Understanding basic principles of perception including depth and its representation. Initially let us take the reference of Gestalt law in order to have an understanding of the basic principles of visual perception. Gestalt is the German word for "form," and it is applied in Gestalt psychology. It means "unified whole" or “configuration." The essential idea of gestalt is that in perception the whole is different from the sum of its parts. Gestalt psychologists developed six laws that govern human perception:

These are the laws:
1. Proximity.
2. Good Continuation.
3. Closure.
4. Good form.
5. Figure/Ground.

In graphic design, it is very important to know gestalt theory because it allows us to predict how viewers respond to design. It does not only assure that our intention will be understood correctly by the viewers, but it also helps us to create a dynamic design.

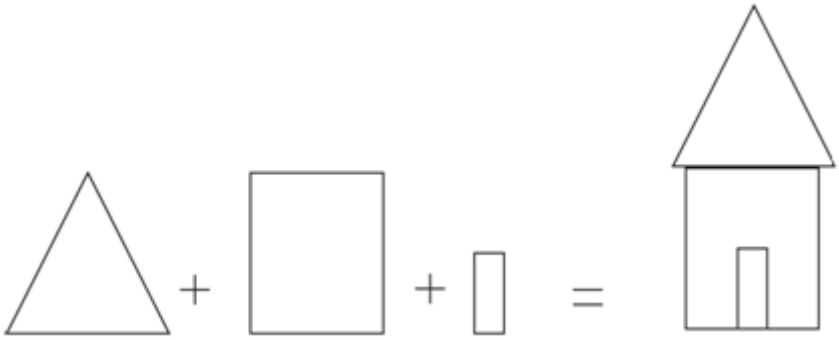

Fig.25 The whole is different from the sum of the parts

Law of Proximity:
Elements that are closer together will be perceived as a coherent object.
We see the first image in horizontal orientation because horizontal circles are closer than the vertical ones and in the second image we see the circles in a vertical orientation because vertical circles are closer to each other than the horizontal circles.

Fig.26: Law of Proximity: circles that are closer are grouped together into a unit.

Law of Similarity:
Elements that look similar will be perceived as part of the same form. In the image below our eyes perceive the squares and circles separately because they look similar so we perceive them as part of the same form.

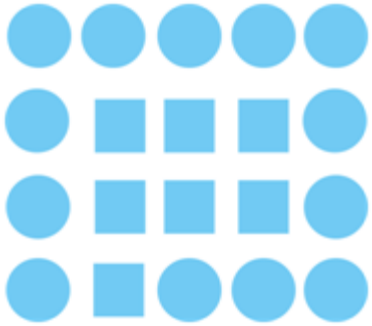

Fig.27: Law of Similarity: shapes that are similar are grouped together into a unit.

Law of Good Continuation:
Humans tend to continue contours whenever the elements of the pattern establish an implied direction.

Fig.28: Law of Good Continuation: the eye follows the circles and perceives a curve

PERSPECTIVE

Depth Perception through Linear or one point Perspective:

When we see object in distance from a particular angle, sometimes we see it as an illusion to know how we must know about perspective and its principles. There are three types of perspective generally we encountered with while looking at objects from distances apart from what we discussed earlier.

These are one point perspective, two point perspective and three point perspective.

Linear or one point Perspective : Linear perspective refers to the fact that parallel lines, such as railroad tracks, appear to converge with distance, eventually reaching a vanishing point on the horizon. The more the lines converge, the farther away they appear. One vanishing point is typically used for roads, railway tracks, hallways, or buildings viewed so that the front

is directly facing the viewer as shown in Fig.35. Any objects that are made up

of lines either directly parallel with the viewer's line of sight or directly perpendicular (the railroad slats) can be represented with one-point perspective.

One-point perspective exists when the picture plane is parallel to two axes of a rectilinear plane — a plane which is composed entirely of linear elements that intersect only at right angles. If one axis is parallel with the picture plane, then all elements are either parallel to the ground plane or level (either horizontally or vertically) or perpendicular to it. All elements that are parallel to the ground plane are drawn as parallel lines. Elements that are perpendicular to the ground plane converge at a single point (a vanishing point) on the horizon. A typical example of one-point perspective is shown in Fig.35.

