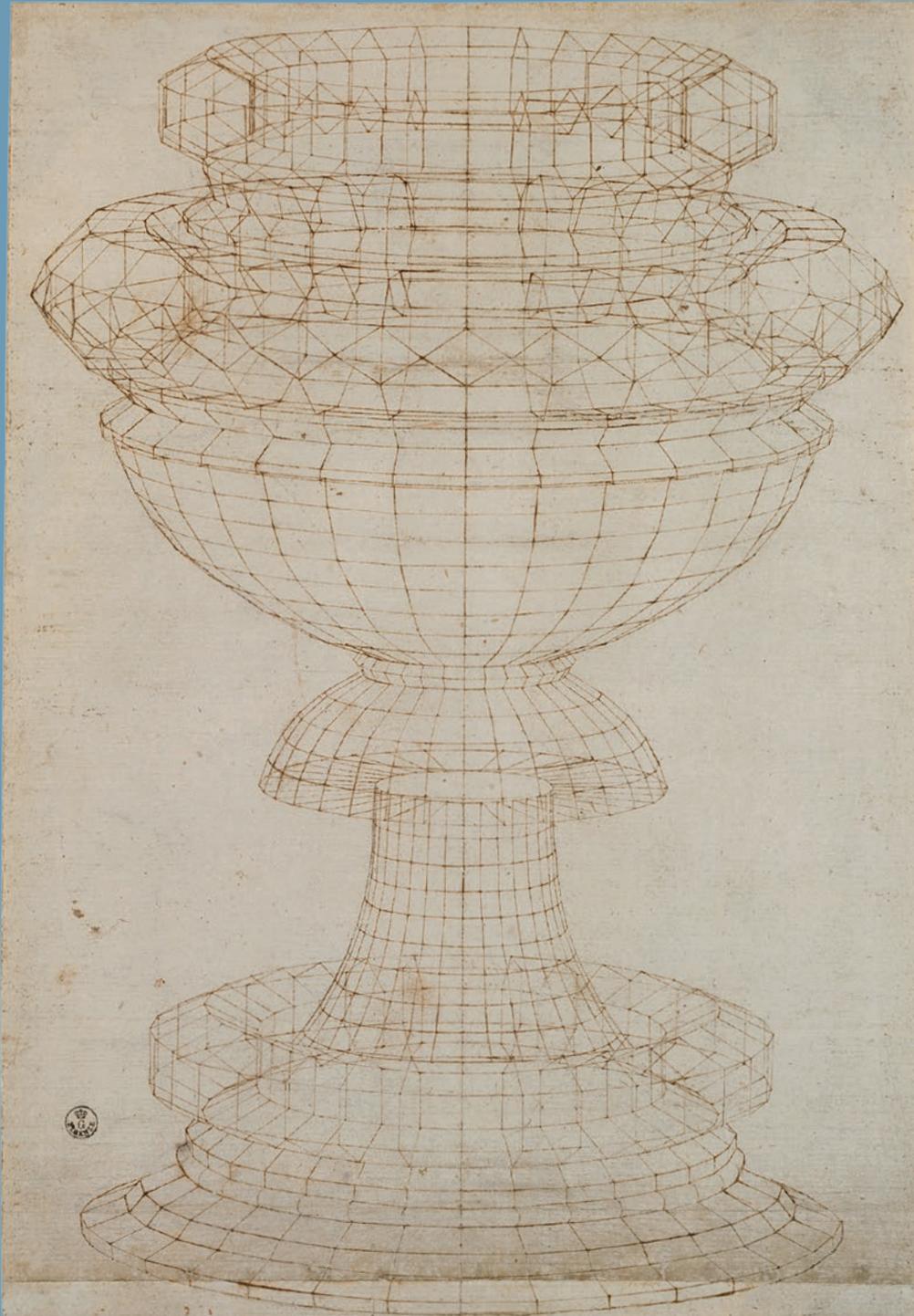


THE DEPICTION OF SPACE



Perspective and pictorial vision
in Western art



*"After all, the aim
of art is to create
space – space that
is not compromised
by decoration
or illustration,
space in which the
subjects of painting
can live. This is
what painting has
always been about"*

Frank Stella, *Working
Space* (1986)

Key ideas



▲ *Saint Lawrence*, 5th century. Mosaic. Ravenna, Mausoleum of Galla Placidia, south lunette.

