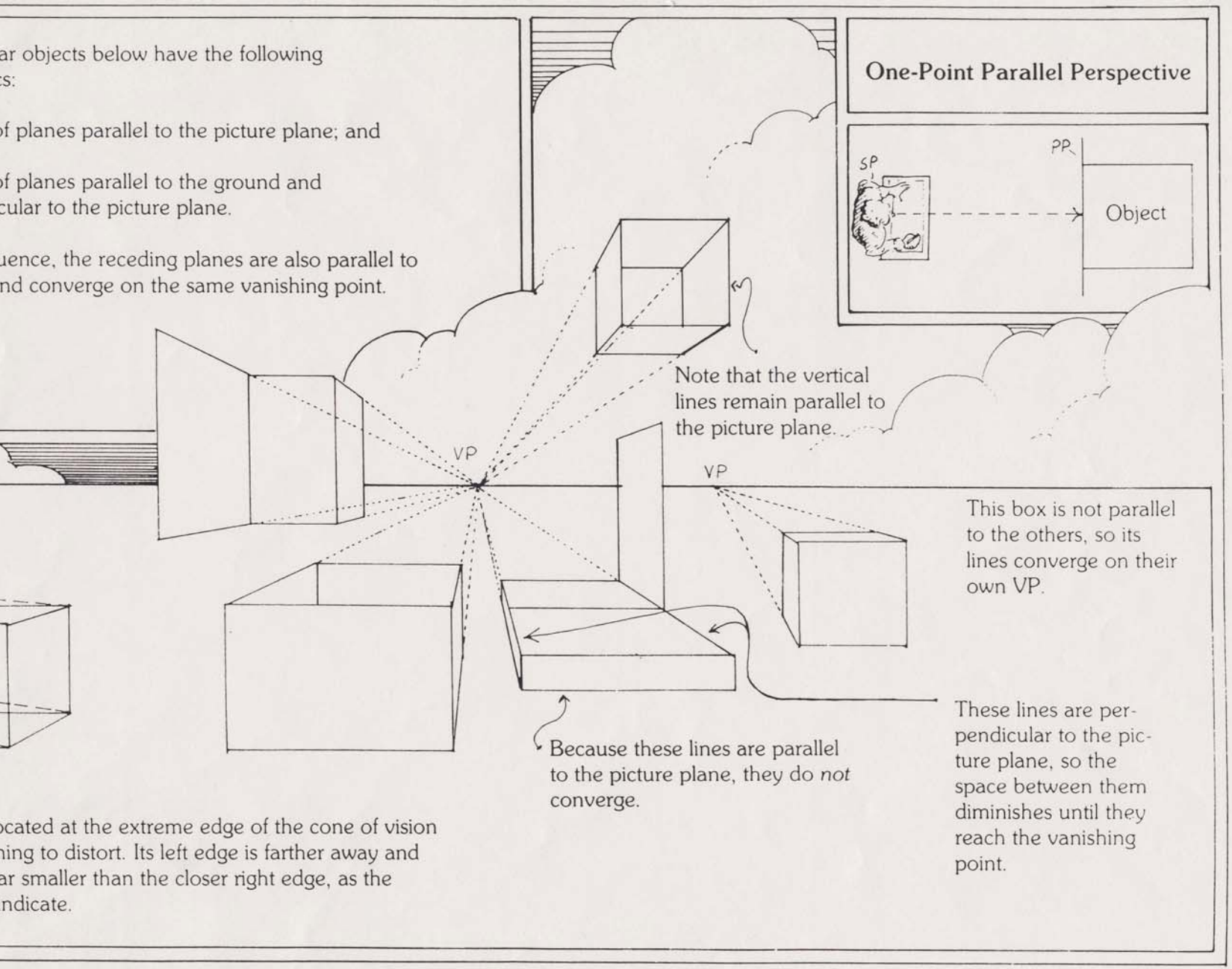
One-Point Parallel Perspective

The rectilinear objects below have the following characteristics:

1. One set of planes parallel to the picture plane; and
2. One set of planes parallel to the ground and perpendicular to the picture plane.

