Tishk International University
Engineering Faculty
Interion Design Department

LECTURE 5: FORM & SPACE

1ST STAGE

SPRING SEMESTER

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Form & Space

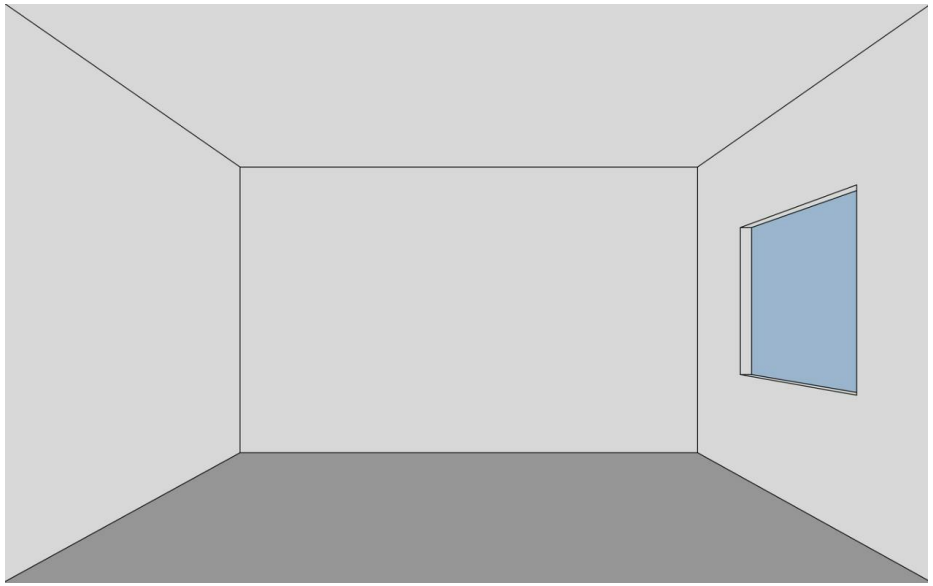
Space constantly encompasses our being. Through the volume of space, we move, see forms, hear sounds, feel breezes, and smell the fragrances of a flower garden in bloom. It is a material substance like wood or stone. Yet it is an inherently formless vapor. Its visual form, its dimensions and scale, the quality of its light—all of these qualities depend on our perception of the spatial boundaries defined by elements of form.

Form & Space

In interior design, the relationship between form and space plays a key role in creating functional and aesthetically pleasing environments. Form refers to the shape and structure of furniture, decor, and other elements within a space, while space refers to the area around and within them.

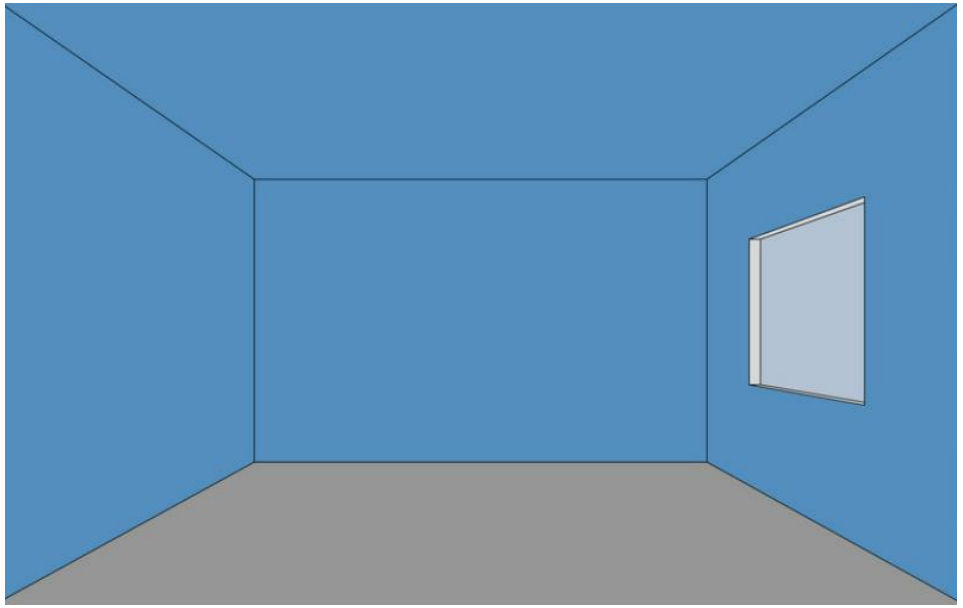
Form and space work together to create a harmonious and functional environment. For example, furniture and decors can be used to create different areas within a room and establish a sense of hierarchy. A sofas and chair can be arranged in conversational group to create a comfortable and inviting living space, while a dining table can be used to define a dining table.

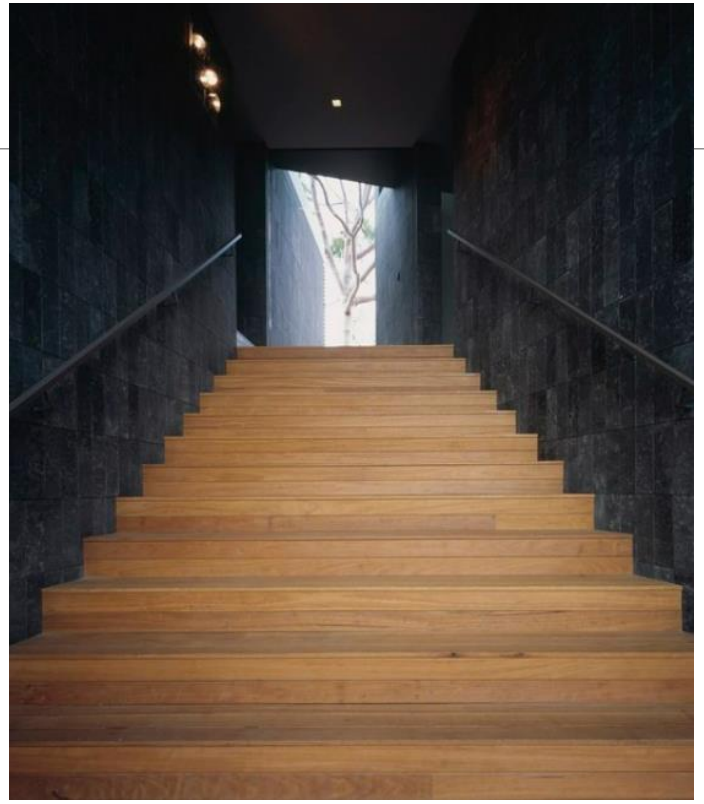
Form & Space



Enlarge the space: To create a feeling of spaciousness in an environment, the best method is to use light colors, which will reflect natural light and make surfaces appear larger to the eyes.

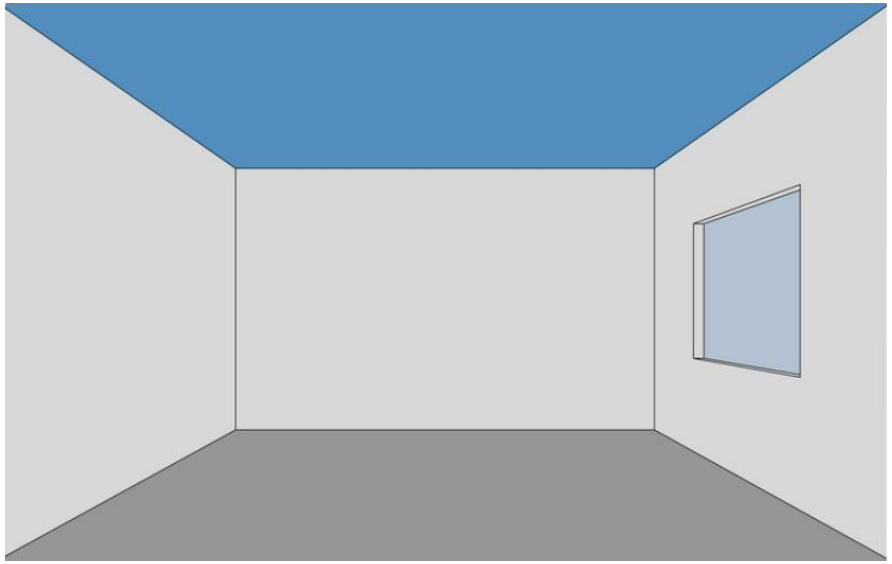
Form & Space





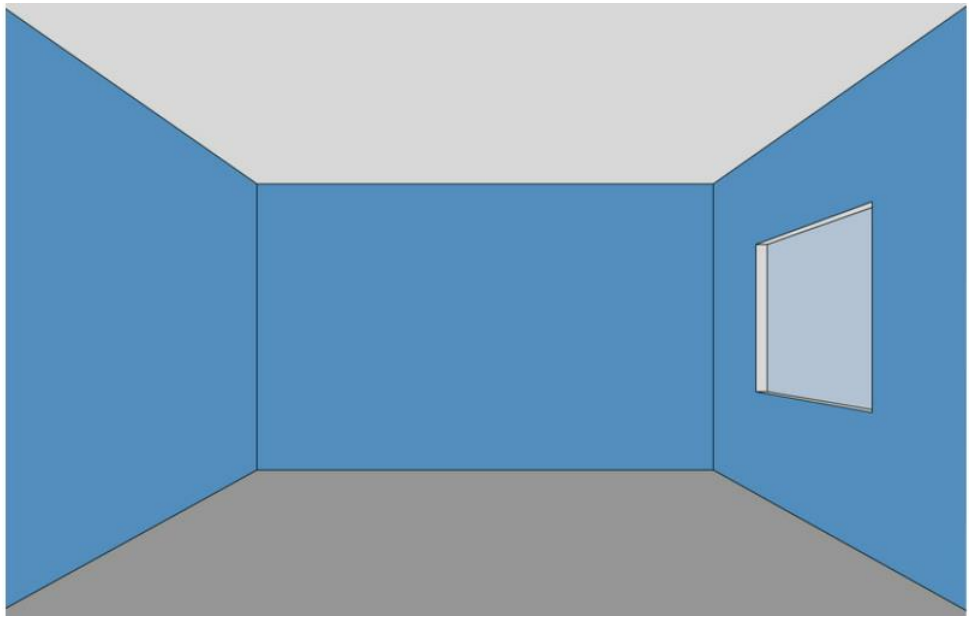
Compact the space: On the other hand, when the idea is to make the room appear more compact, smaller, and cozier, opting for stronger colors on wall surfaces can work well. They will absorb most of the natural light, giving a feeling of enclosure that can be beneficial for certain functions.

Form & Space



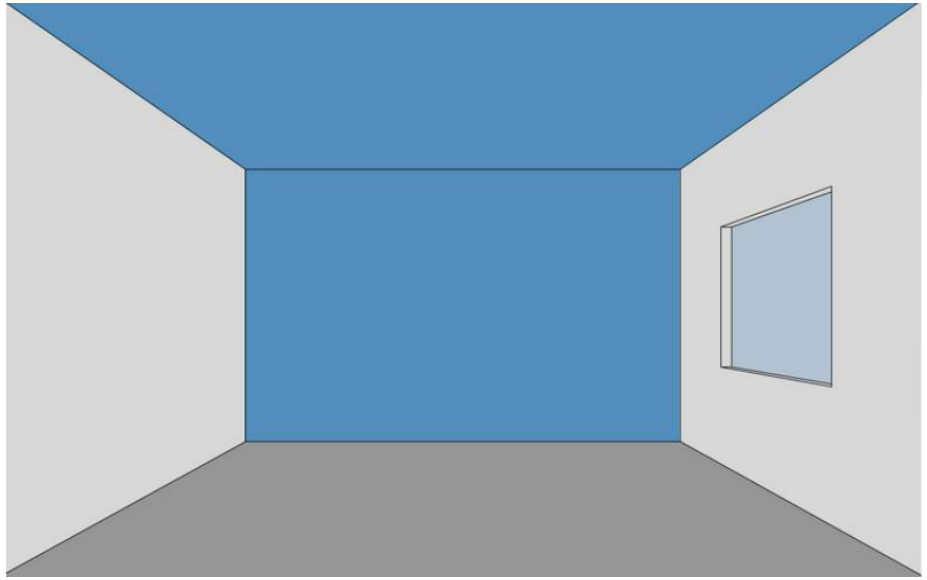
Lowering the space (ceiling): There are times when lowering the height of the ceiling can make the space more pleasant and provide a welcoming feeling. When painting it in a darker color than the walls or leaving the material texture visible, this feature will give the impression that the ceiling is lower.

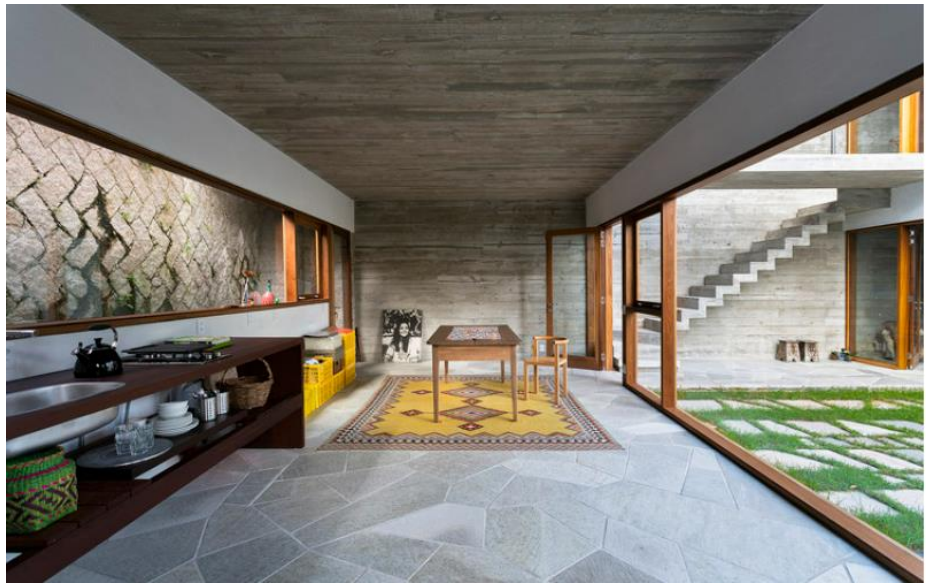
Form & Space



Stretch the space: In other situations, it's just the opposite. There are apartments whose lower ceilings give a claustrophobic feel to the spaces. Painting the walls in a darker color and leaving the ceiling white makes it feel like a higher ceiling.