Pictorial space is the illusion of depth on the flat surface of a painting. In Western art, Euclidean geometry was fully applied only in the Renaissance, whilst the Greco-Roman civilisation developed a different system as the objects in a painting did not share a unified viewpoint. In the Middle Ages, the world was understood in terms of symbol and allegory. As a consequence, the symbolic theological significance mattered more to artists than mimesis. To the Medieval mind, images existed beyond time and space as substance and essence of things. Therefore no attempt was made to achieve spatial depth, volume and roundness before the end of the 13th century.



▲ Fra Carnevale, *The Ideal City*, c. 1480-1484. Oil and tempera on panel, 80.3 × 220 cm. Baltimore, Walters Art Museum. Detail.

As defined by Leon Battista Alberti in *Della Pittura* (1435), the purpose of art is the imitation of nature. And the picture is defined as a surface situated at a certain distance from the viewer who looks through it. This mimetic pictorial space was created combining four different illusionistic devices: linear perspective, separation of planes, atmospheric perspective, colour perspective. The 16th century subsequently introduced aerial perspective combining the variation of focus of atmospheric perspective to the classic colour theory to achieve spatial depth. These principles were fully explored in the complex illusionistic elaborations in Baroque ceilings and stage designs.

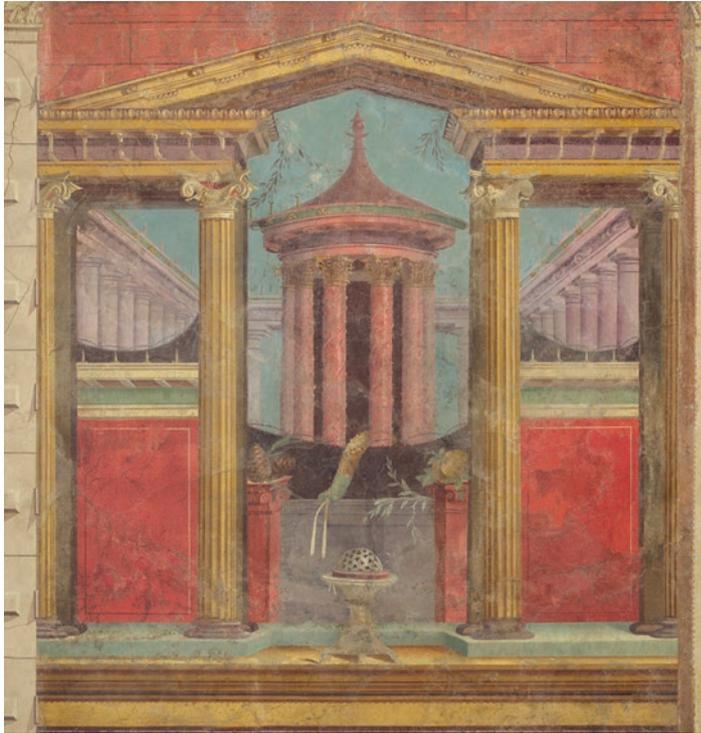


▲ William Hogarth, *Satire on False Perspective*, frontispiece to *Kirby's Perspective*, 1745. Engraving, 20.6 × 17.3 cm. New York, Met Museum. Detail.

