Tishk International university
Interior design department
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FORM, SPACE & ORDER

FORM & SPACE

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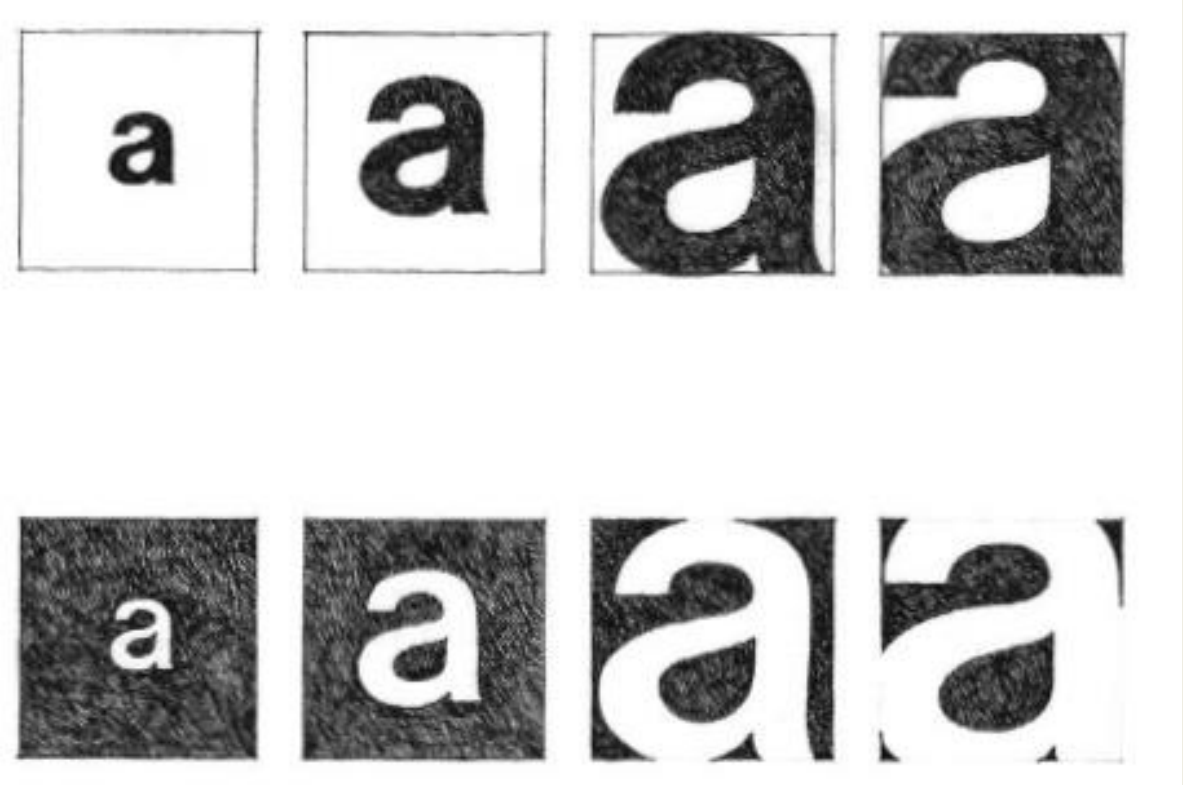
FORM & SPACE