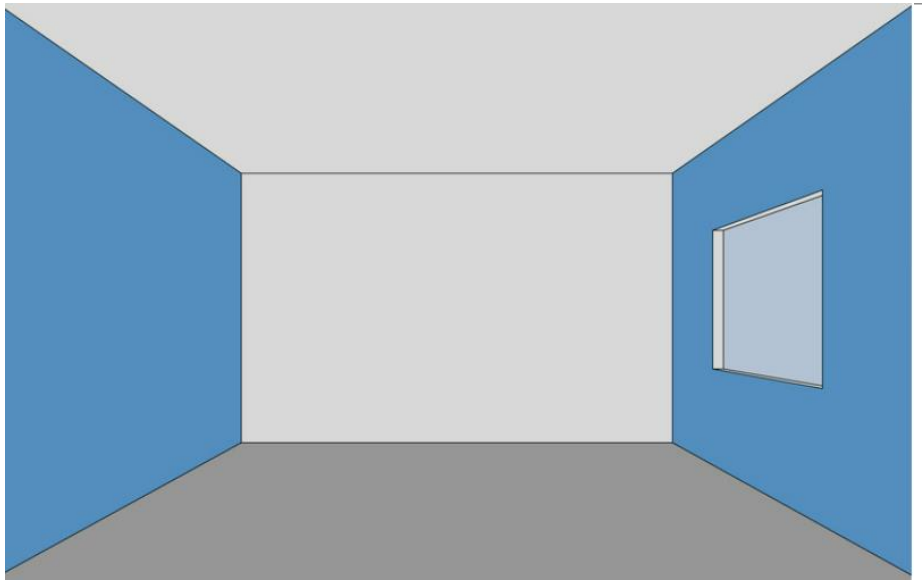
Form & Space





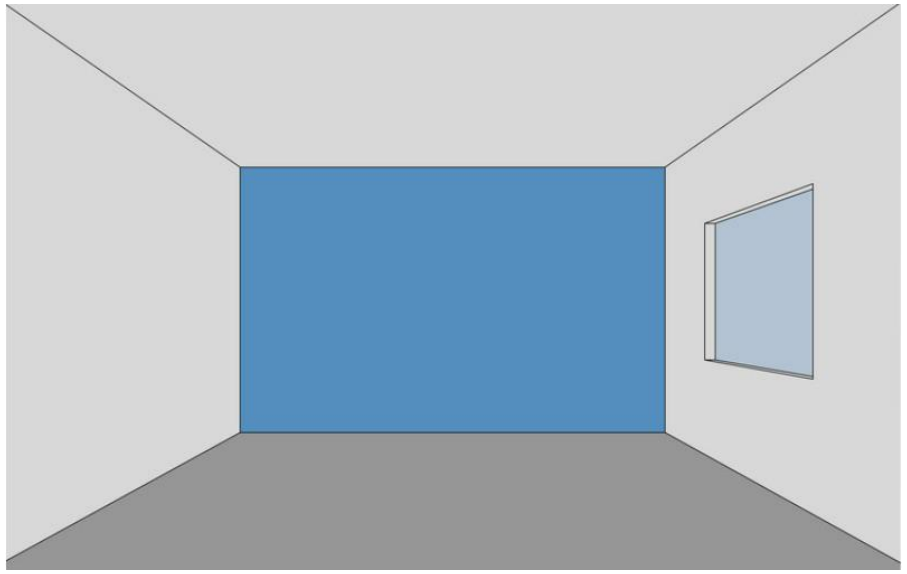
Widening the space: Painting the back wall and the ceiling with the same darker colors and leaving the side walls lighter will make the space appear wider and more spacious. This is a technique widely used in corridors or narrow rooms.

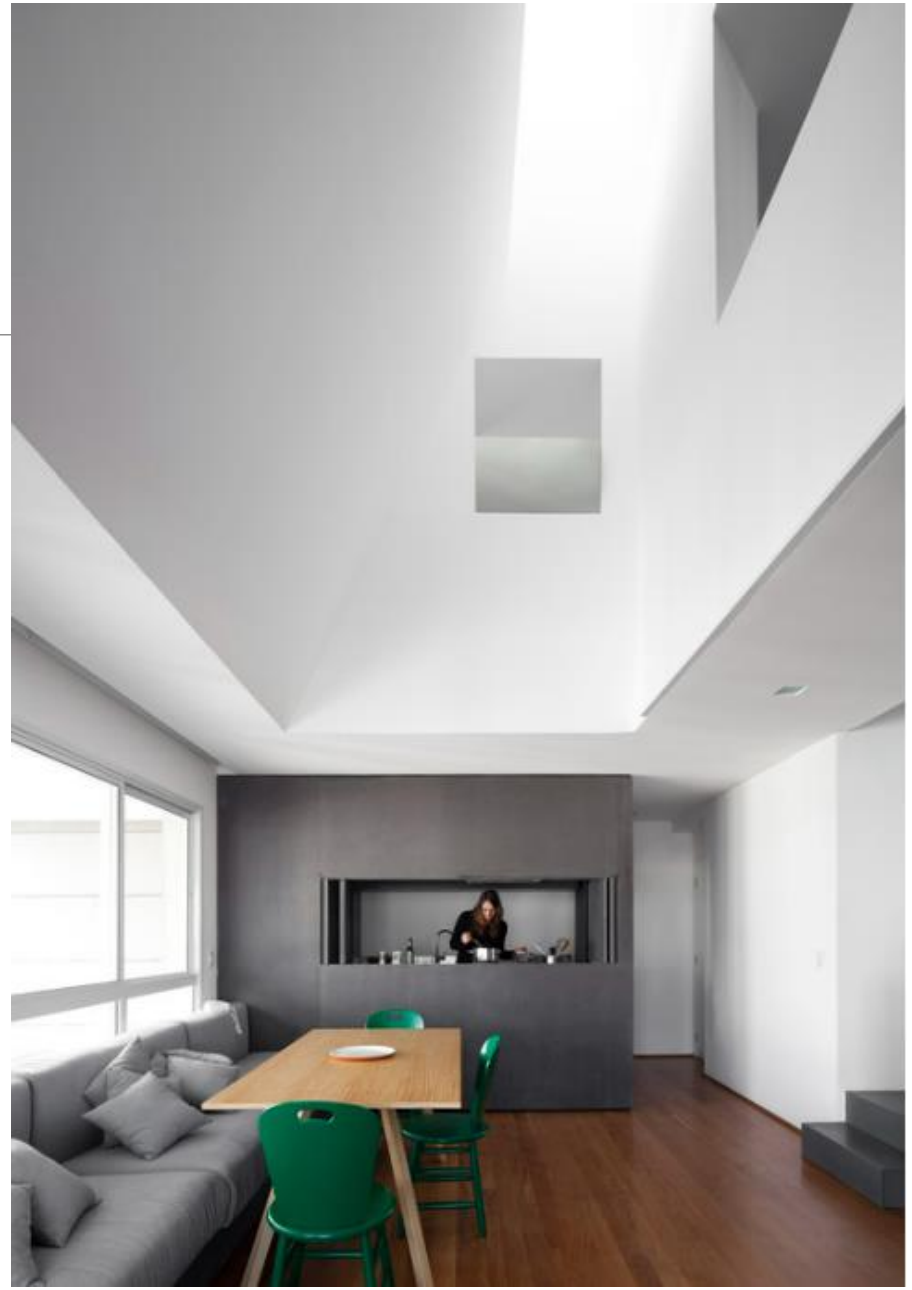
Form & Space



Narrowing the space: Painting the two opposing side walls dark colors and leaving the background and the ceiling in light colors will make the space narrower to the eyes, improving the proportions of rooms with unbalanced dimensions.

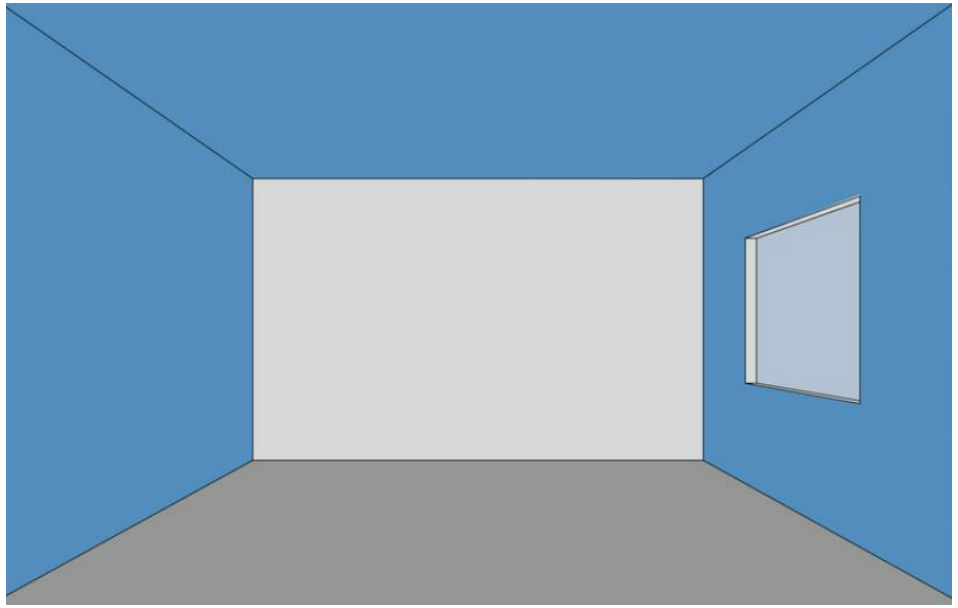
Form & Space

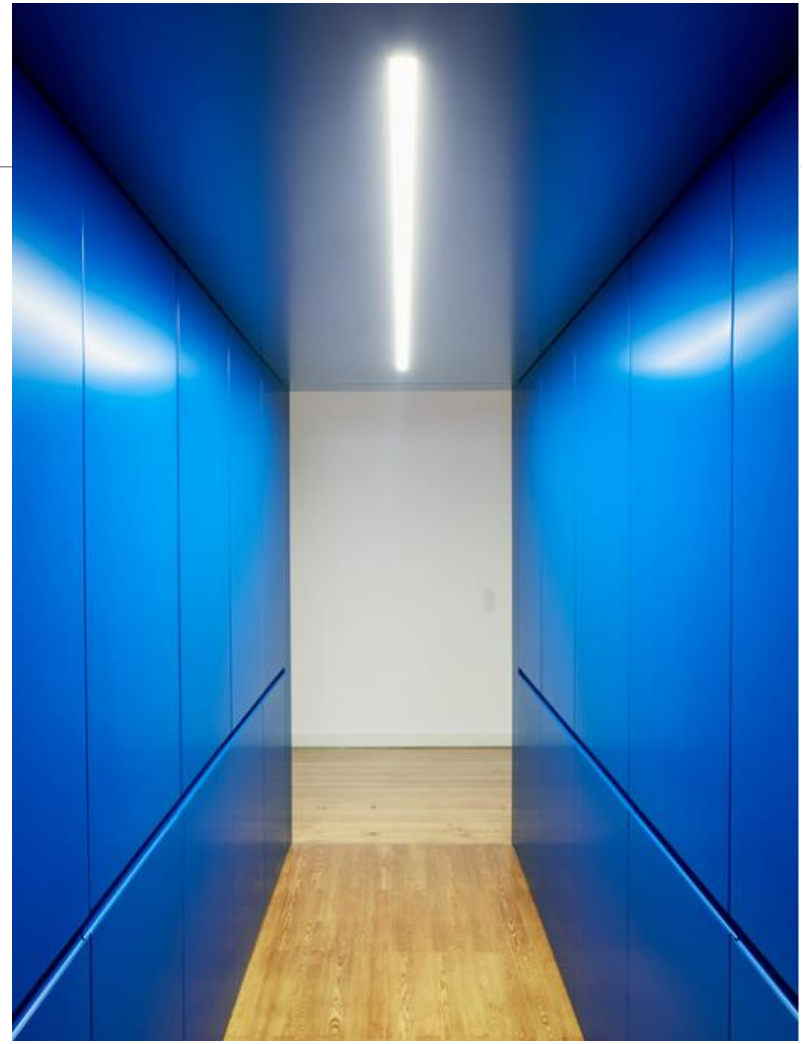




Shortening the space: If you have a very large space in your home and want it to feel more intimate, invest in dark tones on the back wall in contrast to lighter colors elsewhere.