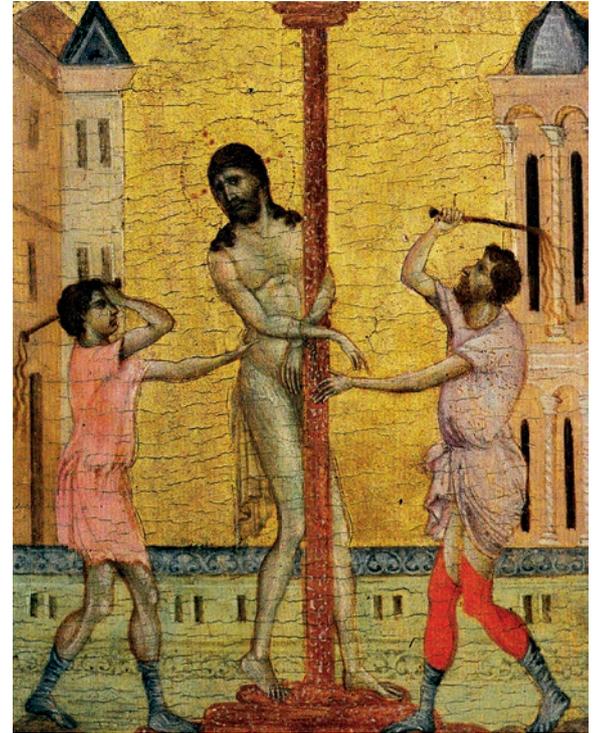
The new scientific discoveries such as non-Euclidean geometry transformed the notion of space in the 19th century introducing the fourth dimension, i.e. the relation between time and space. Artists were now concerned with depicting a specific moment in time. As can be seen in the works of Impressionists, colour was no longer a mere decorative effect but acquired a structural role. By using a central area of focus and blurring the vision of objects outside this scope, the Impressionists mimicked the process of peripheral vision. In response to the accuracy of photographic perspective, artists preferred to return to a two-dimensional reality proper to art. This reversal of illusionistic effects would culminate with pure abstraction in the 1950s.

Cover: Paolo Uccello, *Perspective Study of a Chalice*, c. 1430. Pen on paper, 29 × 24.5 cm. Florence, Uffizi, Gabinetto dei Disegni e delle Stampe.

Virtual exhibition



1 ▲ *Cubiculum M*, west lateral wall, Villa P. Fannius Synistor, 40-30 a.C. Fresco. Il stile. New York, Metropolitan Museum of Art. Detail.



2 ▲ Cimabue, *The Flagellation of Christ*, c. 1280. Tempera on poplar panel, 24.8 × 20 cm. New York, Frick Collection.

1 Still life architectures

Although the Renaissance is said to have resumed the linear perspective system introduced by the Greeks, there are significant differences in the way they represented space. In the Ancient world, objects were not depicted as spatially related as they do not share the same viewpoint. Each object has its own perspective and vanishing point, so the image was in fact fragmented. The Romans on the other hand started developing the idea of unified space. This painted architecture is an example of herringbone perspective in which the lines converge on a vertical axis in the middle of the scene.

KEYWORDS

Vanishing point point in the image where parallel compositional lines intersect.

Herringbone perspective system in which the orthogonals do not converge in one single vanishing point, but form a herringbone pattern.

Foreshortening depiction of an object or person so as to give the illusion of projection in space.

Saturated colour pure colour free from the dilution with white.

