

## CHOOSING THE VIEWING ANGLE WHEN MAKING A PERSPECTIVE

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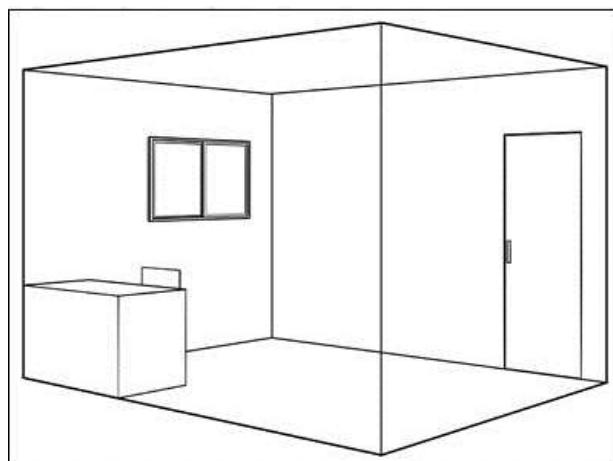
### ABSTRACT

This article is a tutorial article explaining linear perspective in terms of a visual, non-technical approach. Visual means drawing based on direct observation and imagination, and not on the basis of a balanced approach. The purpose of this article is to help beginners and more experienced artists, illustrators and designers improve their drawing and observation skills.

**Keywords:** perspective drawing, frontal composition, creative opportunities, symmetrical buildings, individual method, three-dimensional structure, surge creating innovation.

### INTRODUCTION

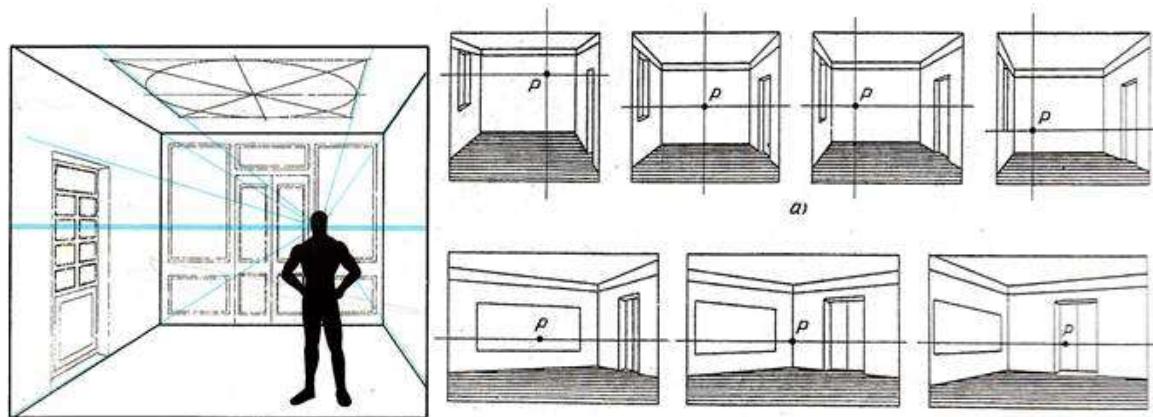
Perspective drawing is a technique used to depict spatial depth, or perspective. In other words, it allows you to accurately draw a three dimensional object onto a two dimensional plane [7].



Picture №1. Room drawn with perspective.

Perspective point of view (the center of the projection) to make an image can be taken at the desired distance from the plane of the board, but the image is made perspective for the image to be impressionable, similar to the appearance of the object itself when we look at it from that point of view, it is necessary to take.

The eye can see a certain part of the space — the destiny that has arisen to the field of vision: it means that what is seen should be at a certain distance from the eye (the larger things are far from the eye, the smaller things are closer).



Picture №2. The direction of the wall lines and the position of the viewpoint and vanishing point.

Horizon line is a confusing perspective term because when you hear it, you tend to immediately think of "the horizon" we see in nature. That is the horizon as in the line where the land or sea meets the sky in the distance. In a painting, the horizon line might be this if you're painting a landscape, but it's best to disconnect the two. Rather, when you hear "horizon line," you want to be thinking "eye-level line."