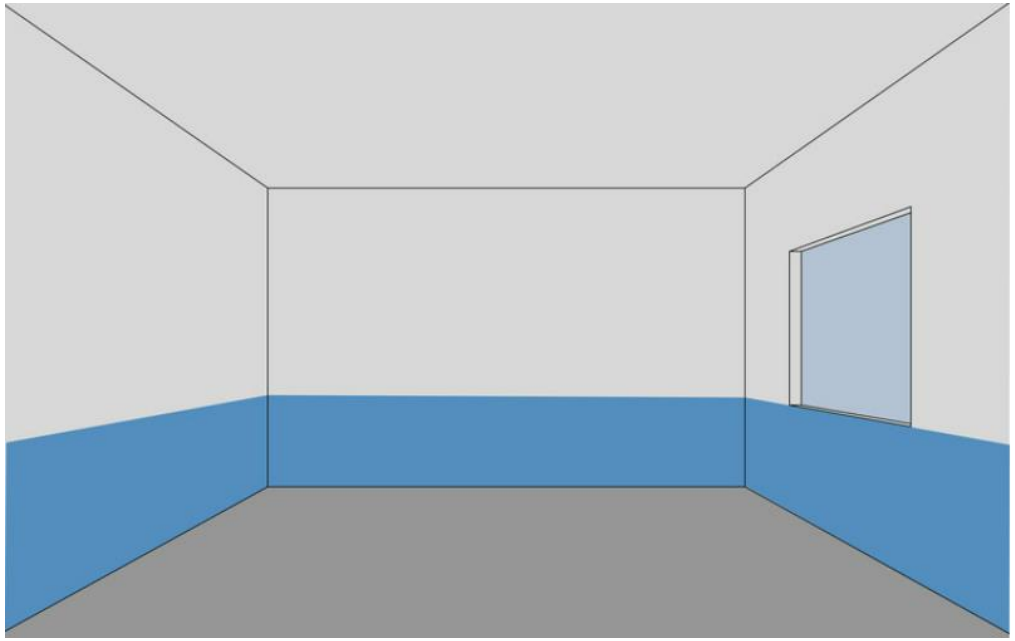
Form & Space



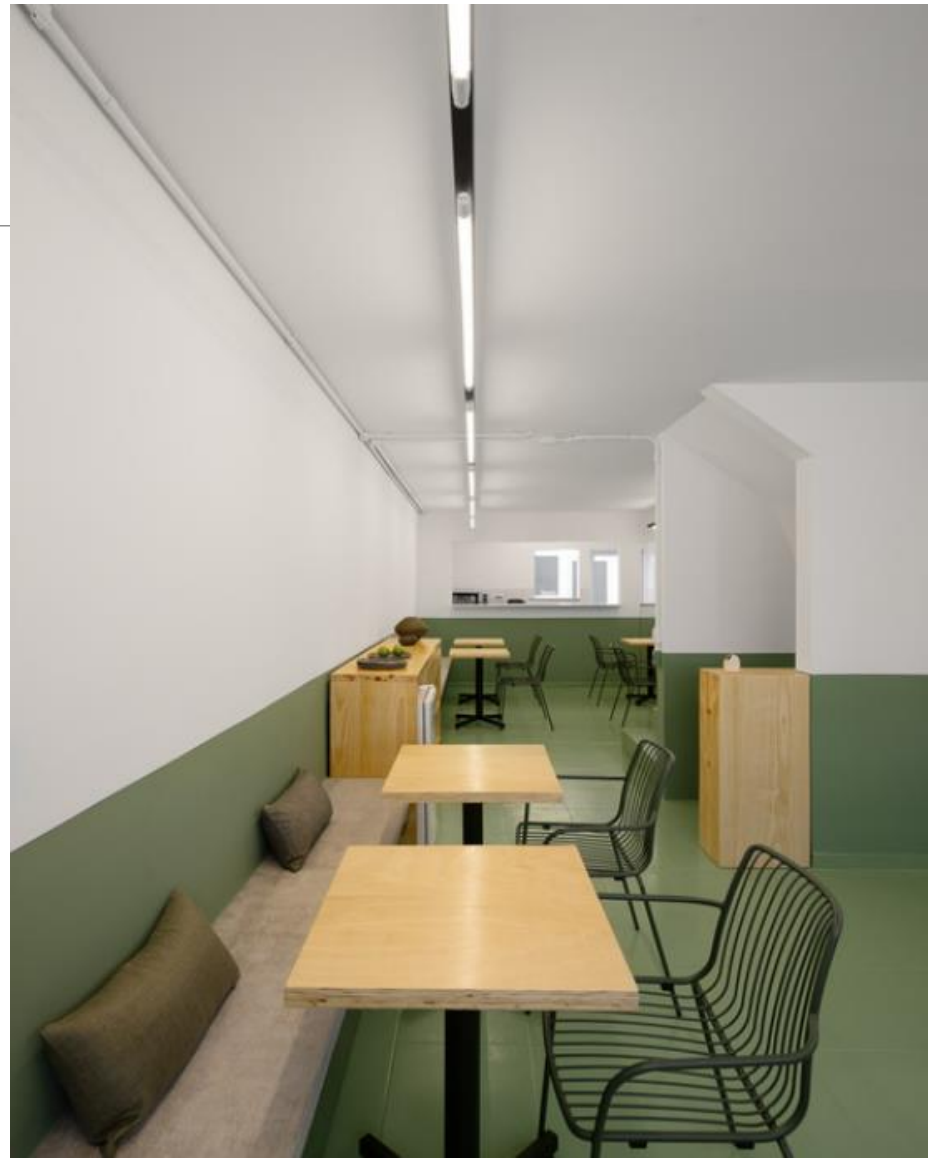


Highlighting a wall: To highlight a wall, it is recommended to keep it a lighter color while others have a darker tint. This causes the eye to be drawn to it

Form & Space

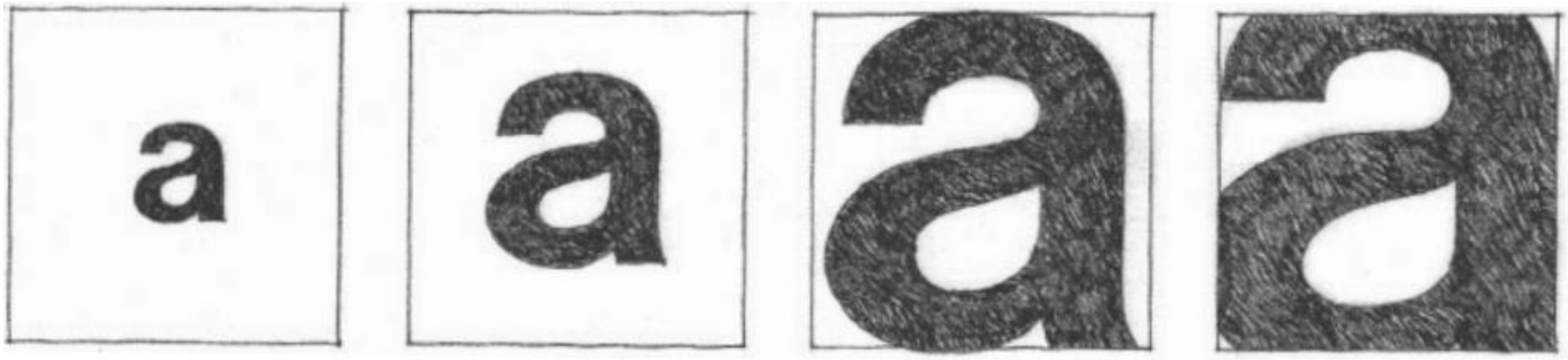


Shortening the wall: If the idea is to make the walls shorter, applying a darker shade to the bottom of the wall will work.



FORM & SPACE: THE UNITY OF OPPOSITES

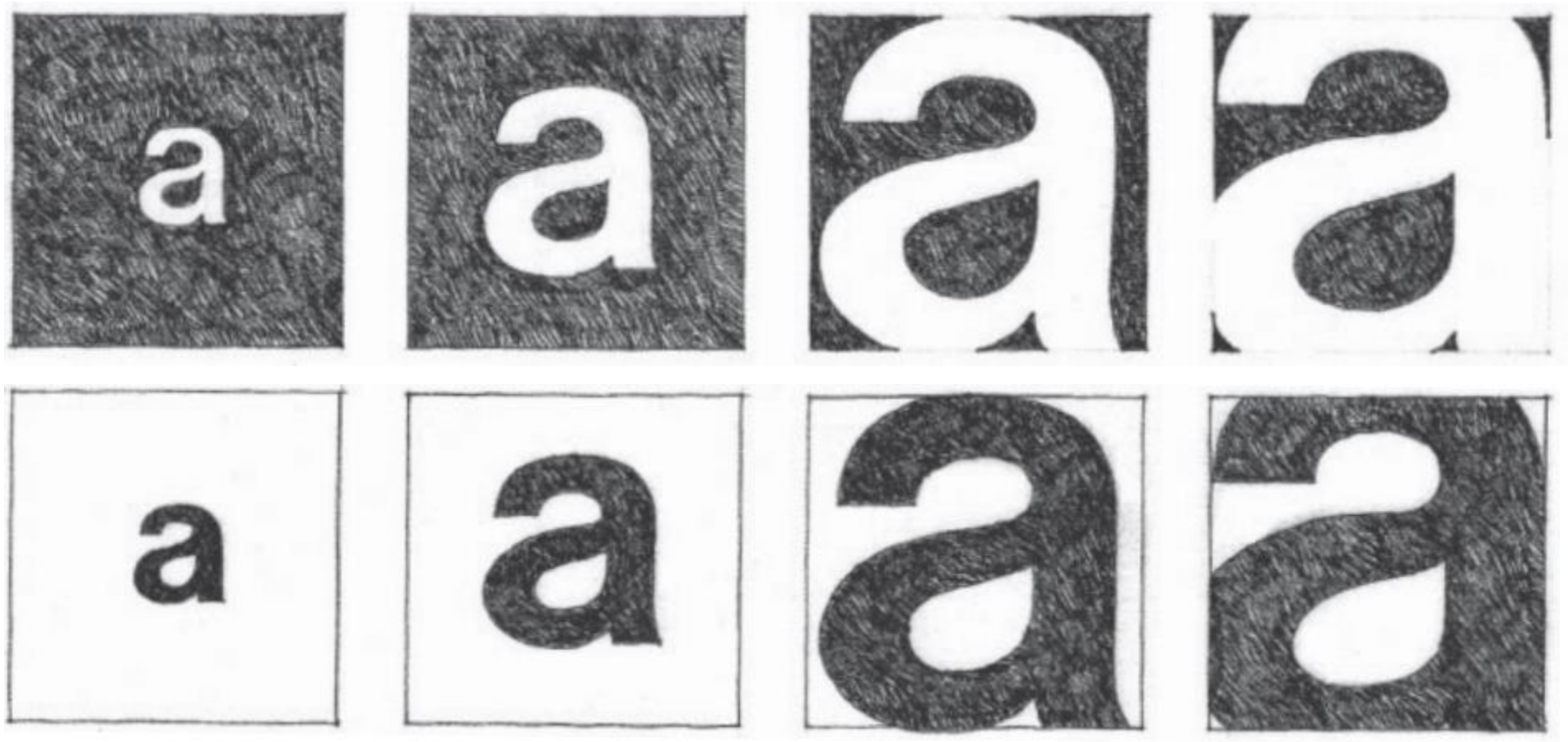
Our visual field normally consists of heterogeneous elements that differ in shape, size, color, or orientation. To better comprehend the structure of a visual field, we tend to organize its elements into two opposing groups: positive elements, which are perceived as figures and negative elements, which provide a background for the figures.



FORM & SPACE: THE UNITY OF OPPOSITES

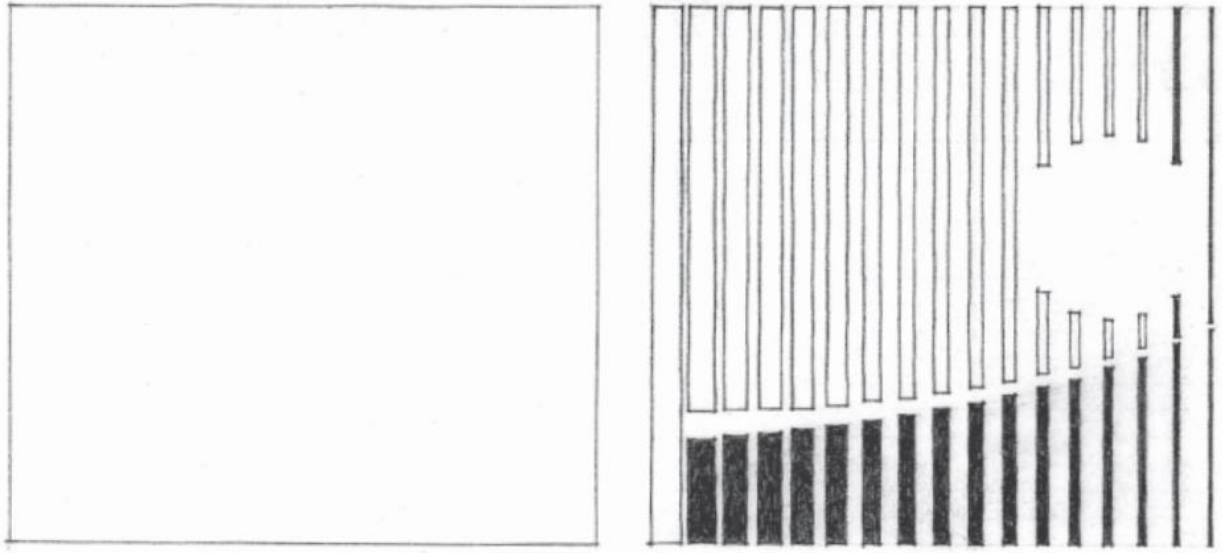
Our perception and understanding of a composition depends on how we interpret the visual interaction between the positive and negative elements within its field. On this page, for example, letters are seen as dark figures against the white background of the paper surface. Consequently, we are able to perceive their organization into words, sentences, and paragraphs. In the diagrams, the letter “a” is seen as a figure not only because we recognize it as a letter in our alphabet but also because its profile is distinct, its value contrasts with that of its background, and its placement isolates it from its context. As it grows in size relative to its field, however, other elements within and around it begin to compete for our attention as figures. At times, the relationship between figures and their background is so ambiguous that we visually switch their identities back and forth almost simultaneously

FORM & SPACE: THE UNITY OF OPPOSITES

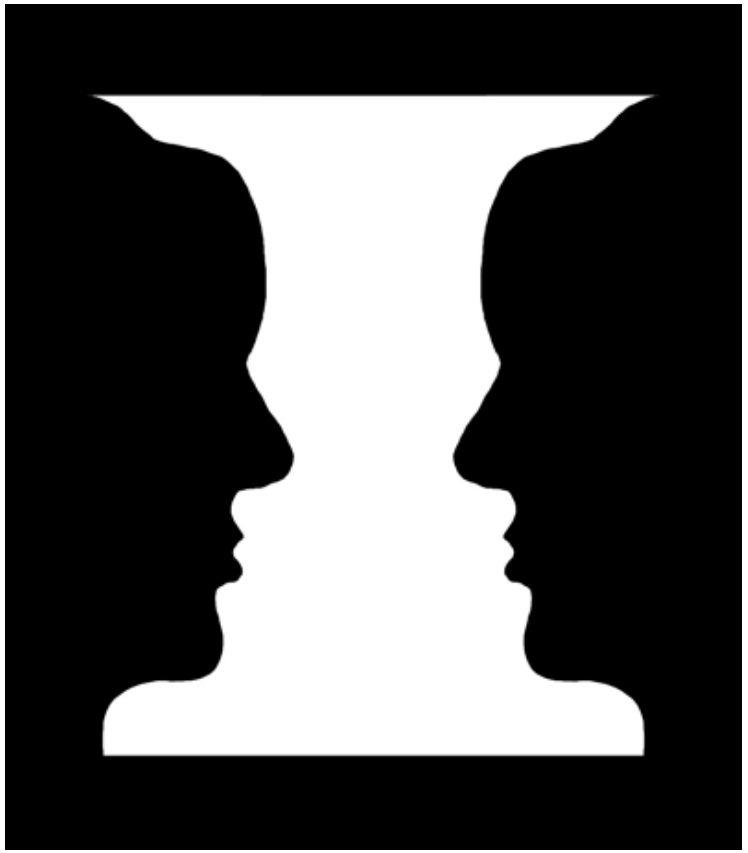


FORM & SPACE: THE UNITY OF OPPOSITES

In all cases, however, we should understand that figures, the positive elements that attract our attention, could not exist without a contrasting background. Figures and their background, therefore, are more than opposing elements. Together, they form an inseparable reality—a unity of opposites—just as the elements of form and space together form the reality of architecture.

