial organization and the principal axis was derived from it. Fountains, stairs, and water channels accentuated this focus. The other axes were parallel to the main one and culminated at major architectural features. Terraces were created so that one climbs gently but steadily up through the garden and then reaching the villa discovers all the glories of the view. Each terrace was treated differently to get various views at different levels.

French Gardens

Absolute command over nature was the underlying philosophy of French gardens. The French regarded landscape in its natural state as barbarian; hence didn't hesitate to remake nature and transform its trees and shrubs into manmade creations. French garden reflect the wealth, power and rigid social structure of France. The basic quality of French classic gardens is that it bends the laws of nature to the human intelligence.

The great gardens of 17th Century at Versailles and Vaux-le- Vicomte in France planned by the renowned garden Architect, Andre le Notre, were having strong central axial layout radiating outwards from the palace or Chateau, so that the garden because of its immense size, seemed to stretch endlessly to the horizon. The central axis gave symmetry and mathematical proportions, with the surrounding forest forming a strong enclosure to the garden.



Fig. 11: Garden of Versailles.

Views out were limited by changing the scale of the trees of the designed landscape of the surroundings. Eye movement was restricted by the vegetation. The irregular growth of the trees and bushes were trimmed into geometrical and symmetrical shapes. This was the starting point of the Topiary.



Fig. 12: Chateau de Vaux le Vicomte.

Sculpture and fountains were used as a work of art to provide rhythm and punctuate space. Parterres on both the sides of the Castle were decked with fountains^[7]. The forest formed an important part of the garden and was subdivided by the central main axis. Dark massed woodlands formed a strong contrast to the central open space with strong central axis layout.

English Gardens

Before 18th century, the English didn't have a national style of gardening. English gardens tended to follow French, often employing French designers. English gardens were formal like, all European gardens had been for over a thousand years. Most of the paths were straight, although some of the woodland paths did wind in a more "natural" manner. There was an emphasis on English grass lawns, gravel walks, use of perennial borders, hedges and gates, benches, use of living trees and shrubs into artificial and decorative shapes. The change in level by terracing and formal water features was also included into the gardens^[8].



Fig. 13: The English Gardens of 18th Century.

The natural space forming in the gardens and the liberation of nature from the restrictions of baroque architectural forms were the ideas of philosophers, poets, artists and scientists of the early 18th century.

The English garden style that emerged in England in the early 18th century, and spread across Europe was a product of the Romantic Movement. Its form was based on direct observation of the nature and principles of paintings and poetries.

Surprise, variety and concealment became the goal and art of landscape. This kind of landscape created fictional scenery with imaginative and nostalgic spaces and hence was called “picturesque Landscape”.

The opening up of Europe to the rest of the world, the grand tours through Alps to Italy made them in contact with rugged picturesque scenery, craggy mountains, rivers, pastoral plains, ruined castles, monuments, lakes and wind-blown trees. All of these found expression in the canvas of Nicholas, Poussin, Salvator Rosa. Finally, it was realized that nature was not subservient to man but a friendly and equal partner who would provide inexhaustible interest, refreshment and moral uplift.

In Milton’s Paradise Lost, he described the Paradise (Elysium) not as a formal garden but as a scene of the most natural simplicity. As per Switzer, “the adjacent country should be laid open to the view” and the eye should not be imprisoned by the walls or other structures Alexander Pope was essentially different from the bulldozer attitude. The concept conceived for these gardens was that “Beauties should not be forced into place but must result from it.”

The overall spatial organization of 18th Century English gardens was not rigid. It consisted of a few foci in the form of built

structures like palace, grottos, pavilions acted as foci which were visually linked but not physically. Hence, the physical axis was replaced by the visual axis. The positioning of the built structures usually accentuated the visual composition of the landform at different settings to maintain the interest of the user.

English gardens had a major influence on the form of the public parks and gardens which appeared around the world in the 19th Century.

Emergence of the Concept of Public Parks in the 19th Century

The 19th Century had colonialism and industrial revolution at its peak. The industrial revolution had cleared away nearly all the old gardens. The two principles of historical revivalism in design and exotism in planting reached the greatest height and this led to artificial replication of natural features.

In 1843, a park designed by Sir Joseph Paxton, a combined project for suburb and open space owned by the public was laid at Birkenhead. His concept was to design a Park based on natural features such as open meadows and natural woodlands.

A separate perimeter road was included for traffic, allowing the park interior to be enjoyed by pedestrians. Central Park, New York was the first public park in the United States as a result of the design competition won by Fredrick Law Olmsted and his partner Calvert Vaux in 1858. The Central park was a dominant romantic idiom, of the mid-19th century.

This was to be a heaven of repose, relaxation, and recreation for the masses of ordinary people who were trapped in the Manhattan street scrapes.



Fig. 14: Aerial View of Central Park, New York.

The following Olmstedian Principles were used for designing the Central park in Manhattan.

1. Preserve the natural scenery and if necessary restore and emphasize it.
2. Avoid all formal designs except in very limited areas.
3. Keep open lawns and meadows in large open areas.
4. Use native trees and shrubs especially in heavy border plantings.
5. Provide circulation by means of paths and roads in wide sweeping curves.
6. Place the principal road so that it will approximately circumscribe the whole area.

'The triumph of Vaux and Olmsted's design had been to turn a swampy and rocky 'wasteland' into a beautifully composed pastoral landscape.'

CONCLUSION

In the end it is concluded that Historical gardens explicitly and implicitly express the man environment relationship and are representative of cultural continuum. They are our valuable heritage; hence the conservation of these holds paramount importance for preserving cultural continuity.

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