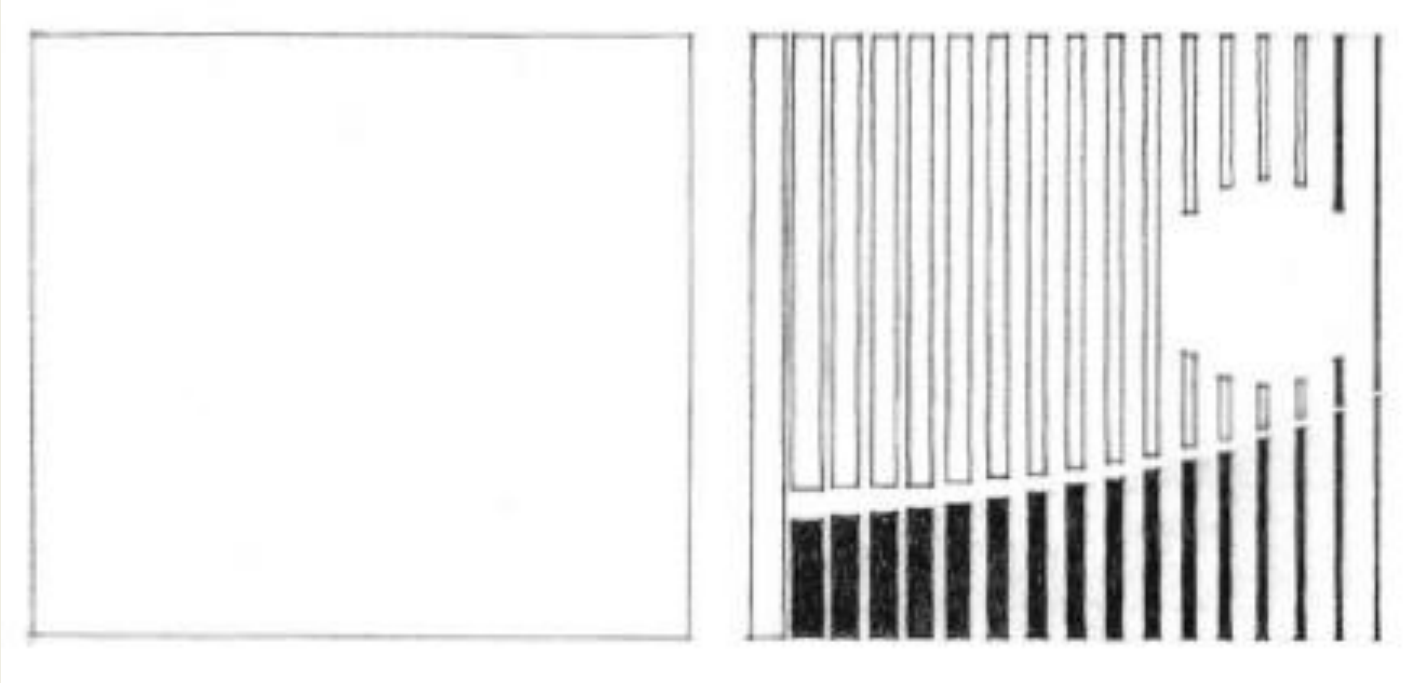
- Space constantly encompasses our being.
- Through the volume of space, we move, see forms, hear sounds, feel breezes, smell the fragrances of a flower garden in bloom.
- It is a material substance like wood or stone.
- Yet it is an inherently formless vapor.
- Its visual form, its dimensions and scale,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

As space begins to be captured, enclosed, molded, and organized by the elements of mass, architecture comes into being.

