
The Garden of Versailles

The historic garden at the Palace of Versailles owes its form to the work of the gardener, Andre le Notre and the desires of his employer Louis XIV of France. This creation of this huge garden, which occupies some 800 ha is a fascinating story from French history. The early garden was created during the reign of Louis XIII, and was a relatively simple 'small' garden. His son, Louis XIV acceded to the throne at the age of five, but only took power in his early twenties. His Minister of Finance, Nicolas Fouquet, honoured this event with a sumptuous party at Fouquet's sumptuous chateau and magnificent gardens at Vaux le Vicomte. The chateau and grounds were on a scale unheard of at the time and the gardens were exquisitely designed and decorated with magnificent statues. The king was not only indignant about the degree of extravagance, no doubt at the expense of the country's coffers, but he was also at a point where he was ready to establish an impression of his considerable power and establish his supremacy. Less than a month after the party, Fouquet was charged with embezzlement and thrown into prison where he remained for the rest of his life.

The figures central to the design of Vaux le Vicomte were taken to the young king, Louis XIV's estate at Versailles. The most significant of these in the garden redevelopment was Fouquet's gardener, Andre le Notre, who developed the garden's present structure. Changes over the years since have not altered his original design a great deal and his creativity and foresight pervades the magnificent garden that we see today.

Le Notre, as son of the head gardener at the Tuileries grew up in elite company and was an intelligent man, with outstanding creative skills. His early years were spent close to the workshops of the Louvre and he was influenced, no doubt, by artists, sculptors, scientists and mathematicians in his immediate environment. His education would have been strongly influenced by the phase of intense intellectual learning that was sweeping through Europe, and his formal education would have included geometry, arts and practical science. Furthermore, he was trained as a painter, learning as part of this education, theories of perspective and its effect on views, skills which he used to great effect in his garden design (Lablaude, 1995).

Louis XIV, an artistic young man, became known as The Sun King and this symbolic persona which he created for himself was significant in his demands for a garden which continued the theme. The garden in many ways became a backdrop for his creation of the Sun King reality. The picture to the right shows the young king dressed for a ballet performance in which he played the sun.



Mathematics played a very important role in the development of this garden, some of which can be seen in this Google Earth view of the Palace of Versailles. In discussing these aspects, I have divided them up into ##### main areas.



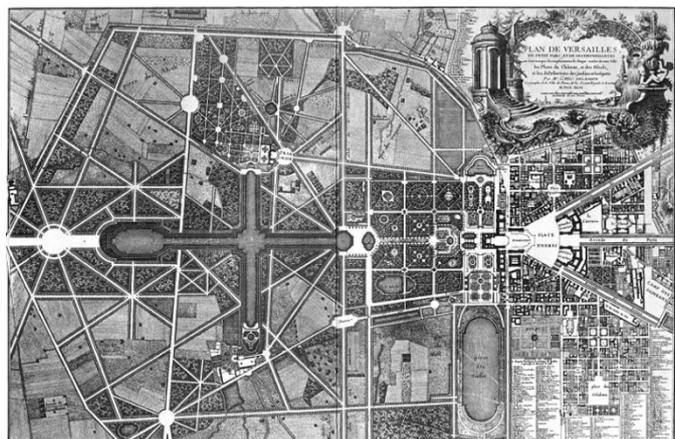
Geometry

The geometry of the gardens is very evident when we view the garden from above, as in the previous photograph, or observe the plans of the garden some of which have survived from almost half a century since its first creation. This garden is structured as a strongly geometric design which we can observe in an overview of the plan. Most obvious is the orthogonal crucifix form of the canal, with its associated strong major axes of symmetry, and the numerous intersecting lines created by the arrangements of roads, paths and routes that criss-cross the garden.



Plan of Versailles,
by Delagrive
(1689-1757), 1746
(right)