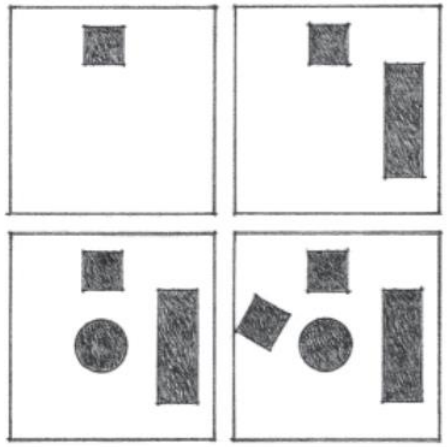


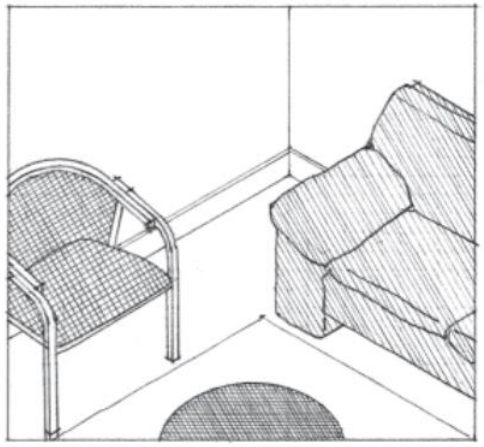
FORM & SPACE: THE UNITY OF OPPOSITES

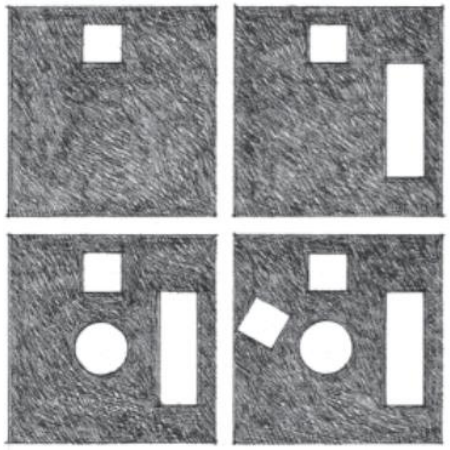


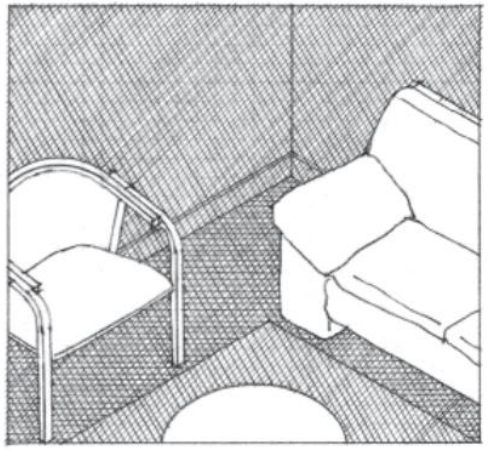
FORM & SPACE: THE UNITY OF OPPOSITES

The symbiotic relationship of the forms of mass and space in architecture can be examined and found to exist at several different scales. At each level, we should be concerned not only with the form of a building but also its impact on the space around it. At the scale of an interior design, articles of furnishings can either stand as forms within a field of space or serve to define the form of a spatial field









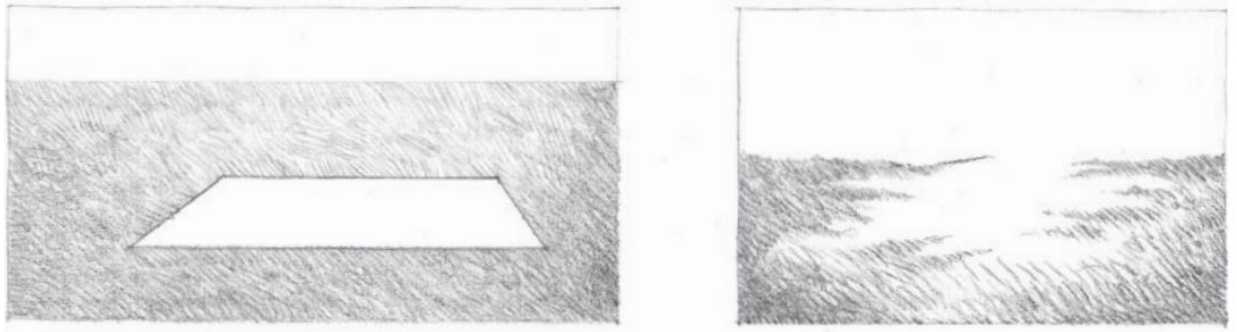
FORM DEFINING SPACE

When we place a two-dimensional figure on a piece of paper, it influences the shape of the white space around it. In a similar manner, any three-dimensional form naturally articulates the volume of space surrounding it and generates a field of influence or territory which it claims as its own.

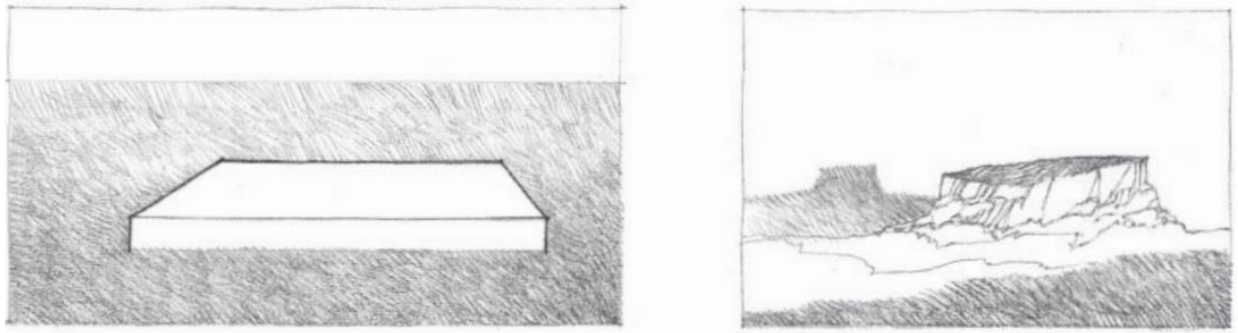
The following sections look at horizontal and vertical elements of form and present examples of how various configurations of these formal elements generate and define specific types of space.

HORIZONTAL ELEMENTS DEFINING SPACE

1.Base Plane. A horizontal plane laying as a figure on a contrasting background defines a simple field of space. This field can be visually reinforced in the following ways.

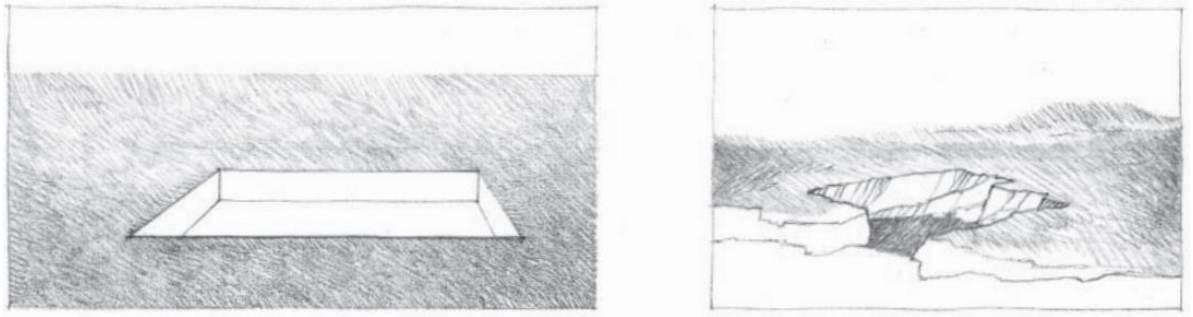


2.Elevated Base Plane. A horizontal plane elevated above the ground plane establishes vertical surfaces along its edges that reinforce the visual separation between its field and the surrounding ground.

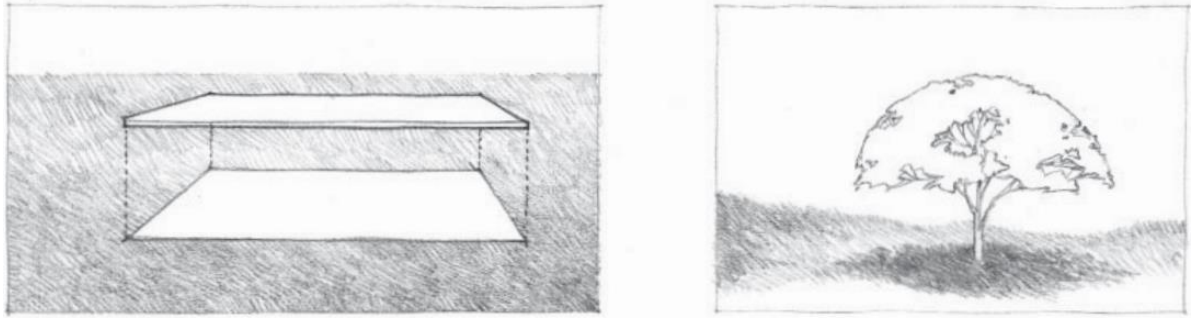


HORIZONTAL ELEMENTS DEFINING SPACE

3.Depressed Base Plane. A horizontal plane depressed into the ground plane utilizes the vertical surfaces of the lowered area to define a volume of space.

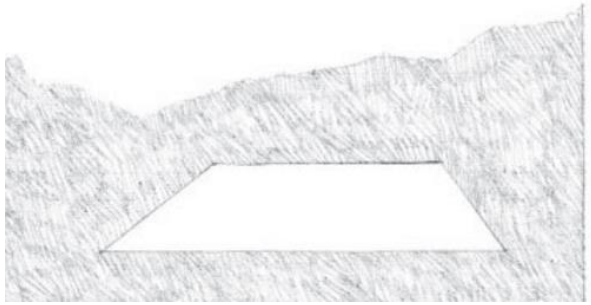


4.Overhead Plane. A horizontal plane located overhead defines a volume of space between itself and the ground plane.

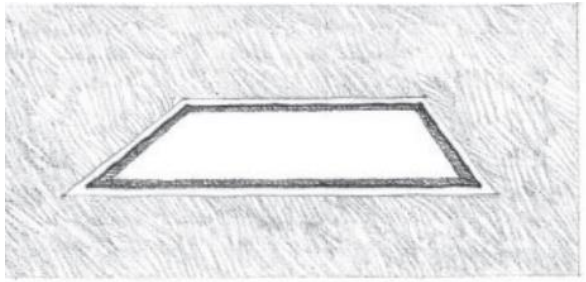


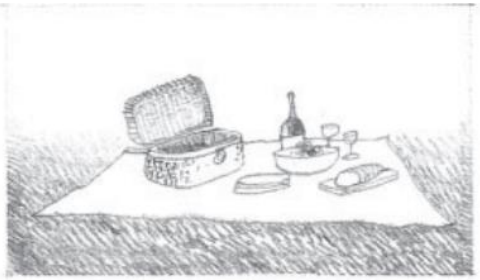
1. BASE PLANE

For a horizontal plane to be seen as a figure, there must be a perceptible change in color, tone, or texture between its surface and that of the surrounding area



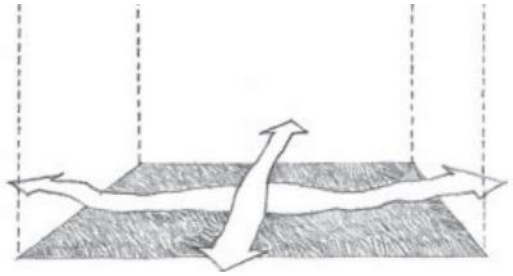
The stronger the edge definition of a horizontal plane is, the more distinct will be its field.



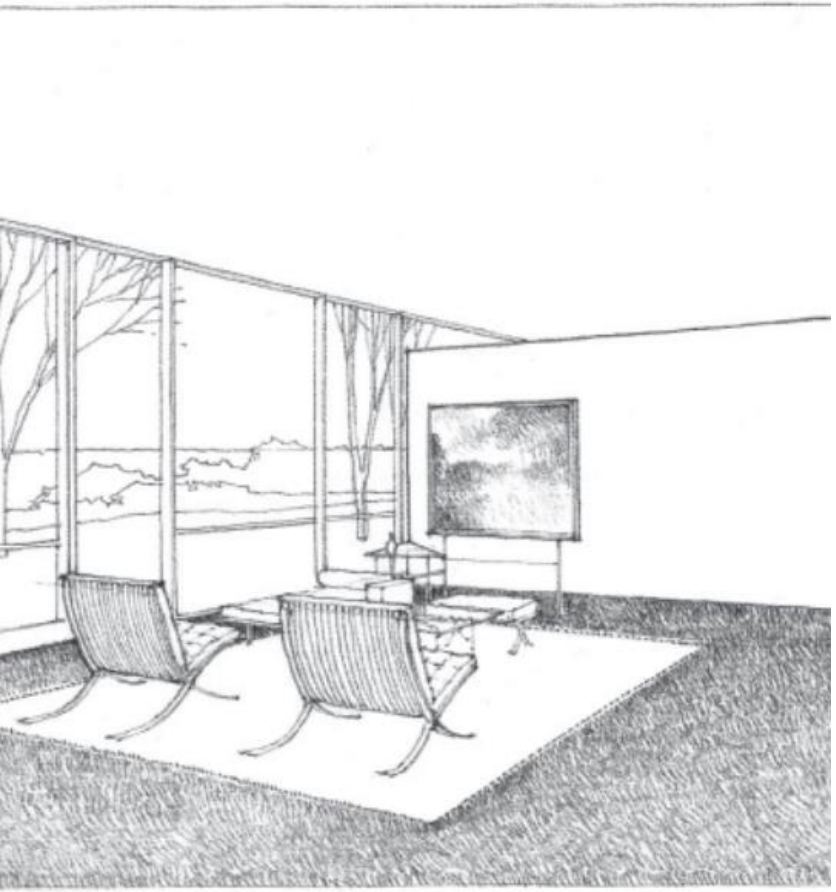


1. BASE PLANE

Although there is a continuous flow of space across it, the field nevertheless generates a spatial zone or realm within its boundaries



The surface articulation of the ground or floor plane is often used in interior design to define a zone of space within a larger context. The examples on the facing page illustrate how this type of spatial definition can be used to differentiate between a path of movement and places of rest, establish a field from which the form of a building rises out of the ground, or articulate a functional zone within a one-room living environment.