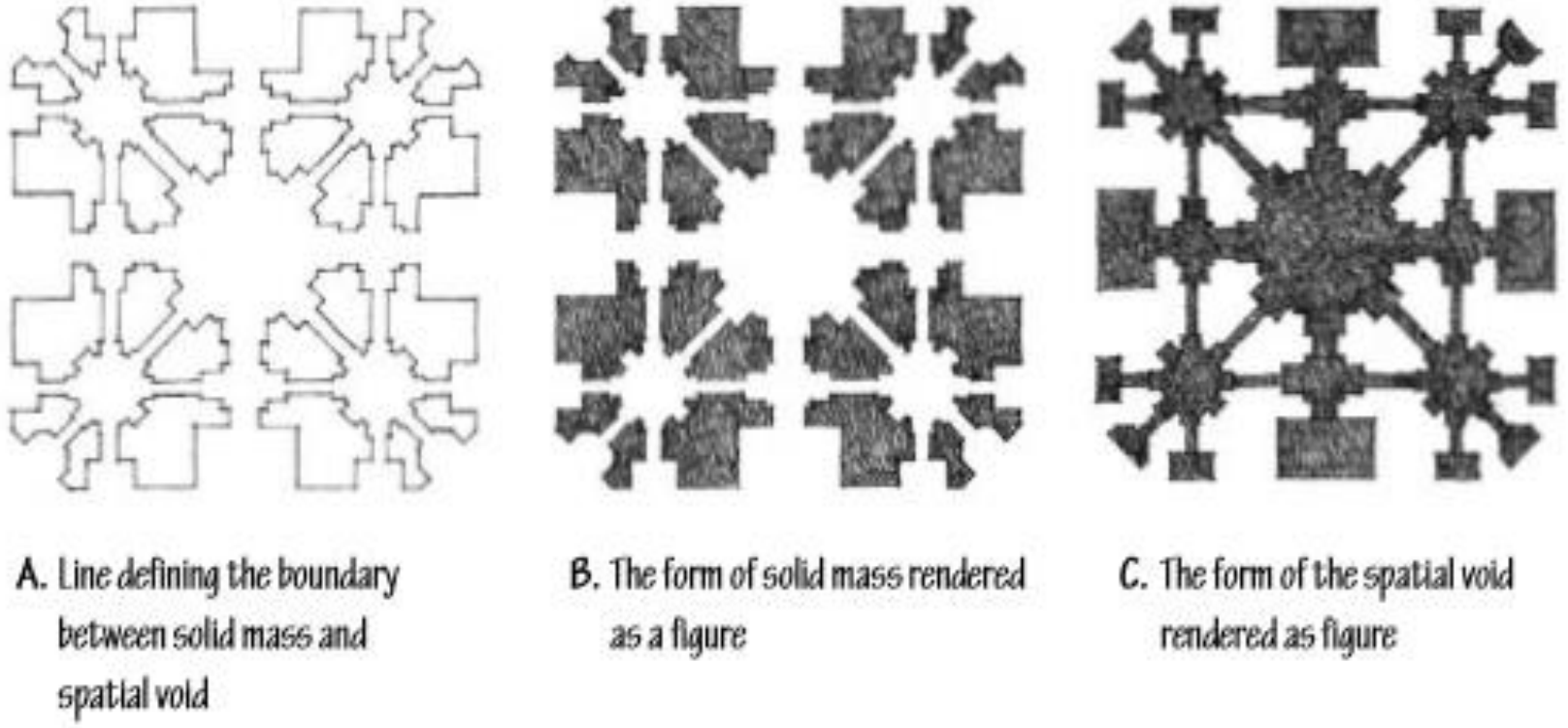
- Our perception and understanding of a composition depends on how we interpret the visual interaction between the positive and negative elements within its field.
- for example, letters are seen as dark figures against the white background of the paper surface.
- Consequently, we are able to perceive their organization into words, sentences, and paragraphs.



- In 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.



Taj Mahal, Agra, India, 1630–53. Shah Jahan built this white marble mausoleum for his favorite wife, Muntaz Mahal.



A. Line defining the boundary between solid mass and spatial void

B. The form of solid mass rendered as a figure

C. The form of the spatial void rendered as figure

Architectural form occurs at the juncture between mass and space. In executing and reading design drawings, we should be concerned with both the form of the mass containing a volume of space as well as the form of the spatial volume itself.