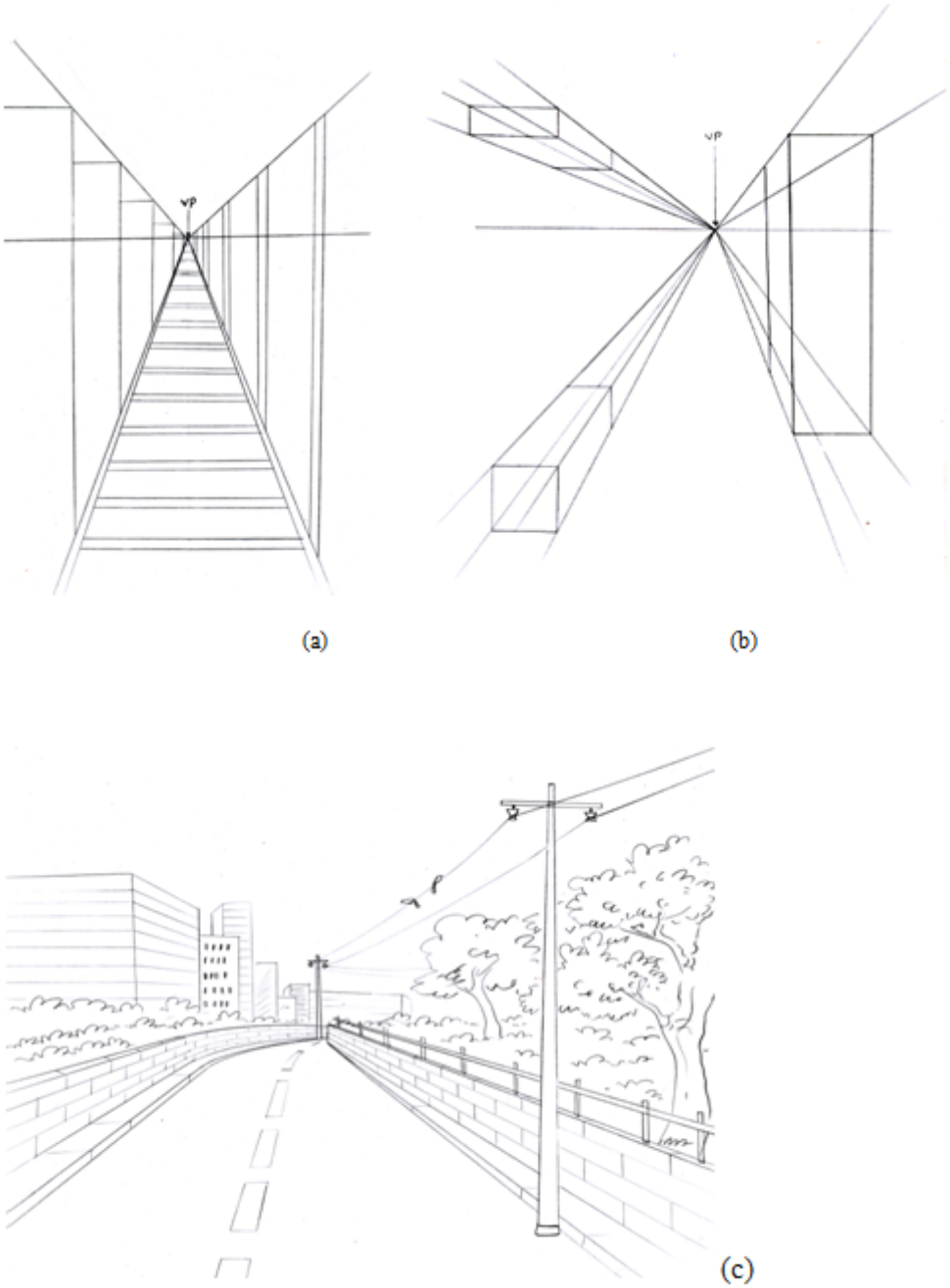

Fig. 35a, b and c: An example of linear or one point perspective

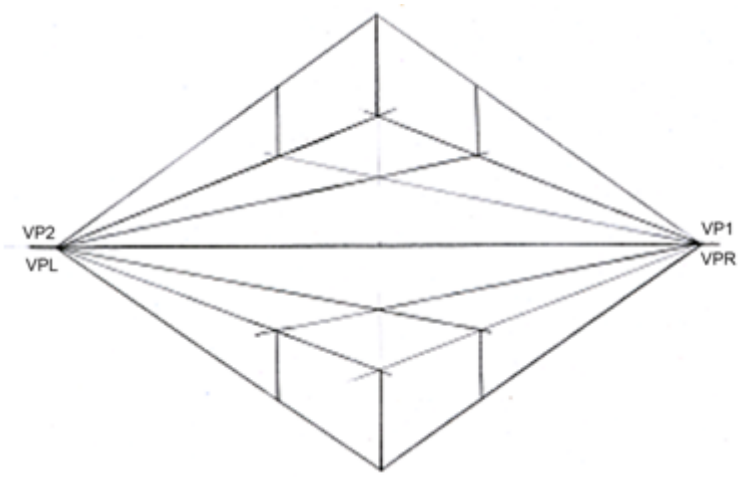

Fig.36(a): An example of two point perspective

Two-point Perspective:

Two-point perspective can be used to draw the same objects as one-point perspectiv looking at two forked roads shrink into the distance. For example, one point repres represents the other. Looking at a house from the corner, this refers as station point. (SI point, while the other wall would recede towards the opposite vanishing point. Two vani VP2 (left)) or VR and VL generated from the same horizon and define the contour of a pa Two-point perspective has two sets of parallel line to the horizon and these two sets horizon, which has been already referred as VP1 and VP2. See fig. 36(a).

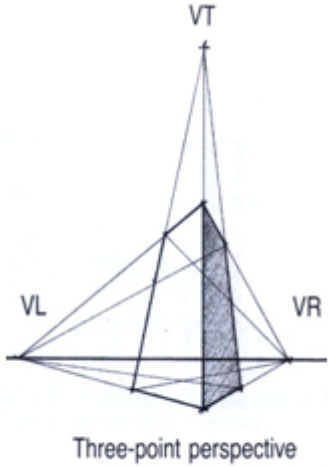

Fig.36(b) : An example of three point perspective

Three-point Perspective:

Three-point perspective is usually used for buildings seen from above (or below). In a one for each wall, there is a third to show how those walls recede into the ground. This Looking up at a tall building is another common example of the third vanishing point. Thi Three-point perspective exists when the perspective is a view of a cartesian plane whe scene's three axes. Each of the three vanishing points corresponds with one of the three One-point, two-point, and three-point perspectives appear to embody different forms of c generate these perspectives by hand are different. Mathematically, however, all of them