As a consequence, the receding planes are also parallel to each other and converge on the same vanishing point.



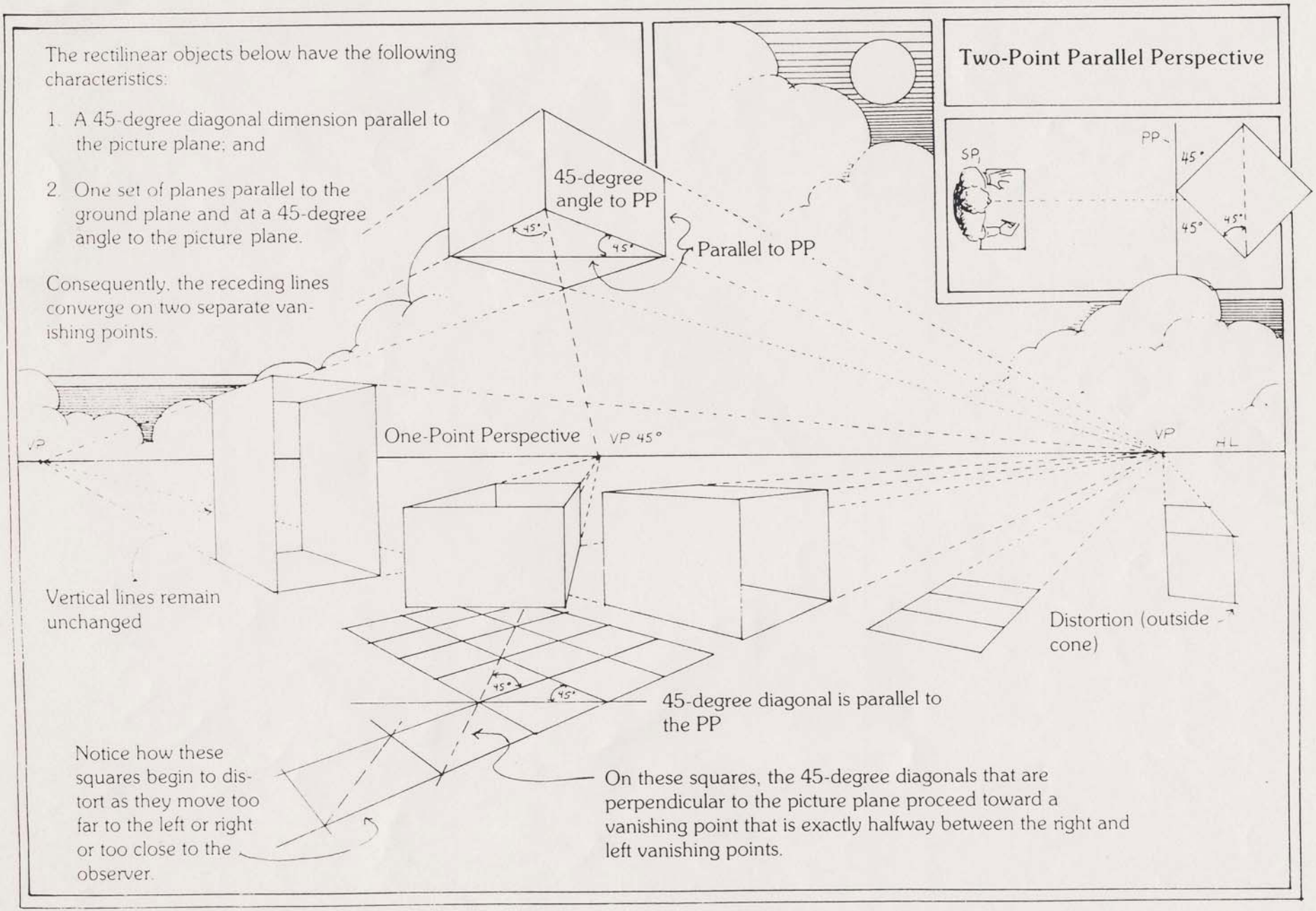
Note that the vertical lines remain parallel to the picture plane.