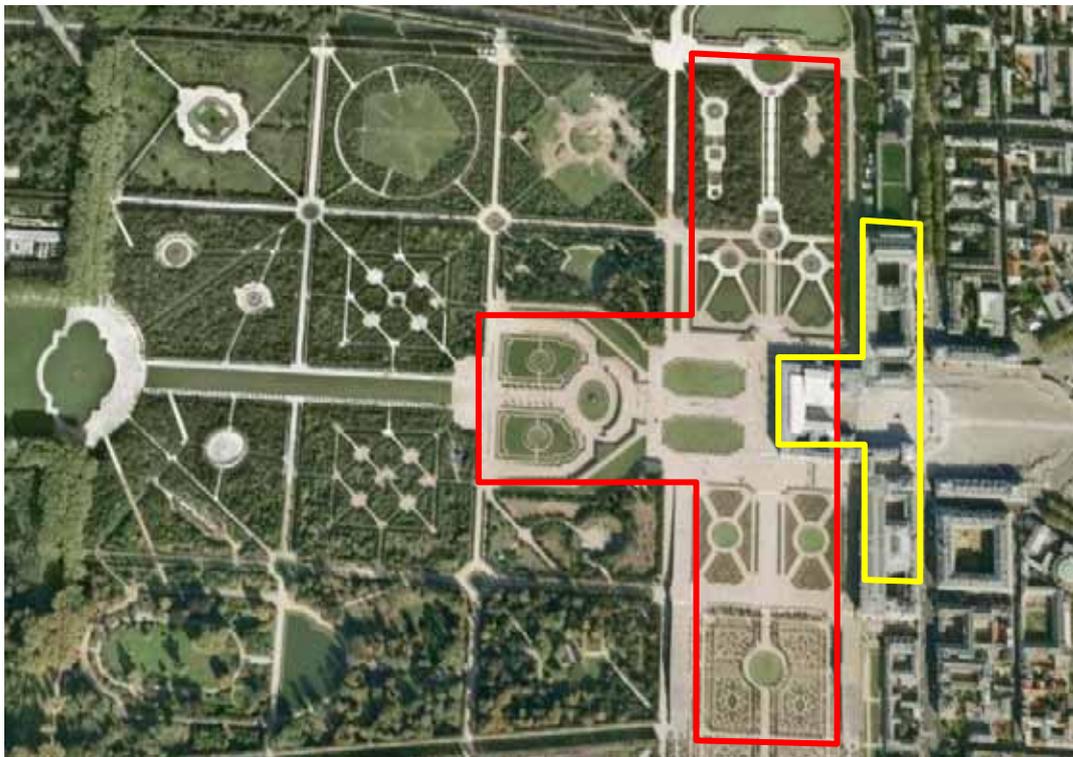
Plan of Versailles by Andre Notre,
1660 (left)



Closer examination reveals geometric forms, star shapes, various polygons and circles creating a well-defined structure which creates avenues of interest as well as vistas and views through to beautiful statues and water features. Areas closer to the palace are created in the formal manner which had swept throughout the design of gardens during the Renaissance period, particularly in Italy and which was later taken and recreated in the style unique to the French.

The Formal Gardens Adjacent to the Palace

The most obviously formal area in the gardens at the Palace of Versailles is the area adjacent to the palace itself. The geometric structure of this area is very explicit, with the first section comprising formally planted gardens and parterres surrounding water features, laid out in an overall 'T' shape which mirrors the 'T' shape layout of the palace.



Two curvilinear rectangular pools dominate the centre part of the T, leading the eye down the expansive walkway and through to the canal reaching into the distance. On both sides of the T are areas with strictly formal circular pools laid out in a rectangular grid, with lawned areas surrounding each.

On the southern side of the T, the first two formal beds surrounding two circular pools on the south side are parterres, with immaculately groomed plants forming the elegant formal pattern garden. One of these is shown below.



Set on a lower level than these two parterres, the Parterre Orangerie is a large garden which consists of 1000's of regimentally placed tropical trees surrounding six more parterres. These were in pots to allow them to be placed indoors for during colder periods. The photo on the right shows more detail of some of the trees in their planter boxes, and gives one an idea of the huge number of trees that are used in this area. It would seem from doing a rough estimate based on photographs, that the number of specimens, which include palms, citrus, pomegranates and conifers must number more than 1000. The photo on the left (below) gives an idea of the extent of this part of the Orangerie.