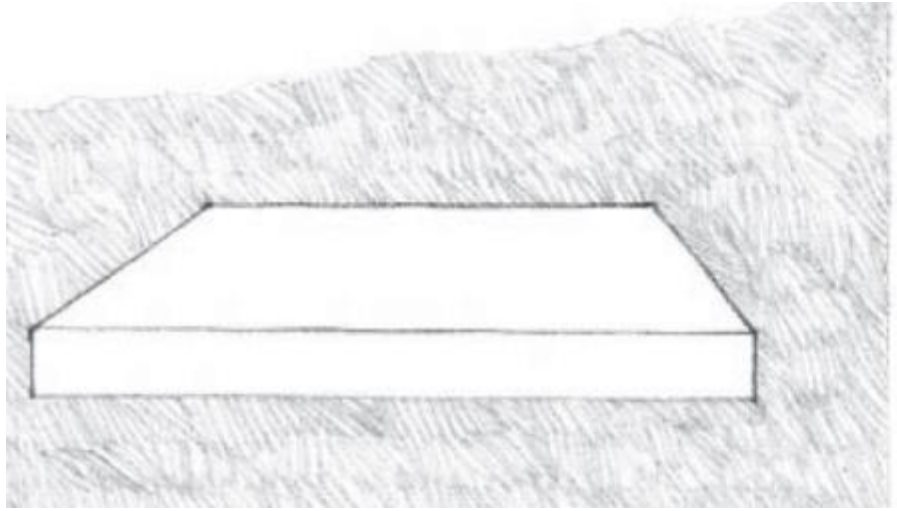


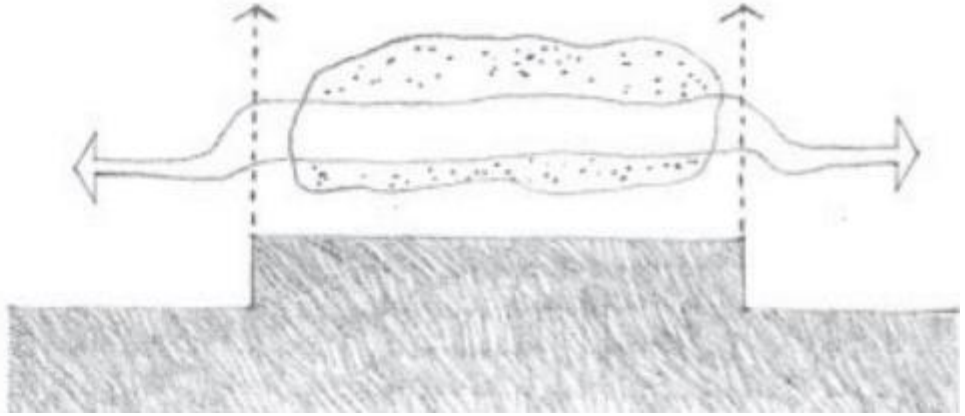
Glass House, New Canaan, Connecticut, 1949, Philip John

1. BASE PLANE

2. ELEVATED BASE PLANE

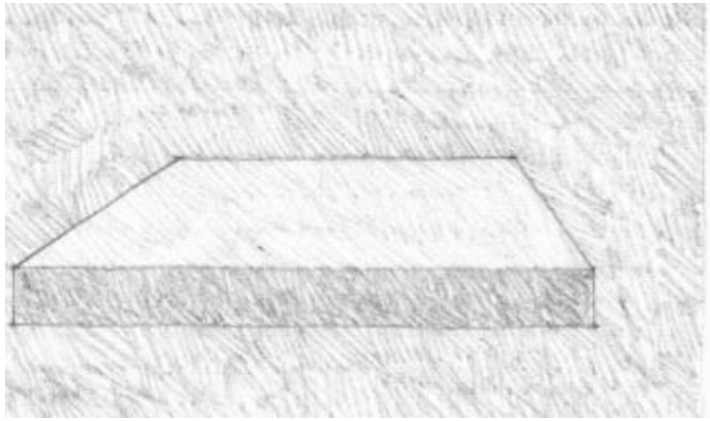
Elevating a portion of the base plane creates a specific domain within a larger spatial context. The changes in level that occur along the edges of the elevated plane define the boundaries of its field and interrupt the flow of space across its surface.

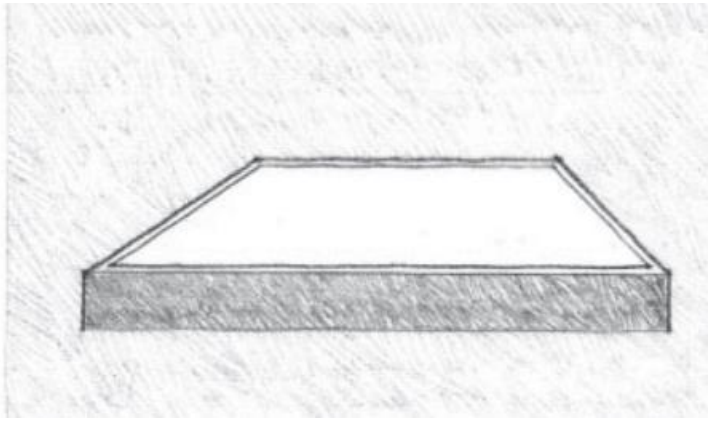




2. ELEVATED BASE PLANE

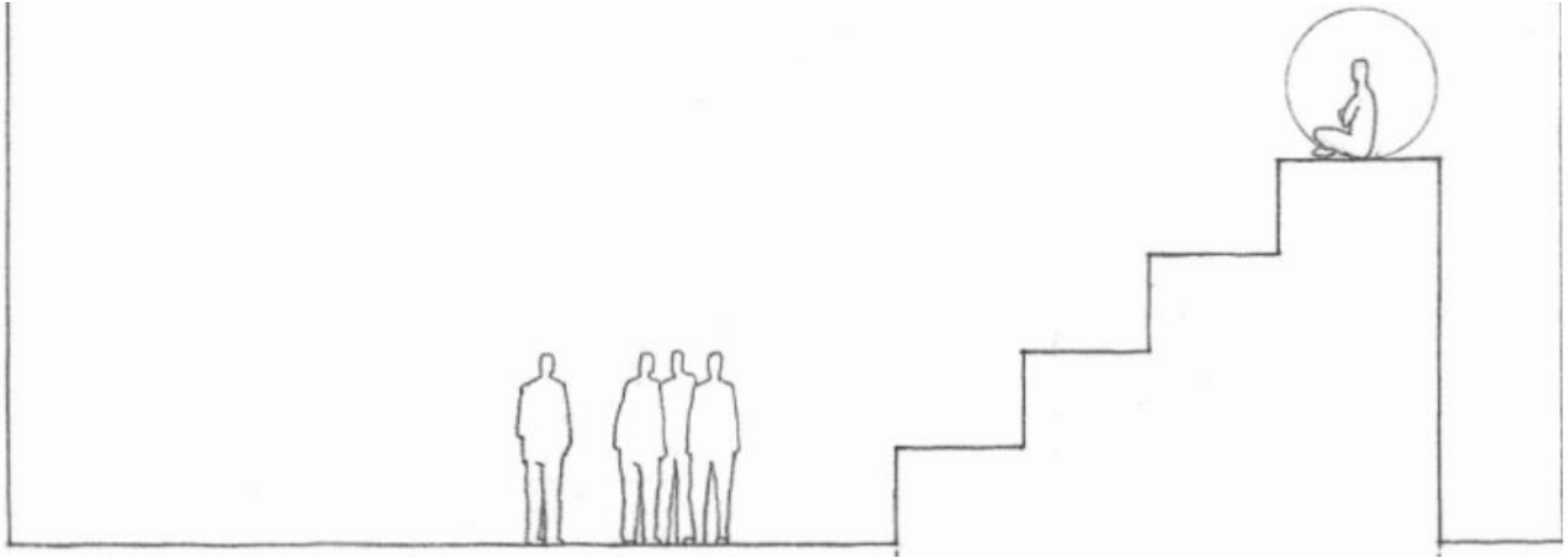
If the surface characteristics of the base plane continue up and across the elevated plane, then the field of the elevated plane will appear to be very much a part of the surrounding space. If, however, the edge condition is articulated by a change in form, color, or texture, then the field will become a plateau that is separate and distinct from its surroundings.





2. ELEVATED BASE PLANE

The degree to which spatial and visual continuity is maintained between an elevated space and its surroundings depends on the scale of the level change.