This box is not parallel to the others, so its lines converge on their own VP.

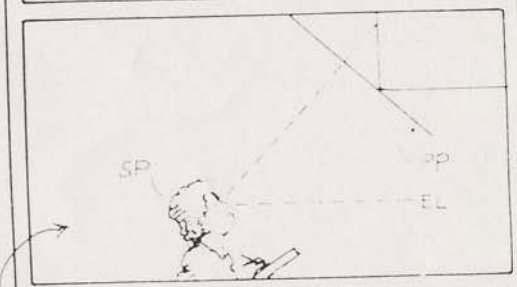
These lines are perpendicular to the picture plane, so the space between them diminishes until they reach the vanishing point.

Because these lines are parallel to the picture plane, they do *not* converge.

This box is located at the extreme edge of the cone of vision and is beginning to distort. Its left edge is farther away and should appear smaller than the closer right edge, as the dotted lines indicate.


The rectilinear objects below have the following characteristics:
1. A 45-degree diagonal dimension parallel to the picture plane; and
2. One set of planes parallel to the ground plane and at a 45-degree angle to the picture plane.
Consequently, the receding lines converge on two separate vanishing points.
Two-Point Parallel Perspective
SP
PP
45°
45°
45°
45-degree angle to PP
Parallel to PP
One-Point Perspective
VP 45°
VP
HL
VP
Vertical lines remain unchanged
Distortion (outside cone)
45°
45°
45-degree diagonal is parallel to the PP
Notice how these squares begin to distort as they move too far to the left or right or too close to the observer.
On these squares, the 45-degree diagonals that are perpendicular to the picture plane proceed toward a vanishing point that is exactly halfway between the right and left vanishing points.

Three-Point Angular or Parallel Perspective



These figures have the following characteristics:

1. No planes parallel to the picture plane; and
2. No planes parallel to the ground plane.

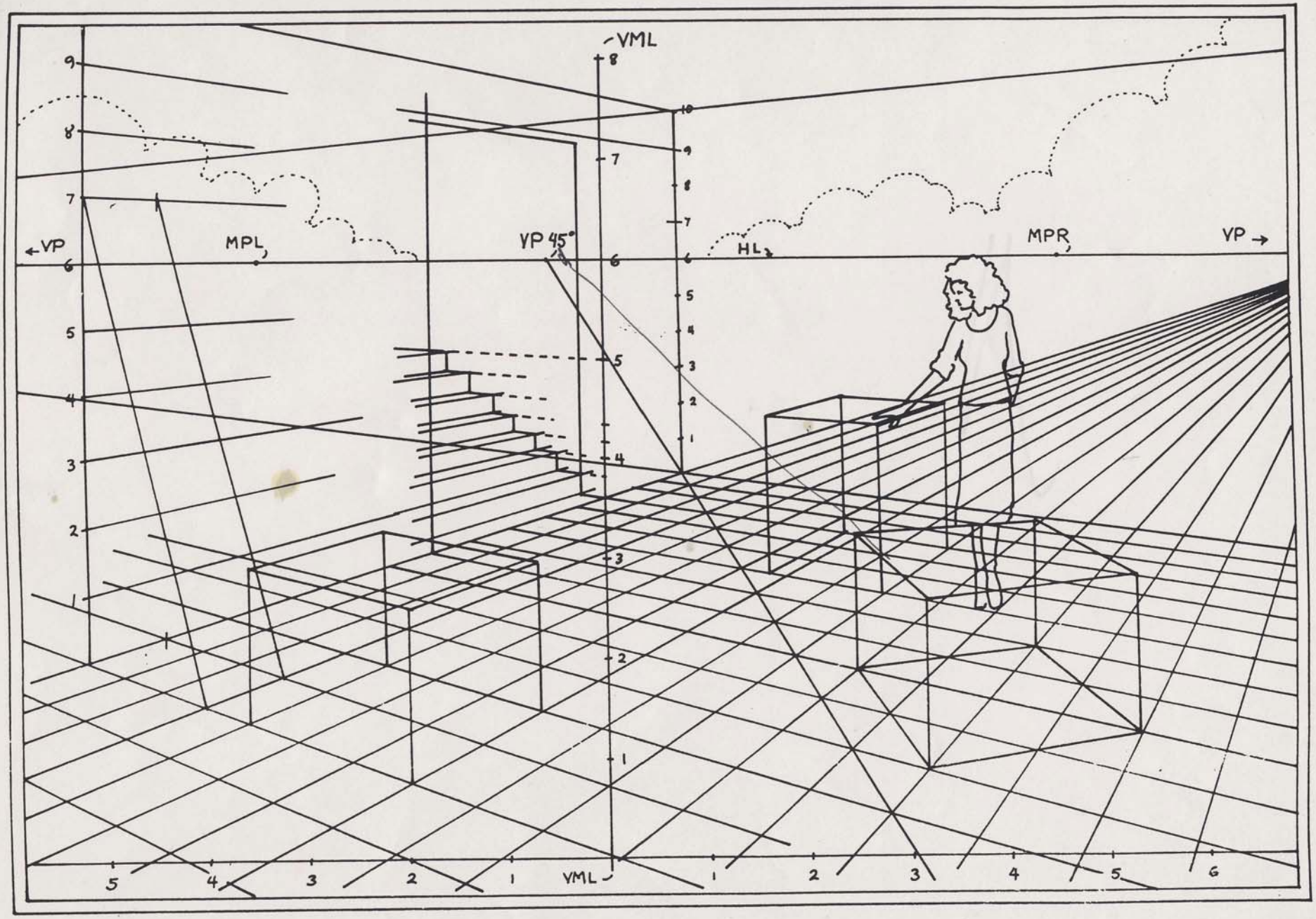
Here, the verticals are far enough away from the center of vision that they also appear to diminish—in this case, toward a *vertical vanishing point* (VVP).

In most situations, it is necessary to tilt the head in order to see a view like this; that is, tilt the picture plane relative to the ground plane. Since the ground plane remains stationary, the horizon line also remains in the same position.

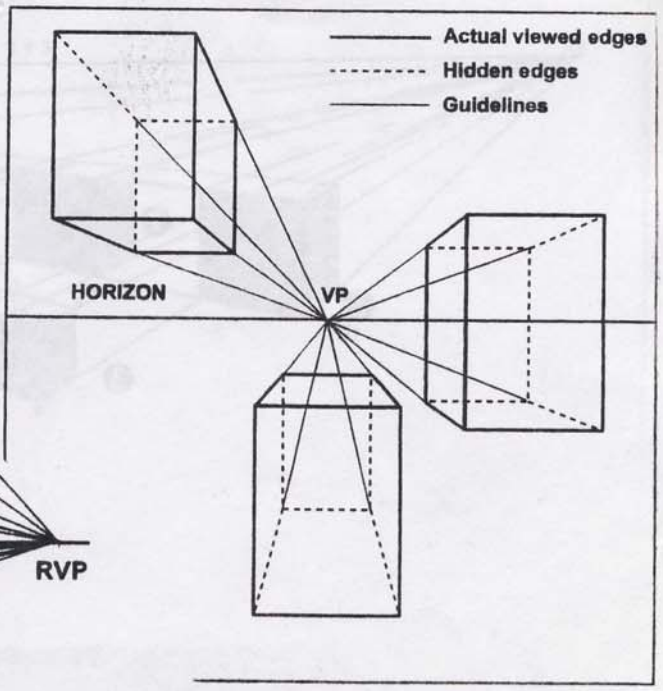
Notice that the boxes closest to *eye level* (EL) (horizon line) show the least dramatic angles.