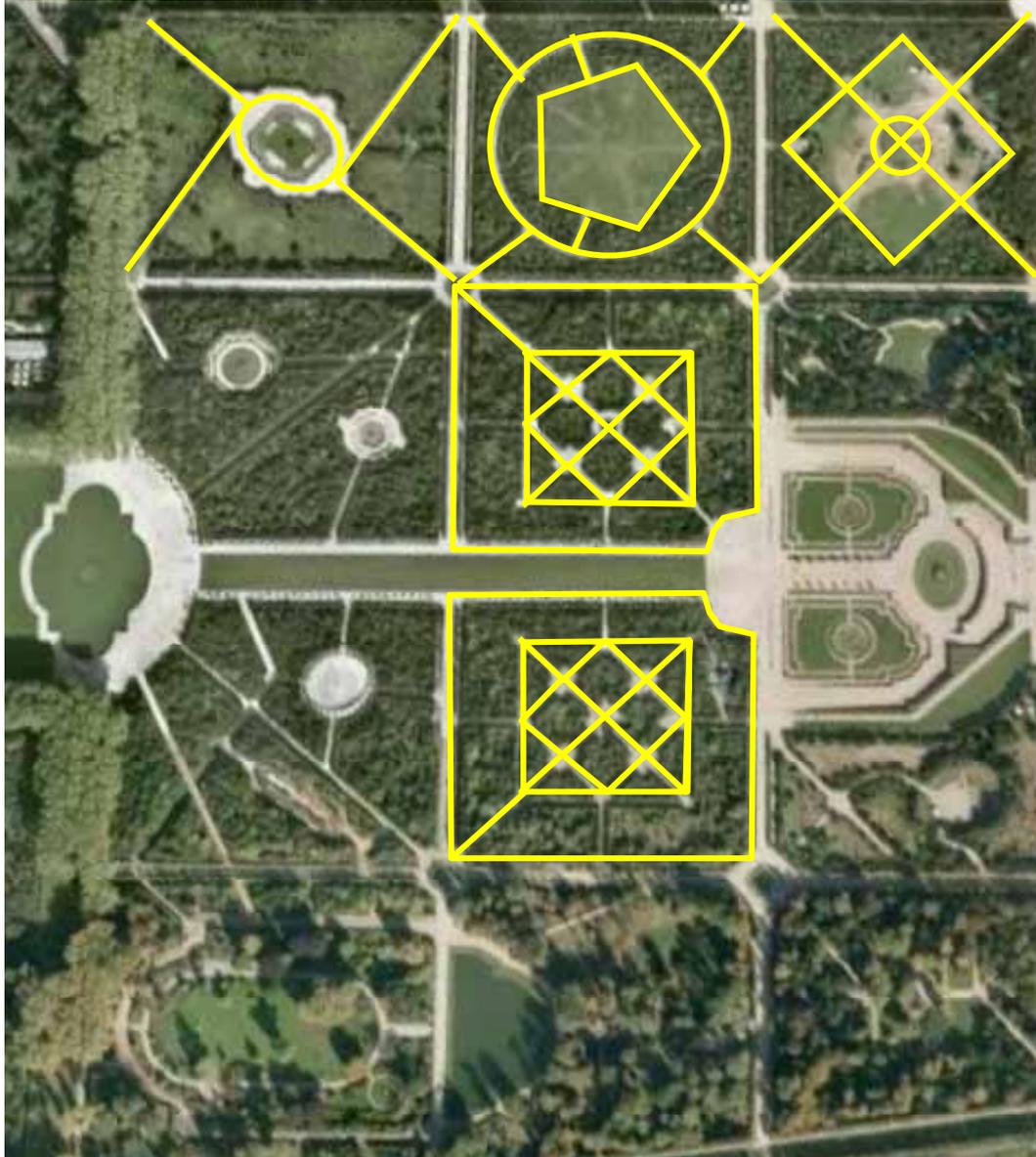
When viewed from above, particularly from the upper levels of the palace, these decorative parterres would give the effect of viewing a lush green tapestry, framed by solid bands of colour in the form of paths, with patterns created from areas of solid green foliage and further decorated with threads of colour, in the form of flowers and fruit.

Beyond the Orangerie, one looks across to a large expanse of water, in the form of a large rectangular pond, with a semicircular area at the closest end.

On the northern side of the T shape are two more rectangular parterres. These are more simple in design and also surround circular pools, which in this case are not centrally placed. Beyond these are two bosquets, or patterned tree plantings, and one looks between the trees down a walkway to the Bassins de Neptune.

The Geometry of the Bosquets

When viewed aerially, we see a great deal more geometry in the next section of the garden, which consists of ten bosquets, or wooded areas.



The aerial geometry of some of these is shown in the overlay above.

The two central bosquets are strictly symmetrical along the main east west axis and consist of squares within squares in the same orientation, with the midpoints of the innermost squares joined to form another square. Another consists of a pentagon shape with one axis of symmetry in the overall bosquet. There is also an ellipse with paths leading from either end, with the overall pattern having rotational symmetry of 180° .

The Axes

There are two major axes which dissect the Garden at Versailles – these can be seen running roughly east-west and north south and are emphasized by two major thoroughfares through the garden and the crucifix canal.



The axis running from east to west, shown in red in the diagram above, is particularly significant in the way that it follows the path of the sun, so important to the Louis XIV, the Sun King. The sun tracked overhead from east to west, following this axis which dominates the view from the palace to the countryside beyond. This east west is also of practical importance in the part it plays in emphasizing the view and the route through the garden. This view is shown in the photograph (right). It is interesting to note that this axis in the time of Louis XIV was ten km in length. The creation of the garden necessitated the eviction of many villagers and farmers to provide the land that was need.