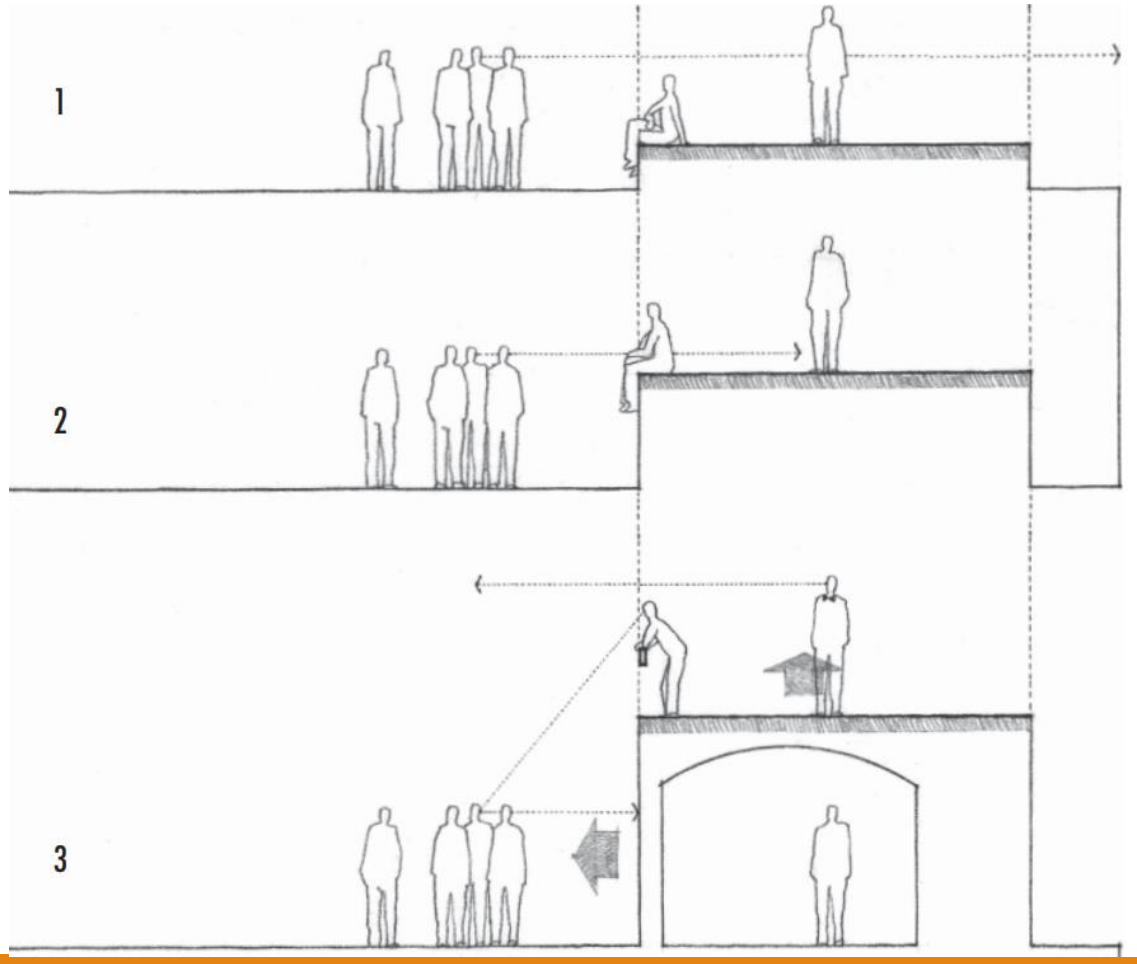


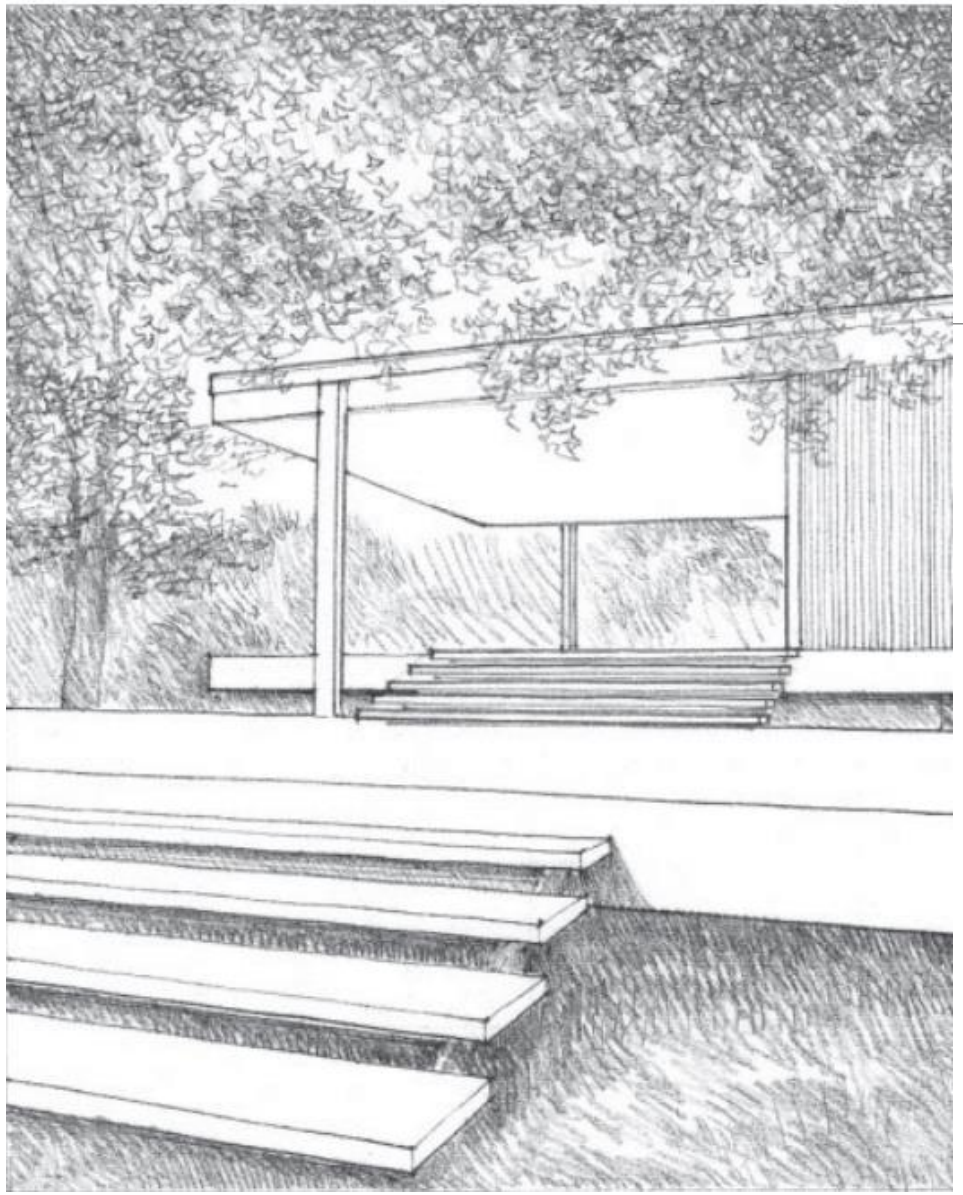
2. ELEVATED BASE PLANE

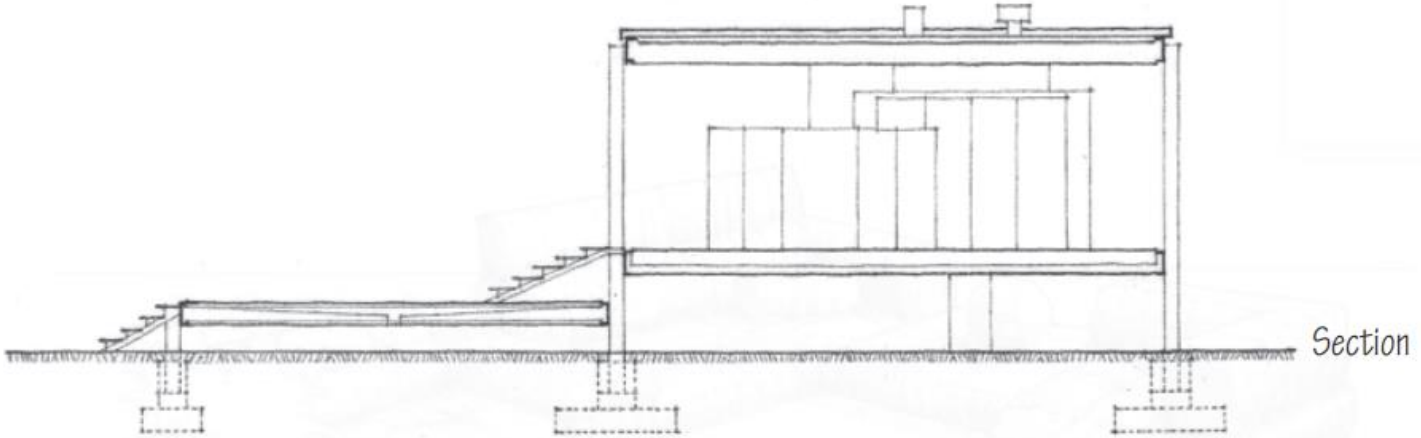
1. The edge of the field is well-defined; visual and spatial continuity is maintained; physical access is easily accommodated.

2. Visual continuity is maintained; spatial continuity is interrupted; physical access requires the use of stairs or ramps.

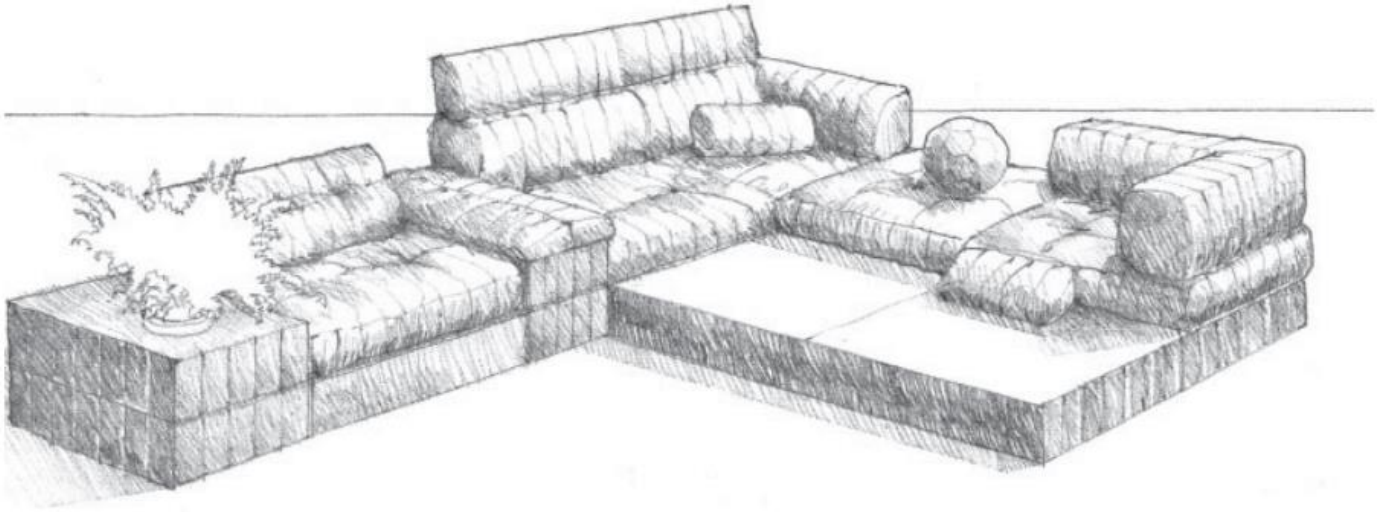
3. Visual and spatial continuity is interrupted; the field of the elevated plane is isolated from the ground or floor plane; the elevated plane is transformed into a sheltering element for the space below.





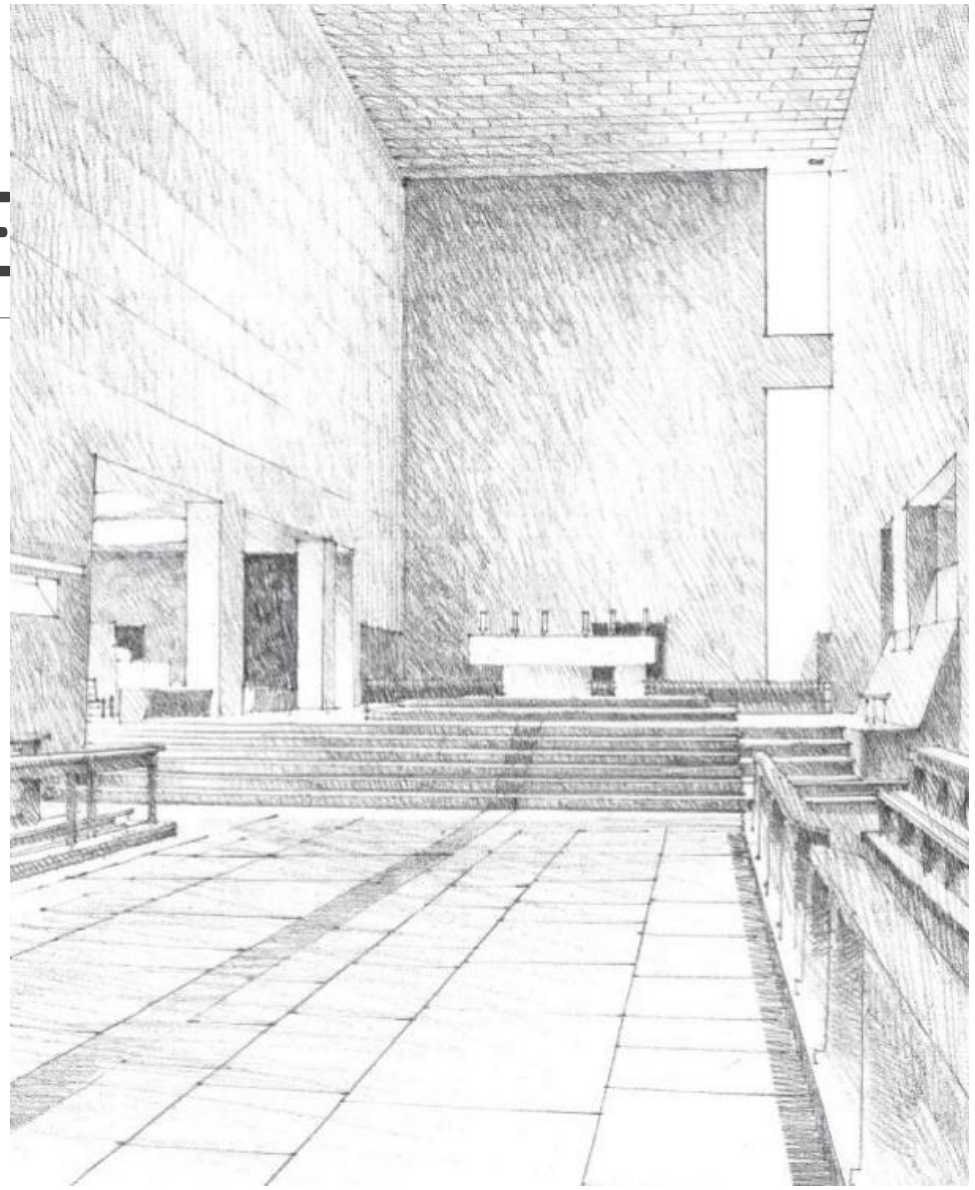


Section



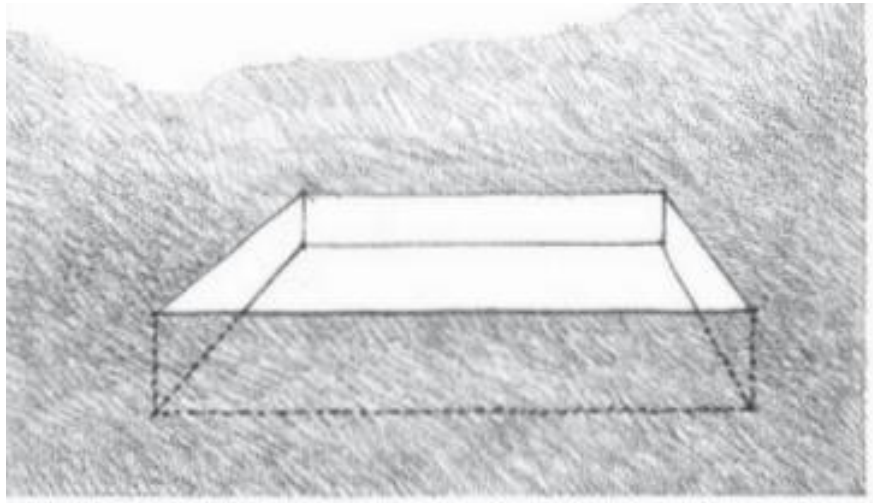
2. ELEVATED BASE PLANE

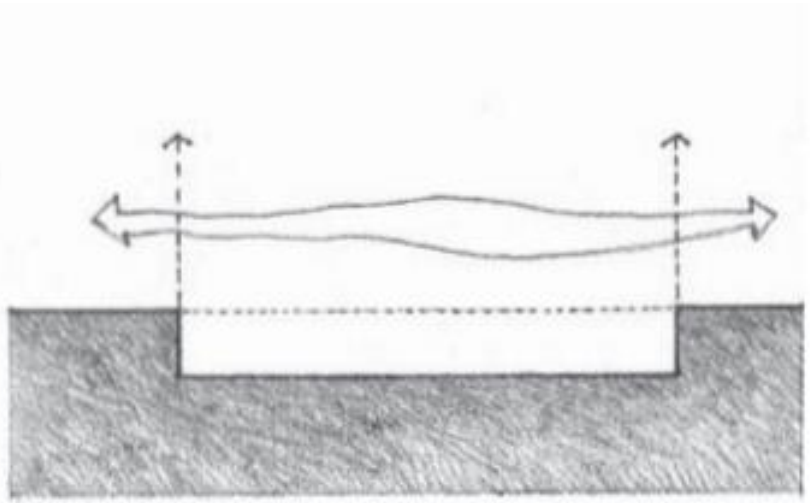
A section of the floor plane can be elevated to establish a singular zone of space within a larger room or hall. This raised space can serve as a retreat from the activity around it or be a platform for viewing the surrounding space. Within a religious structure, it can demarcate a sacred, holy, or consecrated place.



3. DEPRESSED BASE PLANE

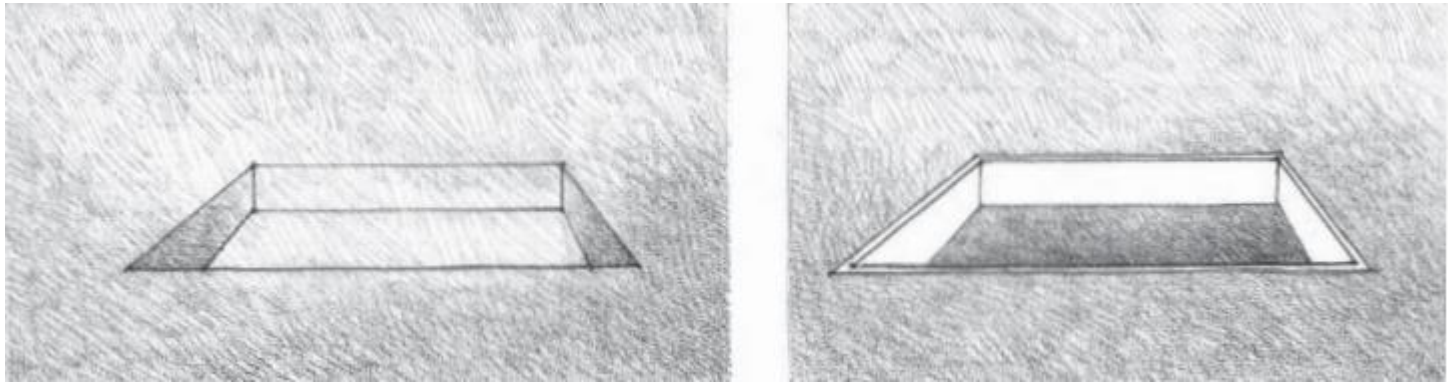
Lowering a portion of the base plane isolates a field of space from a larger context. The vertical surfaces of the depression establish the boundaries of the field. These boundaries are not implied as in the case of an elevated plane, but visible edges that begin to form the walls of the space.