If you draw an imaginary line across the scene at the level of your eyes, that's the horizon line. As you change position, for instance, walk up a hill, the horizon line moves up with you. When you glance down or up, the horizon line doesn't move because the level of your head hasn't moved. The horizon line is an imaginary line used to create accurate perspective in a painting. Anything above the horizon line slopes down towards it, and anything below the horizon line slopes up towards it. Depending on what it is and how it is positioned, this may be very obvious or it may be very slight. Something that straddles the horizon line will slope both up and down. The horizon line is important because the painting's perspective is constructed from this [8].

A person looking forward to the heel sees less space on the upper side of the horizon than on the lower side. From the experiment, it was found that the angle between the viewing rays and the horizon line is approximately  $45^\circ$  up and  $65^\circ$  down. The angle between the viewing rays, which includes the UNG and the space on the left side, is approximately equal to  $140^\circ$ . If we connect the points A, V, S, D in two arrows perpendicular to each other through a conditionally curved line, a person will come up with an approximate form of the field of vision.

We can see what is in a small part of the center of the field of vision.

The Rays that come to the eye from things are called Vision Rays. We can assume that the viewing beam conventionally forms a cone. In reality, this one does not find the right one, the basis of which is a consonant form, approximately similar to the Ellipse. But to simplify it, we take it as a framework one.

The largest angle between the viewing rays is called the viewing angle. The viewing angle varies depending on the distance between the subject and the eye. For accurate viewing of subjects, the viewing angle is different for different people. It can range from  $18^\circ$  to  $53^\circ$ .

The best viewing angle is  $28^\circ$ ; for such a viewing angle, the distance from the viewing point to the cardboard will be equal to two diameters of the viewing circle. Sometimes, the viewing angle can be taken up to  $37^\circ$ ; for such an angle, the distance from the viewing point to the cardboard will be equal to  $1\frac{1}{2}$  of the diameter of the viewing circle.

The Shape of the card can be different, for example, a square, a rectangle, a circle, an ellipse; so only if the card does not come out of the viewing circle.

The image of the postcard width is determined by looking at the width of the object being drawn, and the height is determined by looking at the height of the object.

It is necessary to get the viewing point in such a place that the parts of the object that interest us in the bridge are visible. If the thing, thinly made, is visible from one side to the other, for example, a table, a chair it is unnecessary to place the viewing point diagonally, because if the viewing point is taken diagonally, for example, for the table, its front leg will fasten the rear leg diagonally, and the table will look like a tripod, not.

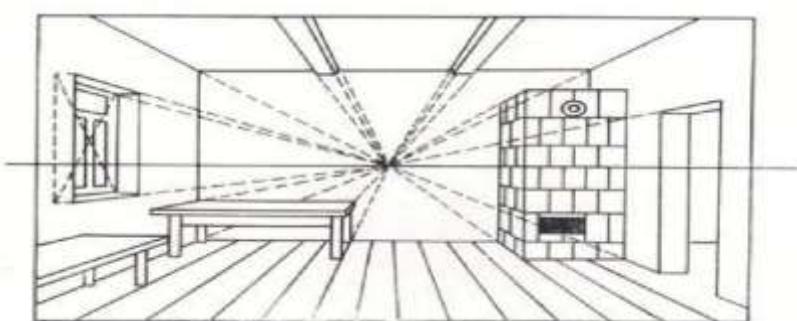
In the design of new buildings, the perspective of the building is based on its orthogonal drawing (plan and facade). In such cases, we can select the situation of the plane of the picture and the point of view as follows.

1. The basis of the point of view (horizontal projection) in the plan r point it got in such a place that the angle between the edge rays emanating from it and trying to the contour of the building plan is  $28^\circ$ . To do this, it is possible to use a template, which is cut out of cardboard paper and the angle between equal sides is  $28^\circ$ .