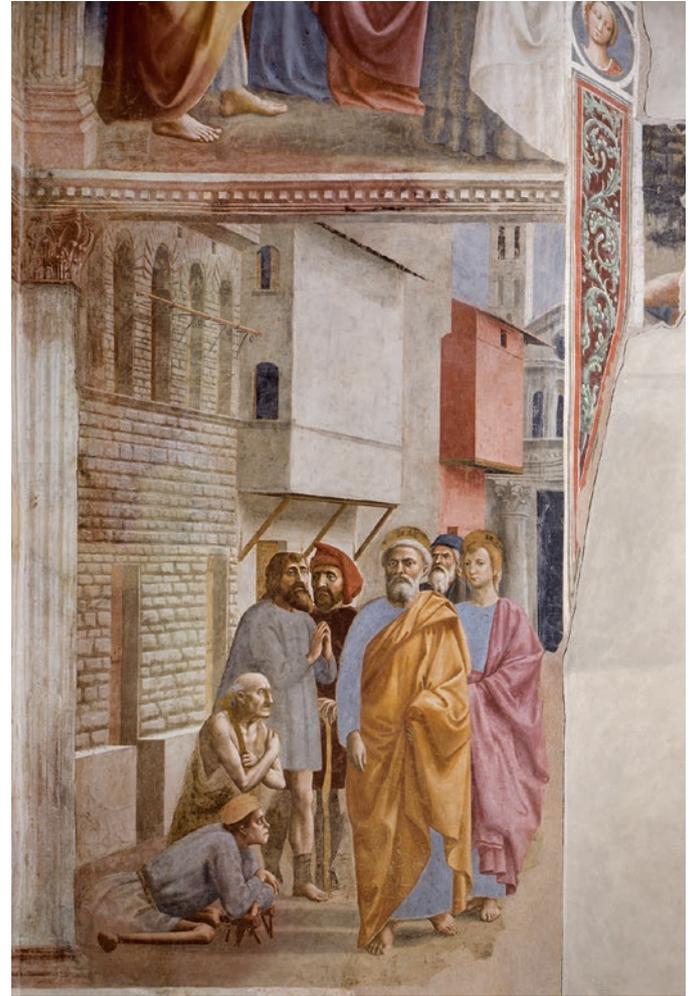
2 Early foreshortenings

Cimabue (1240-1302) is the first painter in the 13th century to be concerned with spatial illusion. Not only does he make use of dark and light to suggest volumes, but he also employed foreshortening. This can be seen in the architectures in the background and especially in the torsion of the flagellant on the left. The three-dimensional depiction is mostly achieved with colour gradation.

Cimabue applied undiluted saturate colour in a scale from blue, the darkest, to rose-red, turquoise, apple-green, cinnabar for half-tones, to yellow for the lightest.



3 ▲ Giotto, *Annunciation to St. Anne*, 1303-05. Fresco. Padua, Scrovegni Chapel.



4 ► Masaccio, *St. Peter Healing the Sick with His Shadow*, c. 1424-25. Fresco, 230 × 162 cm. Florence, Santa Maria del Carmine, Brancacci Chapel.

3 4 Giotto's and Masaccio's perspective

Giotto (1266-1337) introduced two-point perspective by slanting the buildings in space and thus adopting an oblique view instead of a frontal one. In the Arena Chapel in Padua, he achieved unified shading and viewpoints whilst maintaining a flat surface. The light source coincides with the actual windows in the chapel. For the first time, the adopted viewpoint is that of a viewer standing at the centre of the church. The figures are depicted on overlapping planes rather than without any suggestion of space between them, so as to emphasise the flat solidity of

the painted surface and there are no cast shadows. Masaccio's (1401-1428) technique to define space and volume has been called 'saturation modelling'. Each object is modelled by shading its colour from light to dark. The long cast shadows generated by the light coming from a single source are used to suggest spatial recession as well as volume. Not only a stylistic device, shadows are the very subject matter of this scene in the Brancacci Chapel, *St. Peter Healing the Sick with His Shadow*. The architectural rendering clearly shows Masaccio's mastery of two-point perspective.

KEYWORDS

Two-point perspective perspective where lines meet in two vanishing points on the horizon.

Overlapping planes planes that extend over one another.

Saturation modelling control of colour tone to create depth and volume.

Shading marking that suggests three-dimensionality in a painting.



5 ◀ Leonardo da Vinci, *The Last Supper*, 1494-97. Tempera and oil on plaster, 460 × 880 cm. Milan, Santa Maria delle Grazie.