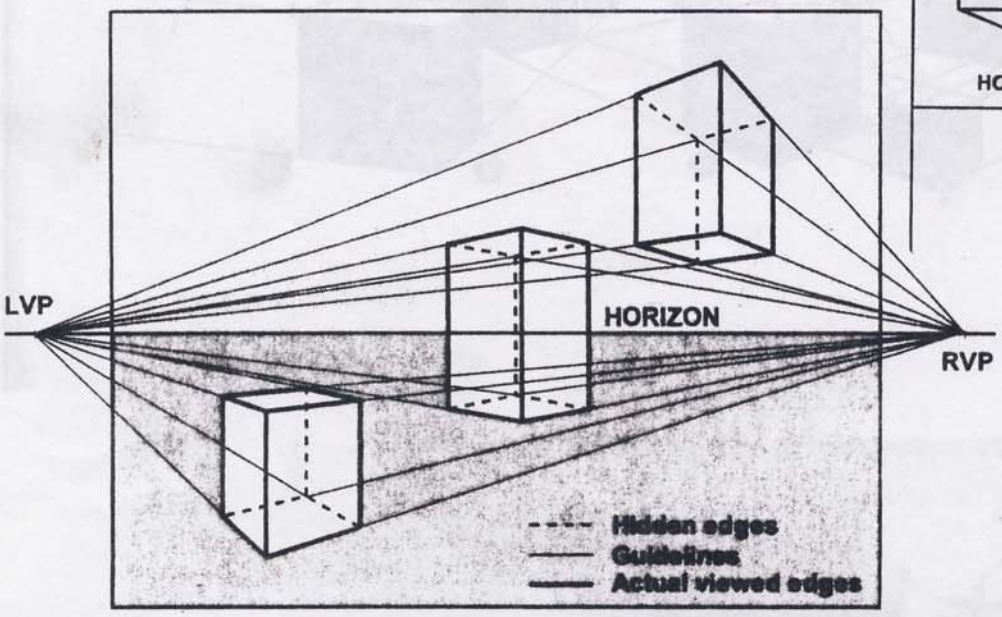
Center vertical axis (CVA). This line plays the same role as the horizon line, but is set perpendicular to the HL.

Turn this page upside down for an aerial view of the verticals diminishing downward.