2. Through the resulting R point, a bisector of the viewing angle of  $28^\circ$  is passed. The bisector will be a horizontal projection of the head beam.

3. In the plan, the trace of the picture plane on the plane of things (horizontal) is drawn perpendicular to the bisector. When making architectural perspectives, it is recommended to move the plane of the board from one vertical edge of the building to the head facade  $25^\circ$ - $35^\circ$ . When this is done, it describes the side facade of the building as more shrinking and the prospect of being made turns out to be impressionable.

In some special cases, for example, areas and interiors surrounded by symmetrical buildings on both sides (interior views of buildings), at the depiction of the halls are placed frontal, as shown in the board's plane.



Picture №3. Frontal composition

When building the perspective of the buildings, we take as equal the height of the viewing point to the eye height of a man of medium stature ( $h = 1,7$  m); sometimes the height of the viewing point can also be taken from 2,5 to 5 meters. In such cases, it is necessary to draw a horizontal line below the 1:3 height of the building or above the 2:3 height. Perspective the image does not turn out well if the horizontal line extends to the middle of the height of the object.

When building the perspective of buildings in a large area, we take the height of the viewing point up to 100 meters, and sometimes even more. Such a perspective is called the perspective from which the bird is taken from a distance.

When describing the garrisons of buildings and other architectural parts that rise from the bottom to the sight, as well as buildings in mountain areas visible from the foothills, the point of view is also taken from below the plane of what the object stands on.

In the end, it should also be noted that when describing interiors (interior views), it may take the viewing angle up to  $60^\circ$ , if the walls of the building interfere with the removal of the viewing point from the cardboard.

In addition, the path is also poured into perpendicular to the bisector of the horizontal track of the plane of the picture in the plan, sometimes the viewing angle; but the main beam must ensure that the distance between the traces of the picture and the points where the outermost rays intersect is in the middle third.

The accurate relative scale of objects is part of the illusion we're creating when we apply the rules of perspective in composition. We can create a sense of distance by painting things in the background smaller than they are in the foreground [8].

## REFERENCES

1. Р. Хорунов. “Чизма геометрия курси”. Техника олий ўқув юртлари учун дарслык. Тошкент «Ўқитувчи» 1997.
2. Ойбек Акбаралиевич Ортиков, Фазилат Абдуллаевна Абдурахимова, Хавохон Элшодовна Халилова. ОБУЧЕНИЕ СТУДЕНТОВ ТРЁХМЕРНОМУ ТЕХНИЧЕСКОМУ МОДЕЛИРОВАНИЮ ЭЛЕКТРОННЫХ МОДЕЛЕЙ ПРЕДМЕТОВ//Точная наука №65 2019.стр.19-20
3. X.Rixsiboyeva, M.Xalimov, U.Rixsiboyev, Ch.Shakirova “Muhandislik va kompyuter grafikasi” Darslik/-T.: “LESSON PRESS” 2020. – 358 bet.
4. Abdullayeva, F. S., Nishanova, S. D., Rashidov, A. Z., Zaripova, M. A., & Dehkanova, R. E. (2020). Factors influencing the formation of clothes as a component of ethnic culture in the territory between two rivers in central Asia. Elementary Education Online, 19(4), 832-836.
5. Raxmatilloevna, F. M. (2021). Creativity in Fashion Design. Pindus Journal of Culture, Literature, and ELT, 1(11), 73-76.
6. Рихсибоев, У. Т., & Халилова, Ҳ. Э. (2021). ТАЛАБАЛАРНИНГ ФАЗОВИЙ ТАСАВВУРИНИ ШАКЛАНТИРИШДА КЎРСАТМАЛИКНИНГ ТУТГАН ЎРНИ ВА АҲАМИЯТИ. Oriental renaissance: Innovative, educational, natural and social sciences, 1(Special Issue 2), 18-26.
7. <https://tips.clip-studio.com/en-us/articles/807>
8. <https://www.thesprucecrafts.com/perspective-in-paintings-2578098>.