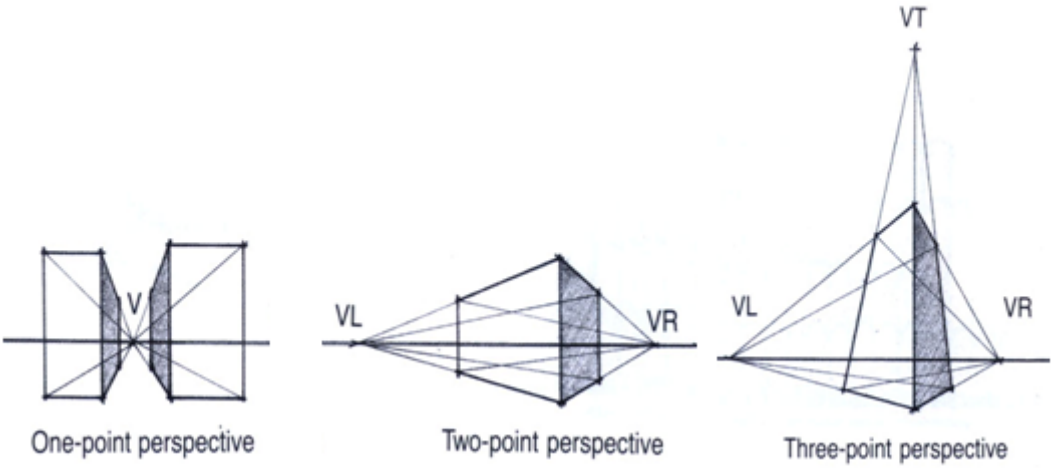

Fig.37: Description of Perspective

Three perspective angles for your clear visual understanding

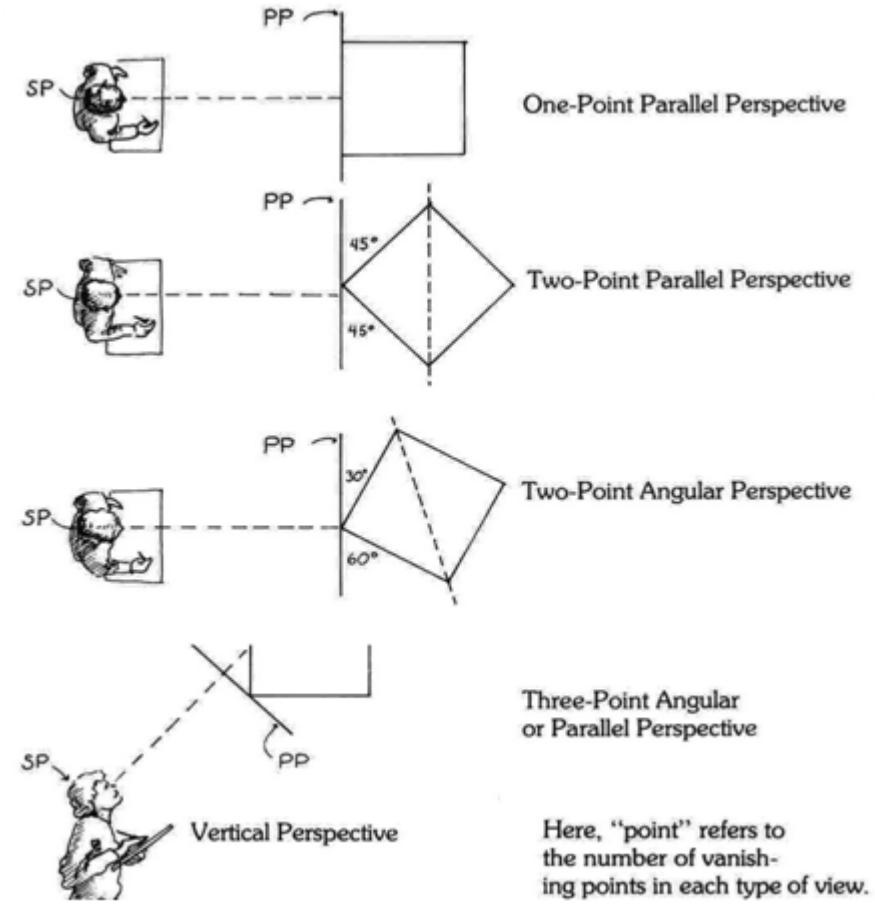

Fig.38: Visual Perspective

Eye level:

The first image lies below the eye level, the second one lies in the eye le above the eye level. These are three basic eye levels we usually encou visual object around us.

(Take any object and try to draw in various eye levels in order to unc

perception as shown in Fig.39.)

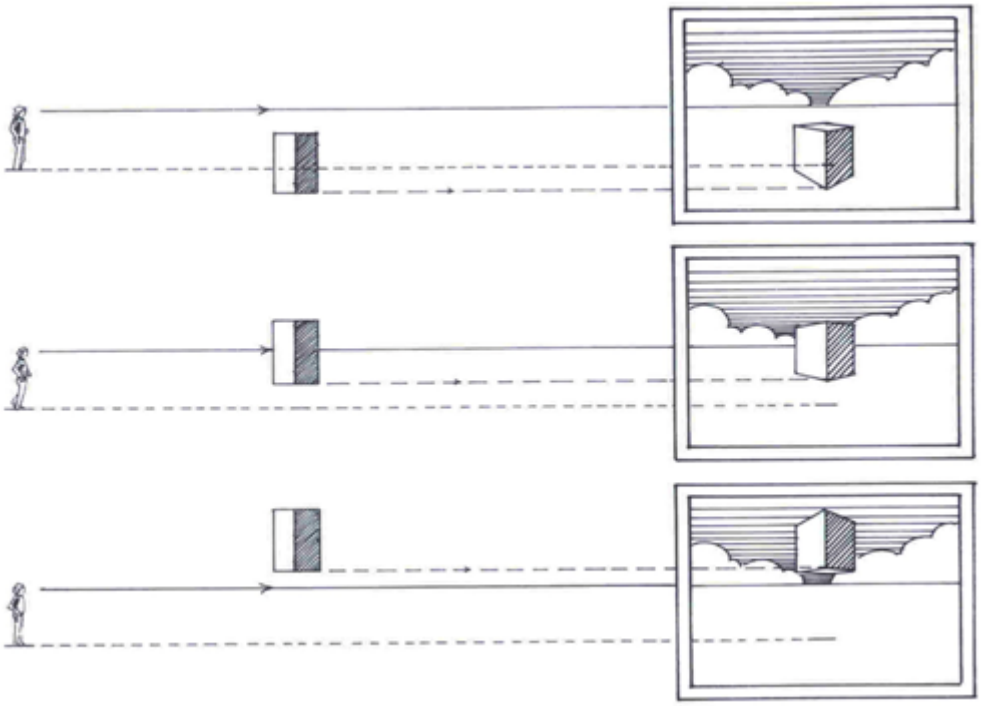

Fig.39: Various eye levels