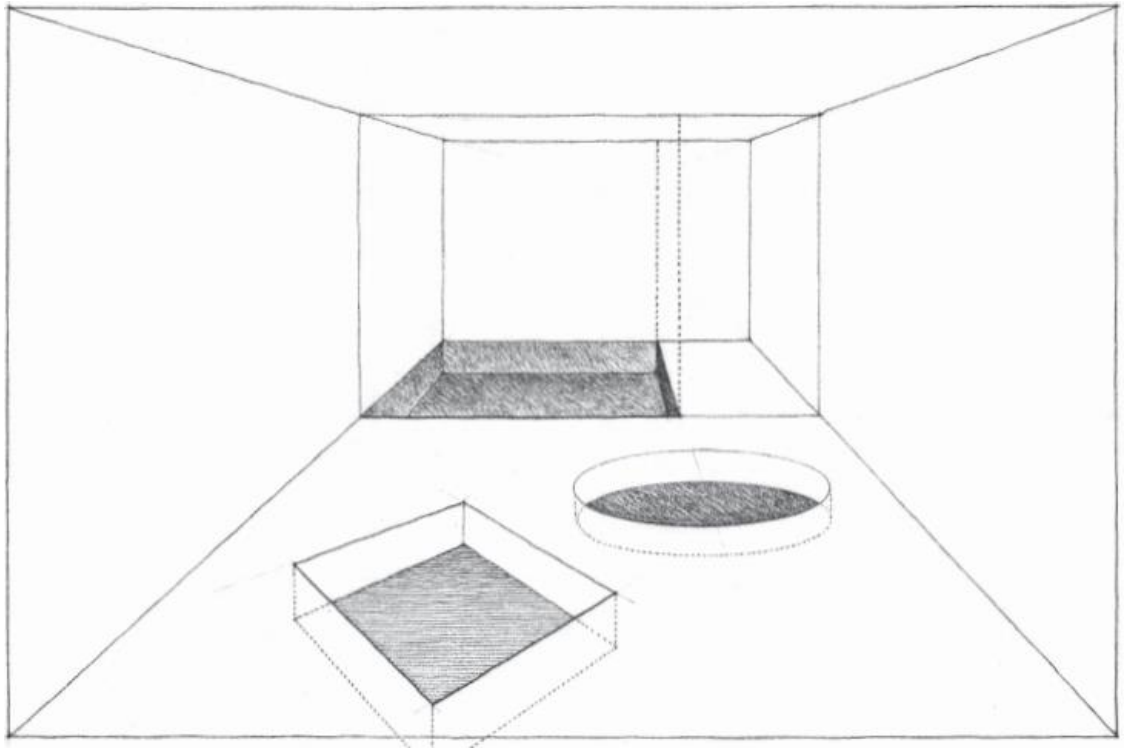
3. DEPRESSED BASE PLANE

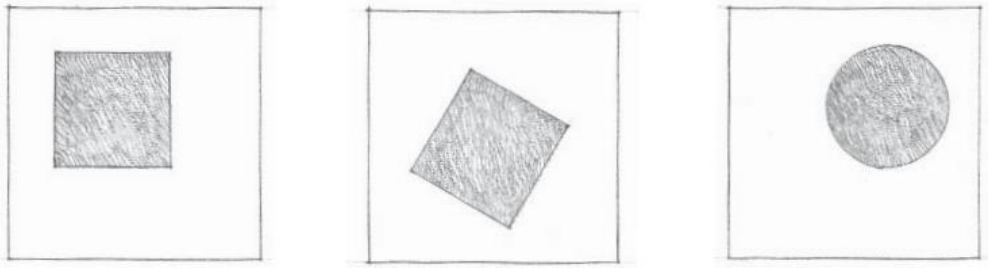
The field of space can be further articulated by contrasting the surface treatment of the lowered area and that of the surrounding base plane



3. DEPRESSED BASE PLANE

A contrast in form, geometry, or orientation can also visually reinforce the identity and independence of the sunken field from its larger spatial context.





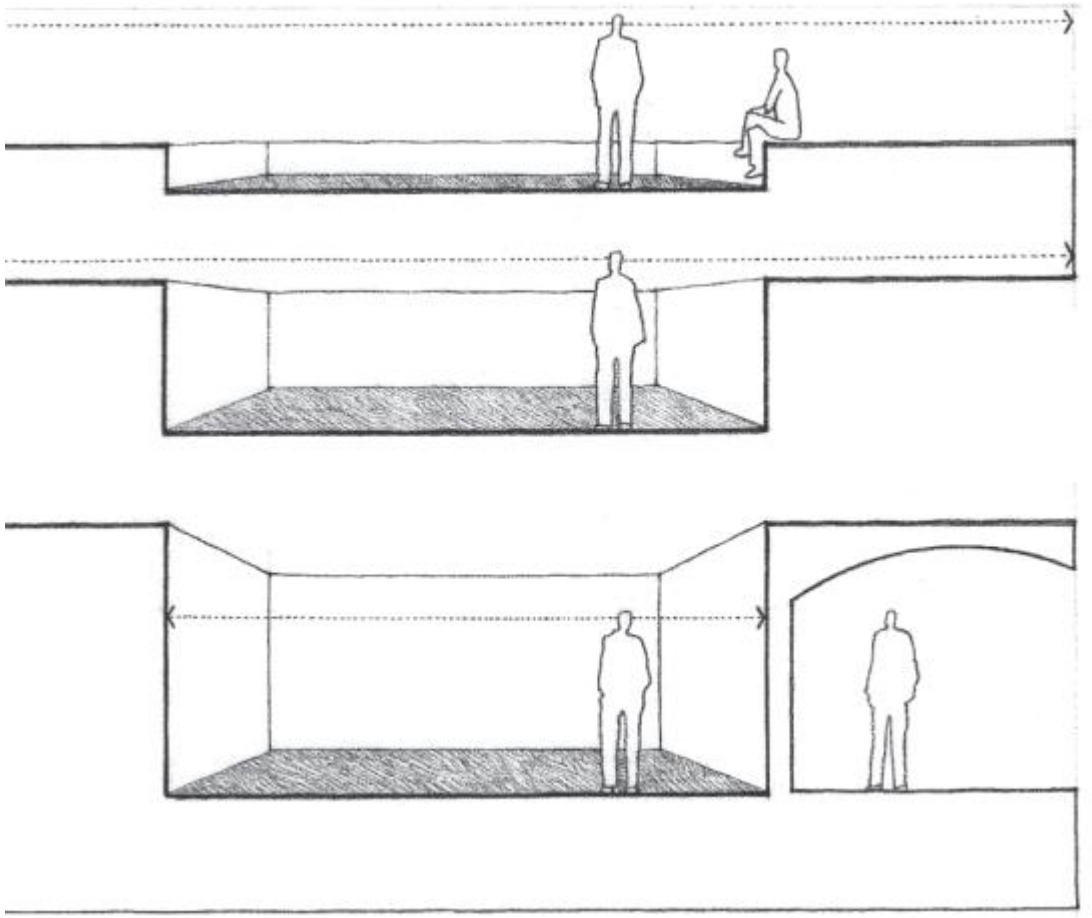
3. DEPRESSED BASE PLANE

The degree of spatial continuity between a depressed field and the raised area surrounding it depends on the scale of the level change.

1. The depressed field can be an interruption of the ground or floor plane and remain an integral part of the surrounding space.

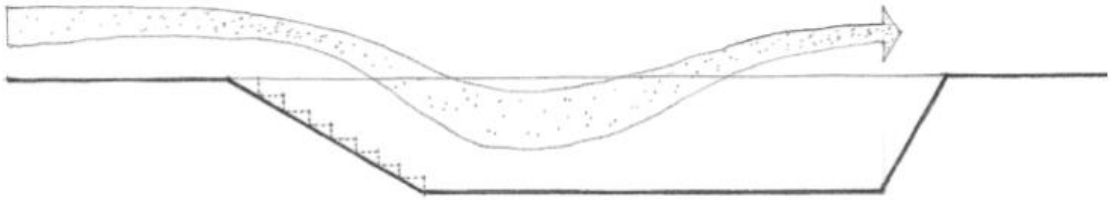
2. Increasing the depth of the depressed field weakens its visual relationship with the surrounding space and strengthens its definition as a distinct volume of space.

3. once the original base plane is above our eye level, the depressed field becomes a separate and distinct room in itself.

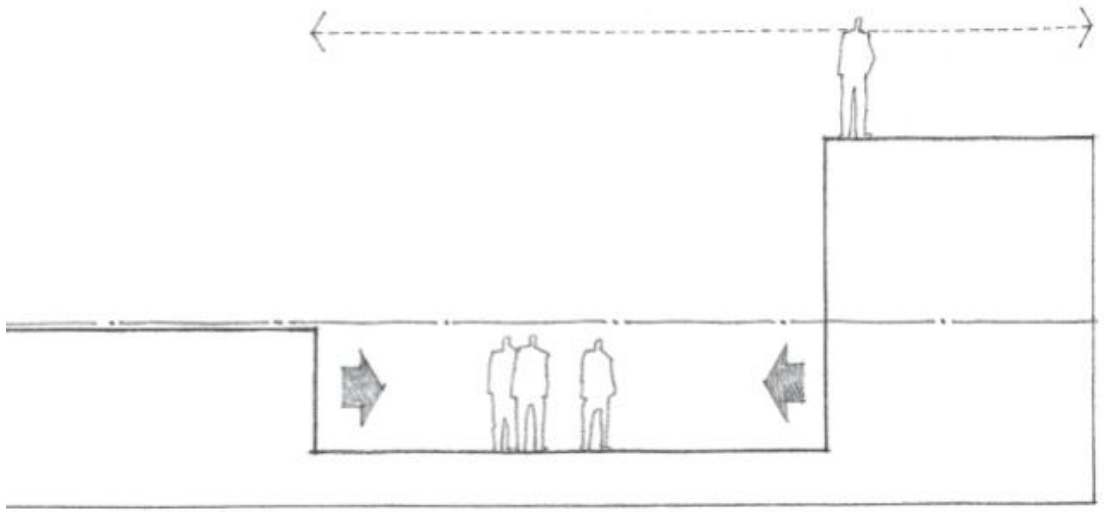


3. DEPRESSED BASE PLANE

Creating a stepped, terraced, or ramped transition from one level to the next helps promote continuity between a sunken space and the area that rises around it.

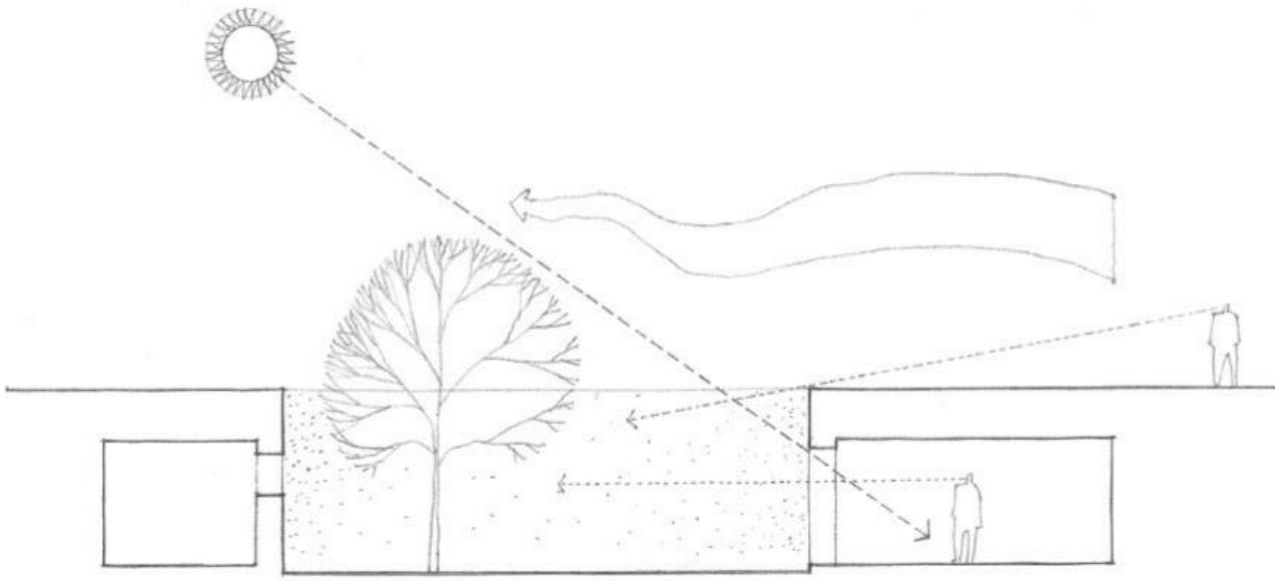


Whereas the act of stepping up to an elevated space might express the extroverted nature or significance of the space, the lowering of a space below its surroundings might allude to its introverted nature or to its sheltering and protective qualities



3. DEPRESSED BASE PLANE

The ground plane can be lowered to define sheltered outdoor spaces for underground buildings. A sunken courtyard, while protected from surface-level wind and noise by the mass surrounding it, remains a source of air, light, and views for the underground spaces opening onto it

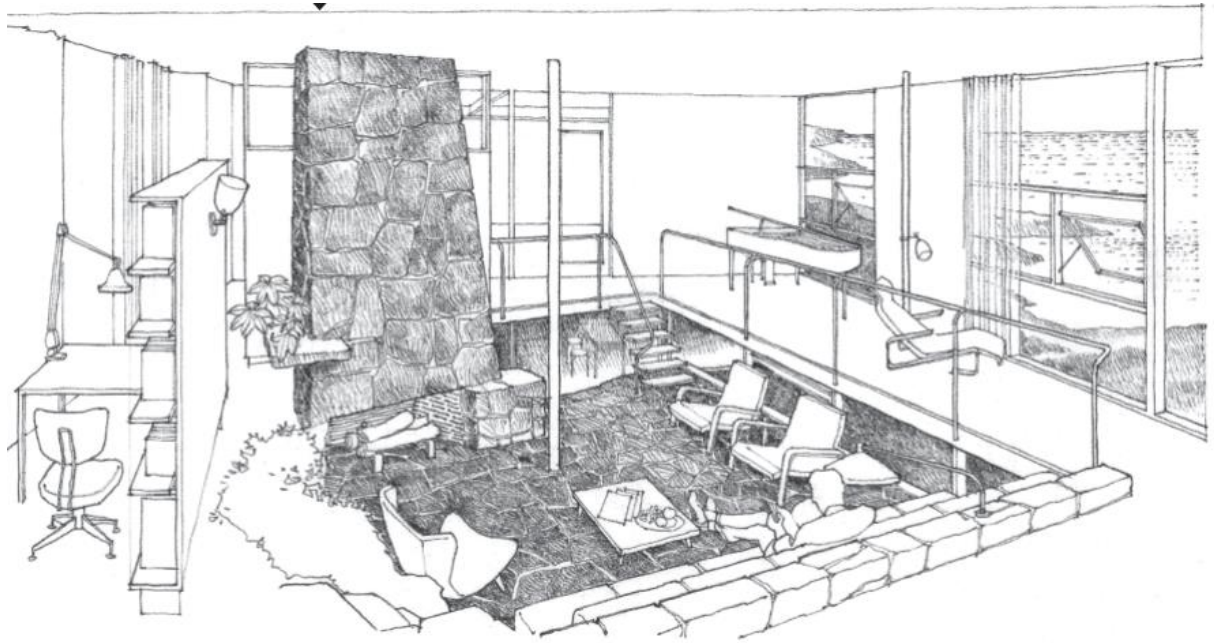


3. DEPRESSED BASE PLANE

In the examples, the designer has defined a reading area within a larger library space by dropping its floor plane below the main level of the library. He then uses the vertical bounding surfaces of the reading area for additional book storage.