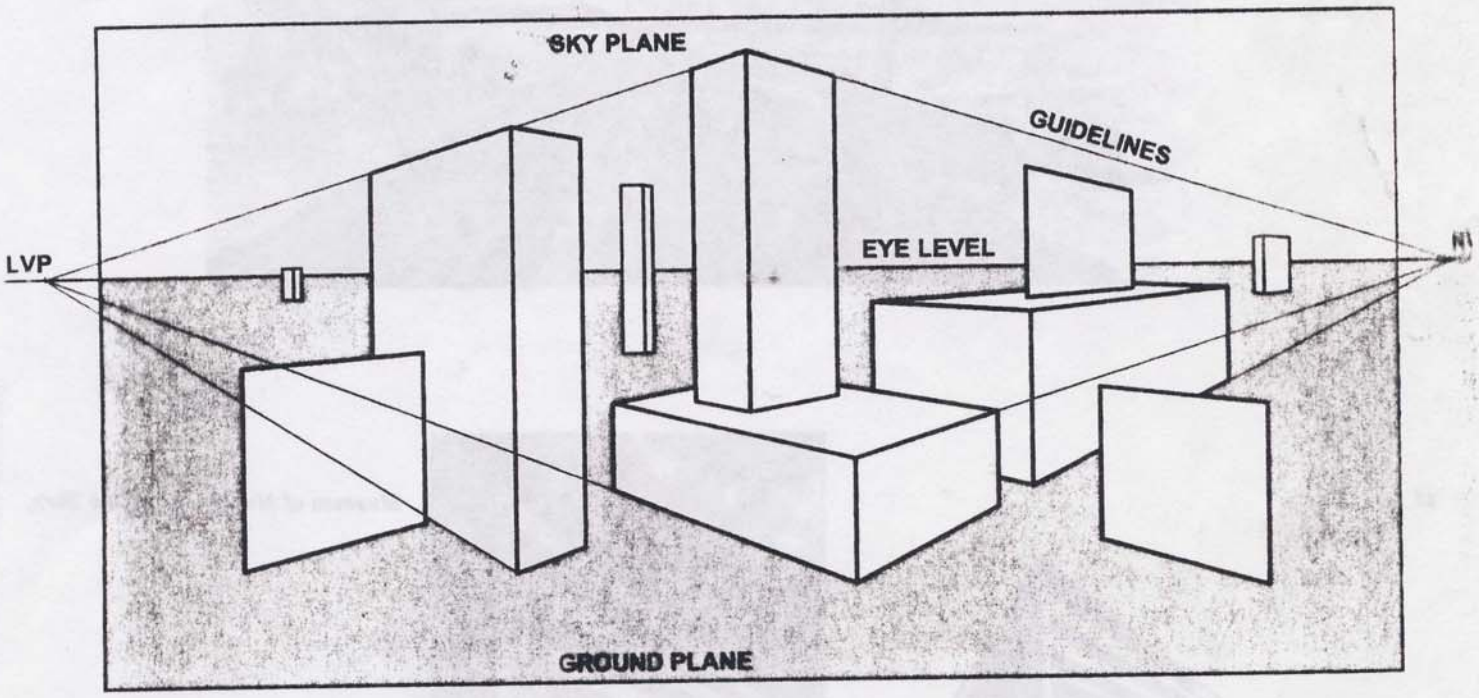

VML
VP
MPL
VP 45°
HL
MPR
VP
VML

8.20 With one-point perspective, the whole front or back plane of the subject is made to appear flat or parallel to the picture plane.