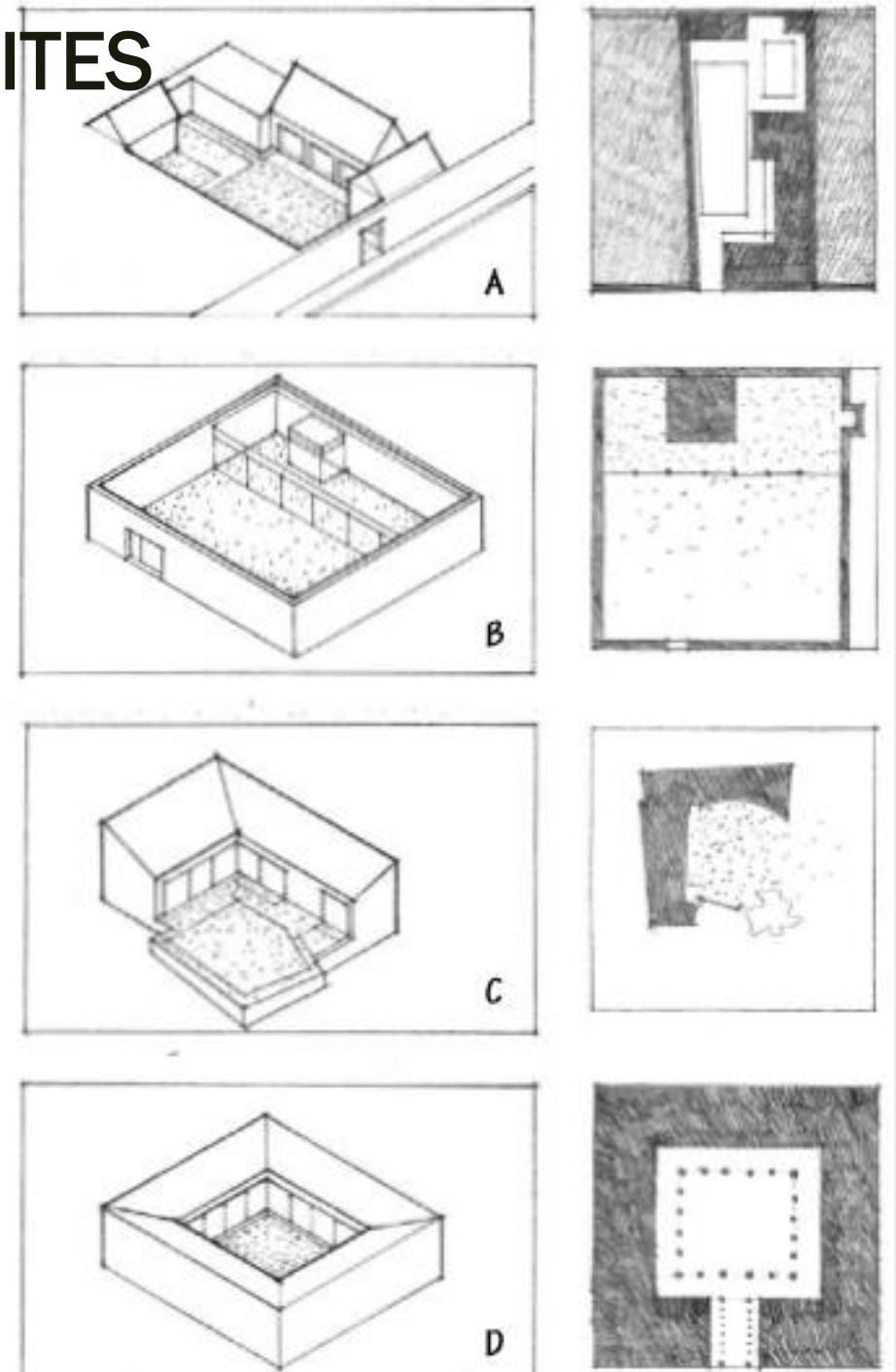
FORM & SPACE: THE UNITY OF OPPOSITES

A. form a wall along an edge of its site and begin to define a positive outdoor space;

B. merge its interior space with the private outdoor space of a walled site;

C. enclose a portion of its site as an outdoor room and shelter it from undesirable climatic conditions;

D. surround and enclose a courtyard or atrium space within its volume— an introverted scheme.