3. DEPRESSED BASE PLANE

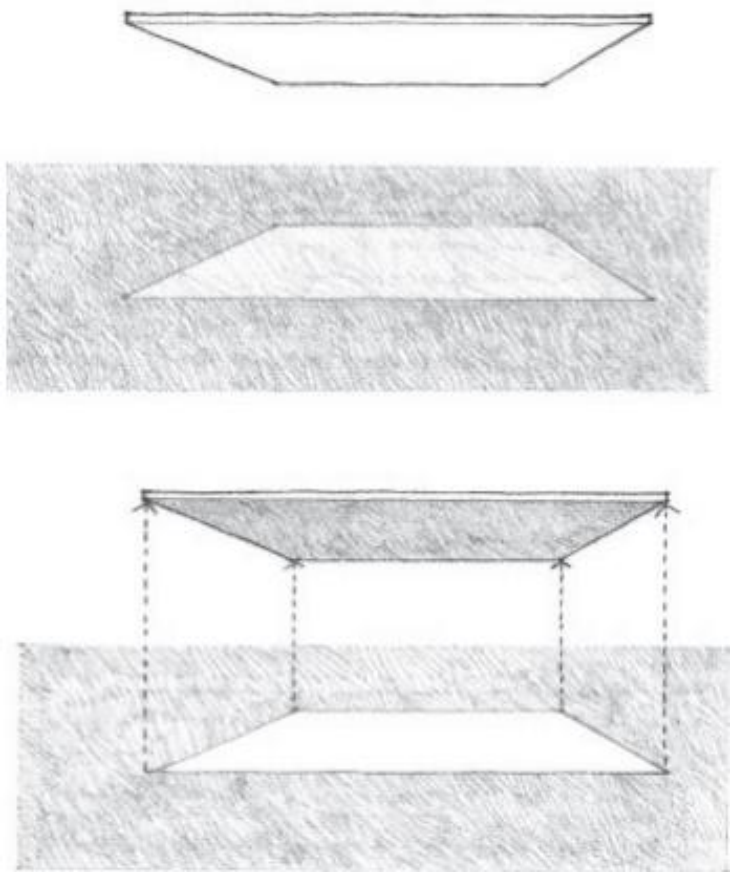
An area within a large room can be sunken to reduce the scale of the room and define a more intimate space within it.



View of the lowered living level

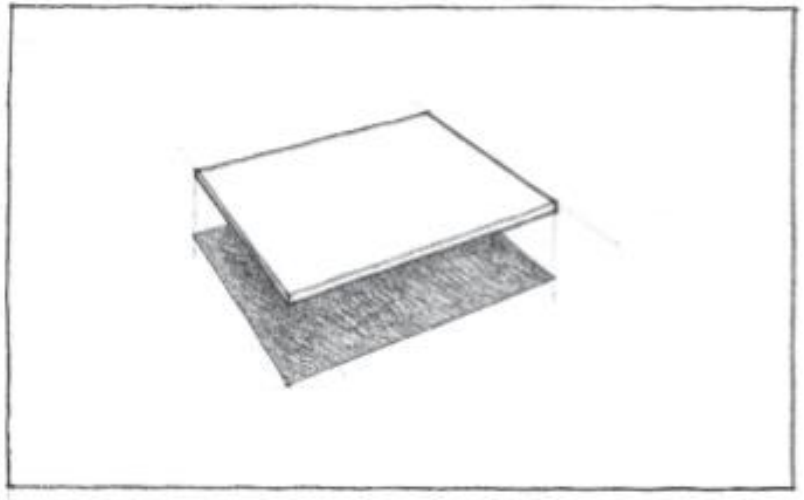
4. OVERHEAD PLANE

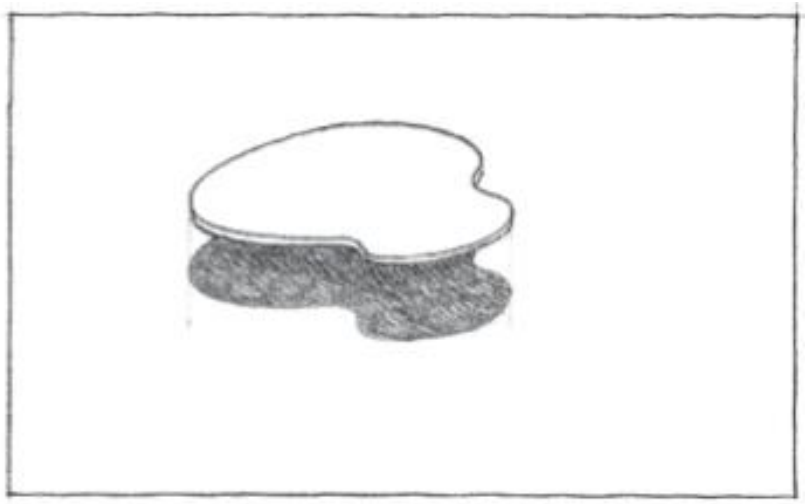
Similar to the manner in which a shade tree offers a sense of enclosure beneath its umbrella structure, an overhead plane defines a field of space between itself and the ground plane. Since the edges of the overhead plane establish the boundaries of this field, its shape, size, and height above the ground plane determine the formal qualities of the space.



4. OVERHEAD PLANE

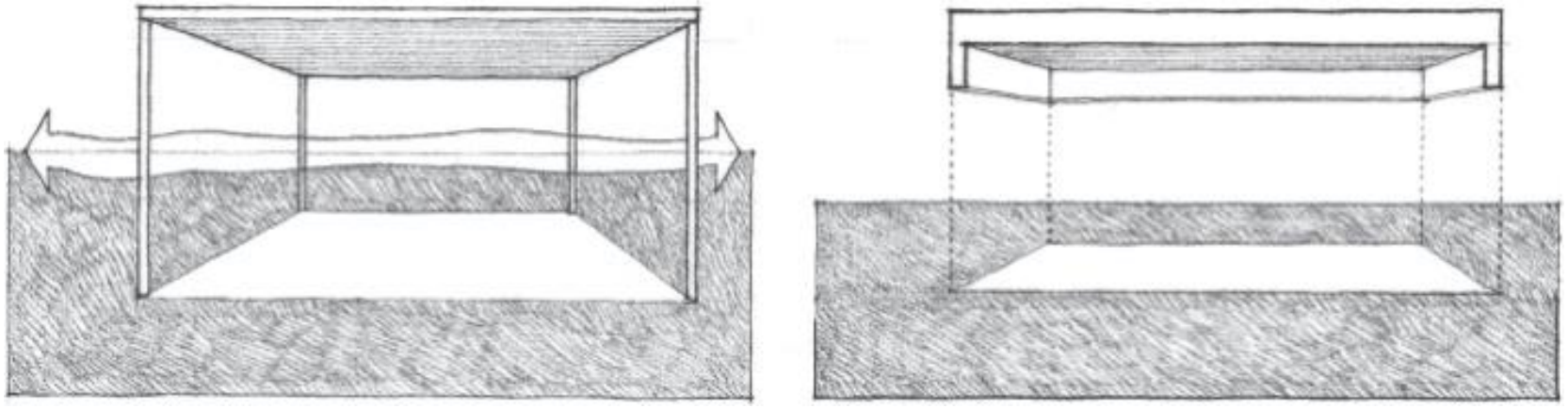
While the previous manipulations of the ground or floor plane defined fields of space whose upper limits were established by their context, an overhead plane has the ability to define a discrete volume of space virtually by itself





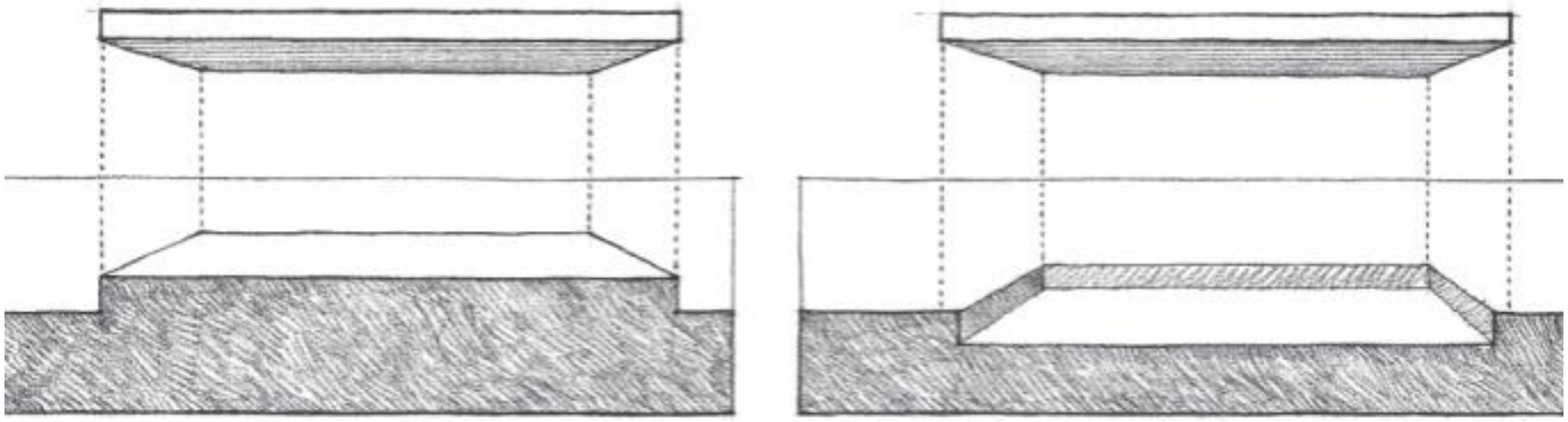
4. OVERHEAD PLANE

If vertical linear elements such as columns or posts are used to support the overhead plane, they will aid in visually establishing the limits of the defined space without disrupting the flow of space through the field



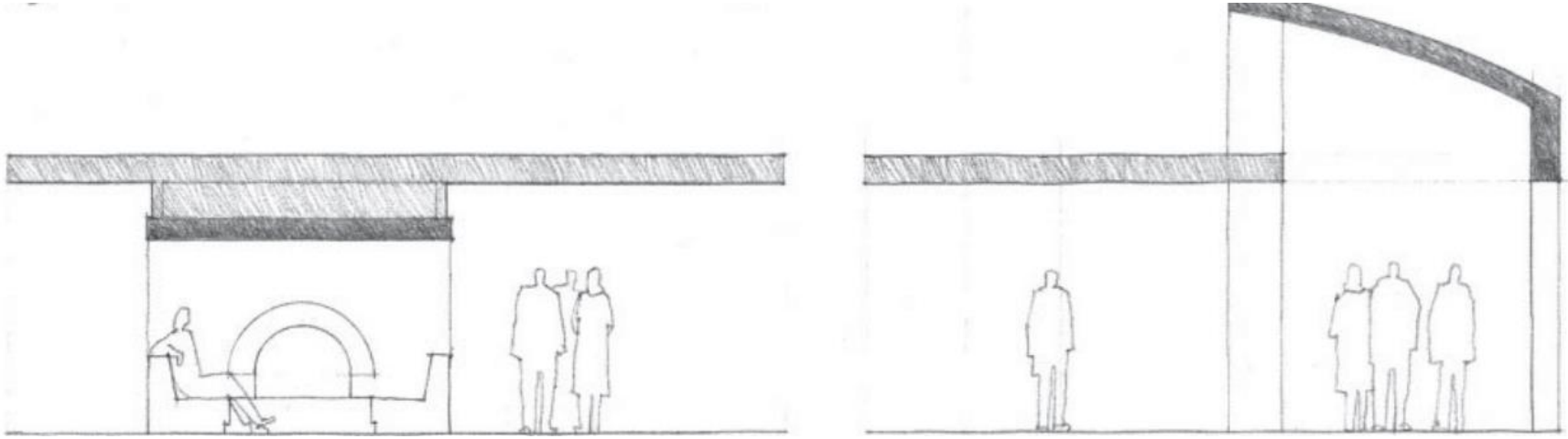
4. OVERHEAD PLANE

Similarly, if the edges of the overhead plane are turned downward, or if the base plane beneath it is articulated by a change in level, the boundaries of the defined volume of space will be visually reinforced



4. OVERHEAD PLANE

As in the case of the base plane, the ceiling plane can be manipulated to define and articulate zones of space within a room. It can be lowered or elevated to alter the scale of a space, define a path of movement through it, or allow natural light to enter it from above



Reference

Ching, Frank, (1943). Architecture form, space and order

THANK YOU