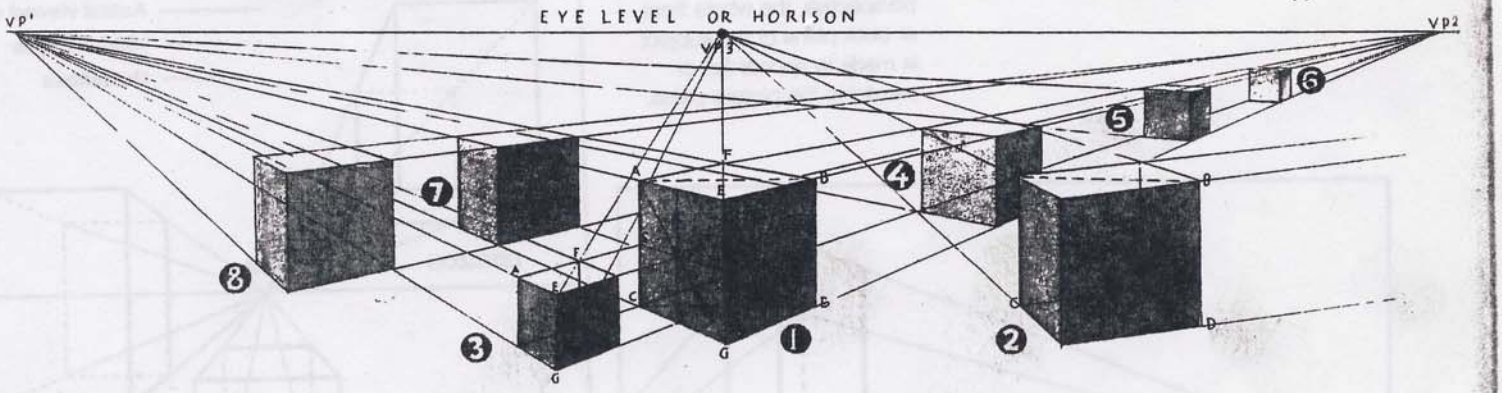


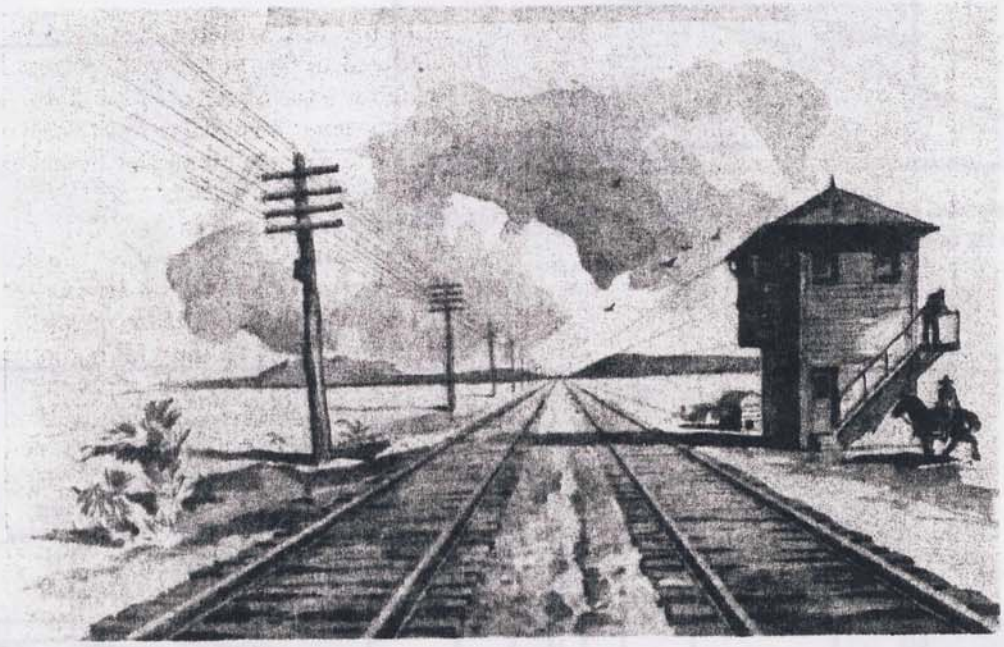


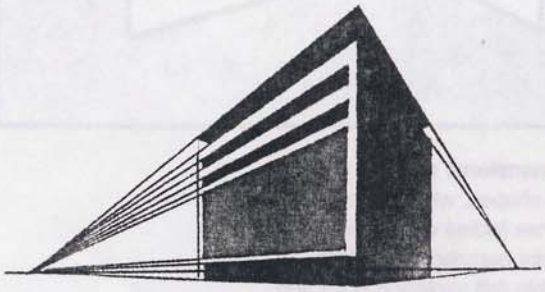
8.22 With two-point perspective, one vertical edge is closest, and all top and bottom edges recede and converge at the left or right vanishing point.



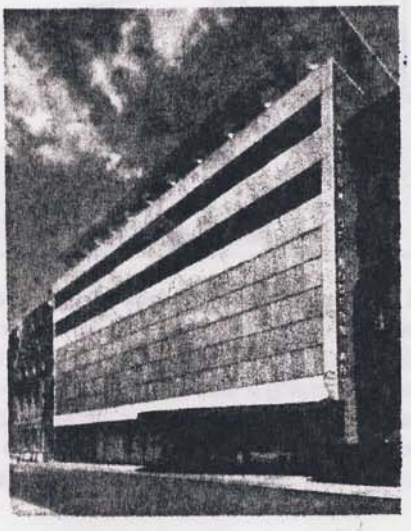
8.23 **A drawing showing the essential difference between planes and three-dimensional shapes.** Planes are shapes having only two dimensions (height and width), whereas three-dimensional shapes, which are made up of planes, have the effect of solidity (height, width, and depth). The component planes (sides) of 3D shapes may be detached and inclined at any angle. The drawing is also an example of two-point perspective. Object edges are shown as heavy lines, orthogonals (guidelines) as lighter lines. Vanishing points (left vanishing point and right vanishing point) show where object edges converge at the eye level or horizon line, which represents infinity. The eye level divides the picture plane into areas that stand for the ground and the sky.







100



101

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