



## Perspective as an Image Technique Appeared in the Renaissance

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**Abstract:** *Great visual clarity of the image. The perspective of the subject creates an impression very close to that obtained by directly viewing the subject. This is explained by the fact that in perspective parallel lines are depicted converging, and in nature we also see them converging; the same segments are depicted both in perspective and in nature the less the further they are removed from the viewer.*

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A perspective is an image whose construction is based on the method of central projection. The word "perspective" in Latin means "to see through", "to see correctly". The main advantages of the perspective are the following:

A perspective view designed for a fixed point of view and assuming a single vanishing point on the horizon line (objects decrease proportionally as they move away from the foreground). The theory of linear perspective first appeared in Ambrogio Lorenzetti in the XIV century, and it was developed again in the Renaissance (Brunelleschi, Alberti), was based on simple laws of optics and was perfectly confirmed by practice. The mapping of space to a plane, first with a simple pinhole camera with a simple hole (wall), and then with a lens, is completely subject to the laws linear perspective. Direct perspective has long been recognized as the only true reflection of the world in the picture plane. Taking into account the fact that a linear perspective is an image constructed on a plane, the plane can be positioned vertically, obliquely and horizontally, depending on the purpose of perspective images. The vertical plane on which images are built using linear perspective is used when creating paintings (easel painting) and wall panels (on the wall inside the room or outside the house, mainly on its ends). The construction of perspective images on inclined planes is used in monumental painting-paintings on inclined friezes inside the premises of palace buildings and cathedrals. In easel painting, perspective images of tall buildings from a close distance or architectural objects of the urban landscape from a bird's-eye view are built on an inclined picture. The construction of perspective images on a horizontal plane is used when painting ceilings (plafonds). There are, for example, mosaic images on the oval plafonds of the Mayakovskaya metro station by the artist A. A. Deineka. Images constructed in perspective on the horizontal plane of the ceiling are called a ceiling perspective.

Great visual clarity of the image. The perspective of the subject creates an impression very close to that obtained by directly viewing the subject. This is explained by the fact that in perspective

parallel lines are depicted converging, and in nature we also see them converging; the same segments are depicted both in perspective and in nature the less the further they are removed from the viewer, etc.

Therefore, images in perspective have the greatest visibility.

The projections are located on the same plane. The disadvantages of perspective include the complexity of constructions and the limited possibility of measurements due to the presence of perspective distortions of angular and linear dimensions. The perspective has a wide scope of application. Perspective images in architectural practice are used to assess the aesthetic advantages of objects at the design stage. Such images allow you to "see" the future structure long before its construction and make the necessary adjustments to the orthogonal drawings (facades and plans), so it is important that the visual judgment that arises when considering the structures themselves in nature is extremely close to the visual judgment caused by their perspective images. Depending on which surface the perspective is built on, the following types of perspectives are distinguished: linear-an image on a plane; panoramic-an image on the inner surface of the cylinder;

dome-the image on the inner surface of the ball.

There are other types of perspective. The perspective of an object consists of the perspective of its individual points; the perspective of each point is constructed as the intersection point of the projecting ray with the picture plane. From this point of view, there is a single method of constructing a perspective (the method of central projection), which reduces to the construction of ray traces (i.e., central projections of points). The graphic techniques of constructing these traces, the so-called "methods of constructing perspectives", are very diverse.

The main ones are:

1. The method of rectangular coordinates (Desargues method);
2. The method of oblique coordinates;
3. The method of architects;
4. The method of perspective plot;
5. The perspective grid method;
6. The method of vanishing points and measurement points for dominant lines.

In addition, auxiliary methods are often used together with the listed "methods" :

- application of dividing scales;
- lowering or raising the object plane and using the "side wall" (the method of Andrea Pozzo).

The position of the vertical edges of the object is determined by drawing the projecting rays from the standing point to the points of the vertical edges of the plan. Then they are transferred to the picture at the appropriate scale. The heights are determined using perspective height scales, by approximating them to coincide with the picture, where the edge will be displayed in full size of the perspective scale.

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