6 ▼ Andrea Pozzo, *The Glorification of St Ignatius*, 1685-94. Fresco. Rome, St. Ignatius church.



5 Aerial perspective

Leonardo da Vinci (1452-1519) notably represents the most advanced stage of aerial perspective in the High Renaissance. In *The Last Supper*, not only did he use a single vanishing point for both figures and background but he also fully developed his *sfumato* technique to attain tonal unity. The whole composition is organised as alternating areas of light and dark, from the top left in the dark to the bottom right in the light. Leonardo da Vinci used what has been termed ‘spatial congruency’ insofar as he painted light areas as warmer, thicker and more opaque, and dark areas as cooler, thinner and more transparent.

KEYWORDS

Aerial perspective technique of rendering depth by blurring the focus of distant objects and creating a tonal unity.

Sfumato technique used in painting or drawing which consists in a fine shading that creates subtle transitions between colours and tones.

Ceiling overhead upper surface of a room.

Illusionism the ability to create an illusion of reality with visual skills, such as perspective or shading.

6 A Baroque illusion

Andrea Pozzo’s (1642-1709) illusionistic ceilings epitomise the Baroque notion of infinite space. This fresco celebrates the founder of the Jesuit order to which Fra Andrea Pozzo belonged. The Saint’s ascension to Heaven is enclosed within a foreshortened architectural framework designed in continuation of the existing one. Such a degree of illusion required a remarkable understanding of perspective, which the painter also gave proof of in his *Perspectiva Pictorum et Architectorum* (1693). Vertiginous perspective constructions such as this one served a specific religious purpose as they were meant to immerse the viewer in the spiritual rapture.



7 ▲ Gustave Caillebotte, *Paris Street; Rainy Day*, 1877. Oil on canvas, 276.2 × 212.2 cm. Chicago, Art Institute.



8 ▲ Paul Cézanne, *Still-life with Apples and Oranges*, c. 1899. Oil on canvas, 74 × 93 cm. Paris, Musée d'Orsay.

7 An Impressionist in name only

Impressionism re-asserted the flatness of the painted surface in contrast to the realism of photography. Gustave Caillebotte (1848-1894) was on the other hand fascinated by the new medium. The composition of his monumental *Paris Street; Rainy Day* is made of diagonals converging on the vanishing point coinciding with the street lamp. By cutting the figures in the foreground, the artist realised a photographic snapshot of the urban view. Moreover, the primacy of draughtsmanship over colour and painterly effects sets this work apart from the cityscapes other Impressionists painted.

KEYWORDS

Snapshot casual photograph capturing an impression of the subject.

Draughtsmanship the ability to excel in drawing.

Cityscapes urban landscapes.

Still life type of genre painting depicting commonplace inanimate objects usually symbolising a meditation on the transience of life.

8 The apples of Cézanne

After the Impressionists' attention to colour, Paul Cézanne (1839-1906) re-addressed volume, depth and spatial placement. In this still life he modelled the fruits in colour using bright red to emphasise the parts closest to the viewer.

The sense of depth is therefore attained according to the classic colour theory in which warmer hues are used for the foreground and cooler ones for the background. Cézanne, however, rejected single-point linear perspective and depicted every object on its own frontal plane.



9 ▲ Pablo Picasso, *Still life with Chair Caning*, 1912. Oil on cloth over canvas edged with rope, 29 × 37 cm. Paris, Musée Picasso.



10 ▲ Henri Matisse, *The Dessert: Harmony in Red (The Red Room)*, 1908. Oil on canvas, 180 × 220 cm. St Petersburg, Hermitage Museum. © Succession H. Matisse, by SIAE 2018.