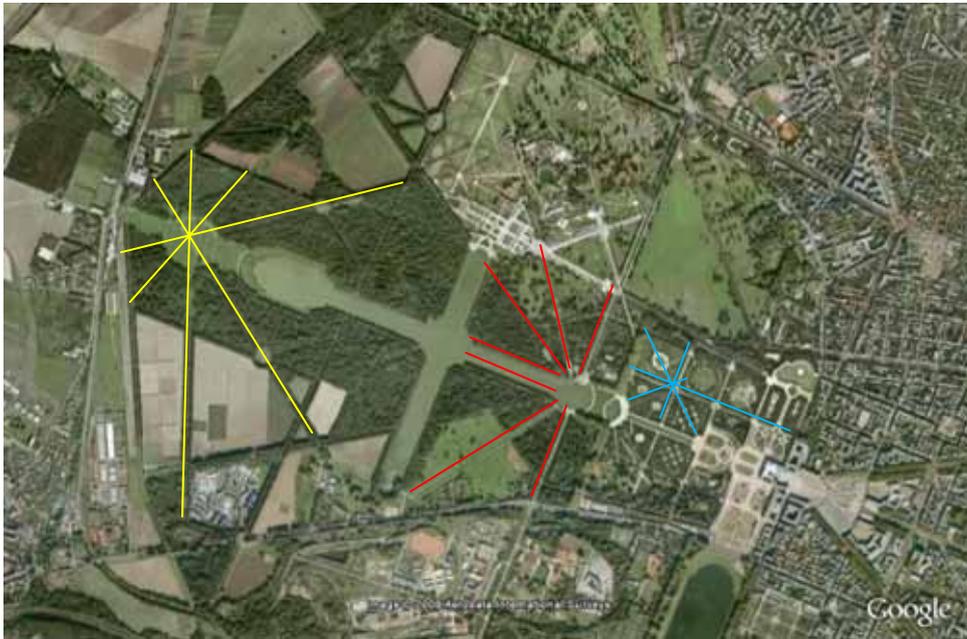


The north south axis, shown in yellow on the aerial view, is not evident from the palace and one only becomes aware of its existence after walking some distance down the garden. The two canals roughly bisect one another if one excludes the pools at the ends of the east west axis. The large pool at the western end is of such magnitude that when seen from above the axes appear like a large cross. Interestingly this crucifix form is not a feature which is noticeable when experiencing the garden.

The lines that criss-cross the garden are important not only in allowing movement around the garden, but also in creating vistas and leading the eye from one place to yet another temptation. Two major star-like routes are of importance in creating the symmetrical arrangement of the garden along the east west axis. From the eastern end of the canal crucifix,

routes radiate out giving access to the important area of the Trianon and on the other side to the Etoile Royale and establishing the importance of this central area of the garden.

Free access to the gardens, available almost all year round, is from the western end, with a series of roads radiating outwards from the central circular area. The main route leads the eye directly ahead to the canal and the view up towards the impressive palace, and again the two alternate main routes lead to the Trianon, and to the Etoile Royale.



Within the bosquets below the palace, similar arrangements of paths within each bosquet and connecting the bosquets themselves allow interesting views through leading the eye and tempting the visitor to move on to examine another sculpture or magnificent water feature. The creation of these strong vistas and the ability to view features from more than one point in the garden, provides a strong thread which unifies the garden despite its huge scale.

Anamorphosis

Anamorphosis is the process whereby images are created in such a way that they appear different when observed in some particular way. The technique is of interest in a number of areas of art, such as Holbein's portrait of The Ambassadors and recent innovative drawings on a flat surface which appear 3 dimensional when viewed from eye level or in some examples, when viewed in a curved reflective surface.

Le Notre's understanding of perspective allowed him to utilize anamorphosis in the design of his gardens and the dimensions of features so that they would appear in a particular way when viewed from a viewpoint of importance. This can be seen in the views down the western axis and the northern and southern axes.

In both of these pictures, we have an extensive view, in the case of the It was here that Le Notre was using his extensive knowledge of the manipulation of space and the perspective effects of being viewed over such a large distance.

View to the south over the pool in the orangery to the Piece d'Eau des Suisses. (left)



The difference in size is marked with the circular pool measuring 675 metres and the circular pool measuring 34 metres.

View to the west down the Grande Canal (below)



From this perspective we are looking at a view down the Grand Canal and beyond, a distance of over three kilometers. The view gives an impression of a balanced design, with the Latone Fountain feature in reality measuring approximately 30 metres, the Bassin d'Appollon approximately 80 metres the pool at the closest end of the canal approximately 120 metres, the pool at the cross axis approximately 200 metres and the pool at the far end of the canal



approximately 360 metres. All pools appear to be about the same size when viewed from above the Latonne Fountain.

http://www.chateauversailles.fr/en/1_Versailles_from_the_Sky.php

Lablaude, P.-A. (1995). *The Gardens of Versailles* (F. Biddulph & J. Hayward, Trans.). Paris: Editions scala.