9 10 Cubist and Fauvist space

The 20th century focused on the space-time relation in a non-Euclidean world characterised by curved space. Taking Cézanne as a teacher, Cubists conceived reality in terms of a series of planes. The fragmented image thus obtained conveys the immediacy of vision in time and does away with the Renaissance notion of linear perspective. What Cubists are concerned with is representing the inner form of the object rather than its external appearance. *Still life with the Caned Chair* by Pablo Picasso (1881-1973) is a compelling example of the multiplication of

viewpoints and planes introduced by Cubism. The collage technique completes the defiance of the canon of illusionism as mechanically produced images are incorporated in the a painting. Henri Matisse (1869-1954) in *The Dessert: Harmony in Red* completely rejected linear perspective and shading in favour of colour. The decorative pattern on red backdrop extending from the table cloth to the wallpaper suggests the expressive absence of central focal point and volume that much owes to primitivism and Japonisme.

KEYWORDS

Inner form fundamental features or idea of an object.

Collage work of art combining mixed media, such as paper, photographs, fabric.

Canon principle or rule accepted as a criterion of judgement.

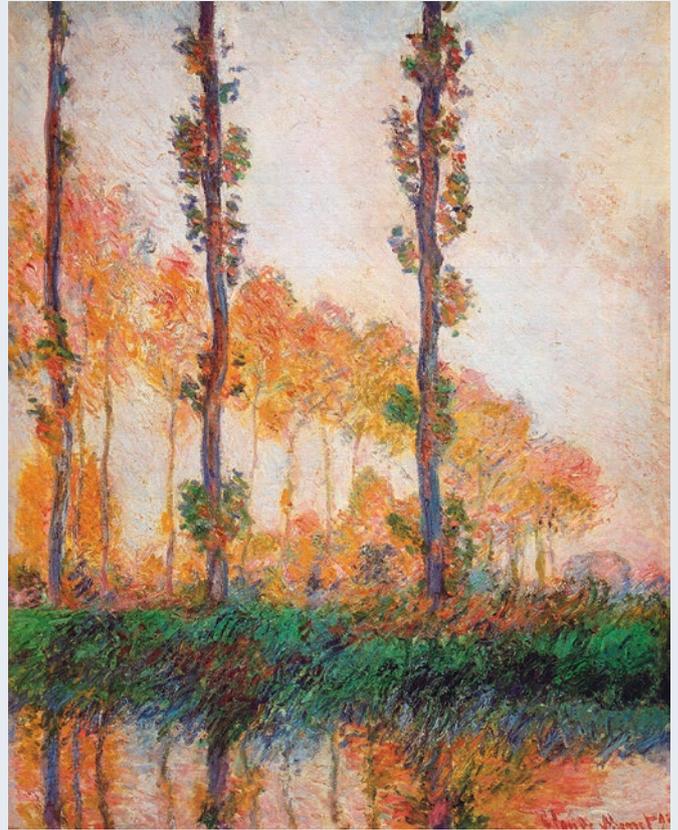
Wallpaper decorative paper for the walls of a room.

Compare and contrast



▲ Meindert Hobbema, *The Avenue at Middelharnis*, 1689. Oil on canvas, 103.5 × 141 cm. London, National Gallery.

► Claude Monet, *Three Poplar Trees in the Autumn*, 1891. Oil on canvas, 92 × 73 cm. Philadelphia Museum of Art.



Two landscapes

On the left is one of the most accomplished works of 17th-century Dutch landscape painter Meindert Hobbema (1638-1709). Compare it to Claude Monet's

(1840-1926) *The Four Trees*, which belongs to a series of canvases depicting the poplars on the banks of the Epte river near Giverny.

Compare these two landscapes.

1. What use have the two artists made of Renaissance perspectives (linear, colour and atmospheric perspectives and separation of planes)?
2. Was the landscape painted in the studio or *en plein air*?
3. Which of the two landscapes offers a more exacting topographical view of the scene?
4. The trees are a focal point in the composition of both paintings, although yielding opposite results in the spatial layout. Do they give a sense of depth or do they add to the flatness of the scene?