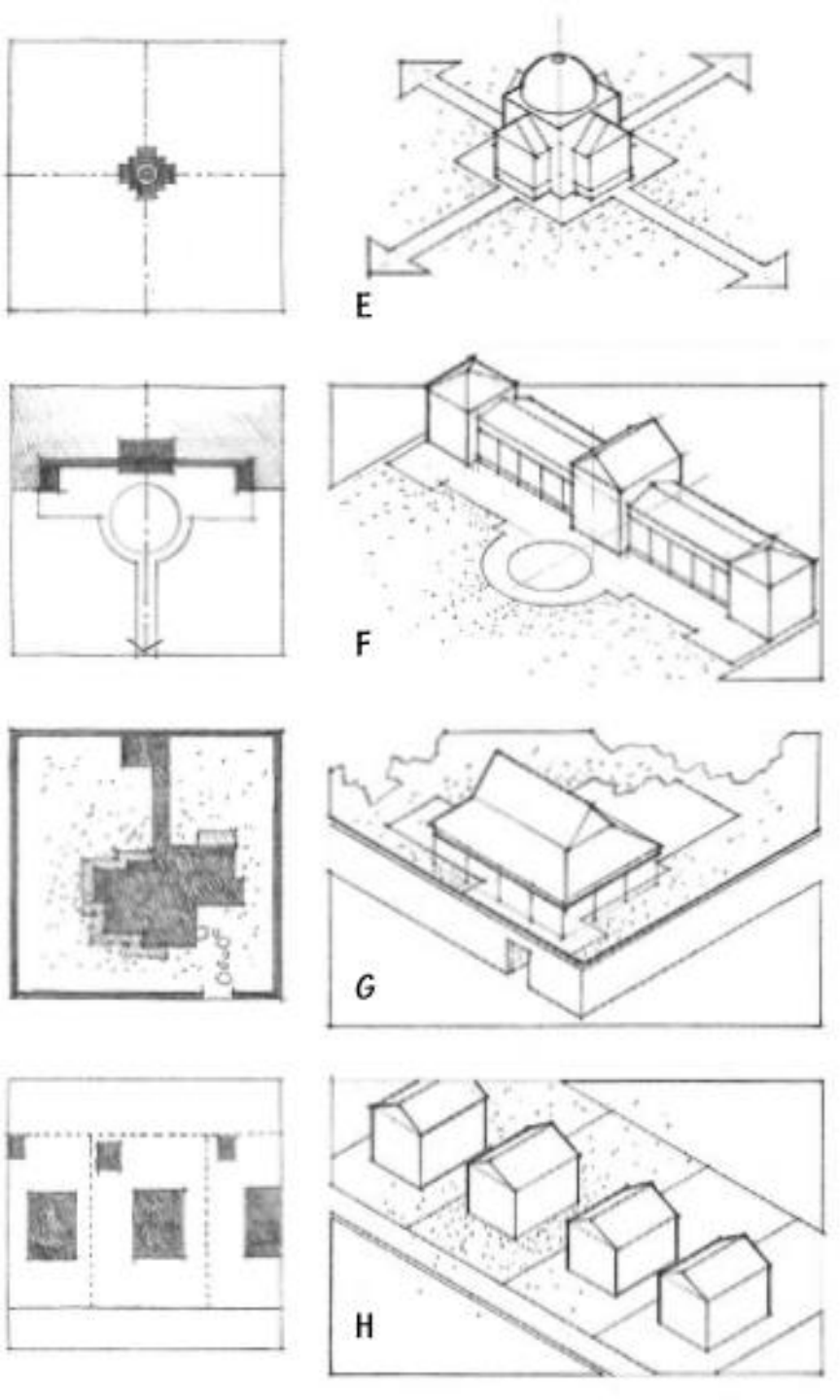


E. stand as a distinct object in space and dominate its site through its form and topographical positioning—an extroverted scheme;

F. stretch out and present a broad face to address a view, terminate an axis, or define an edge of an urban space;

G. stand free within its site but extend its interior spaces to merge with private exterior spaces;

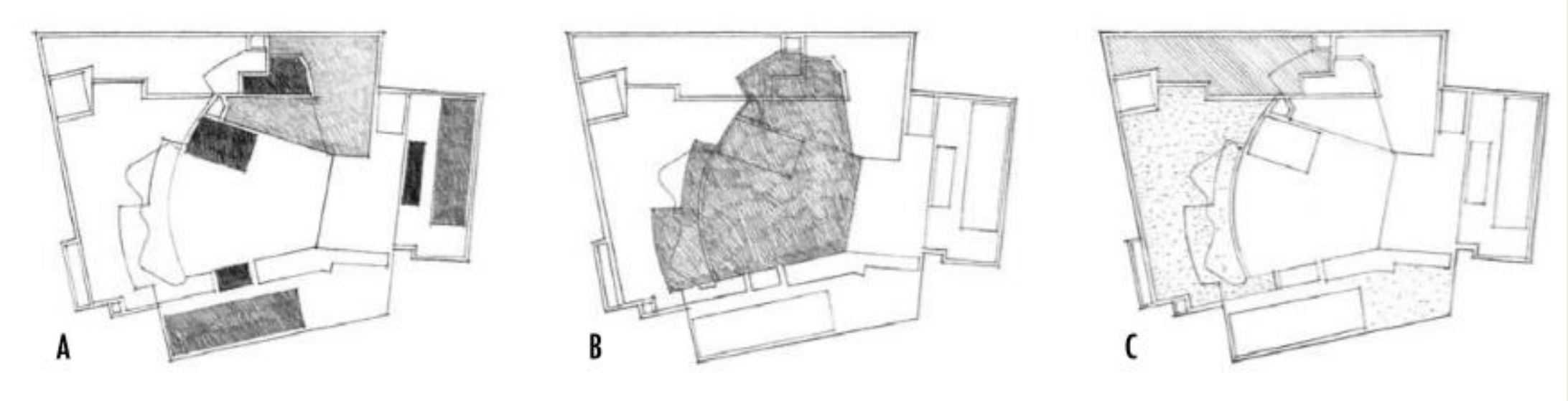
H. stand as a positive form in negative space.



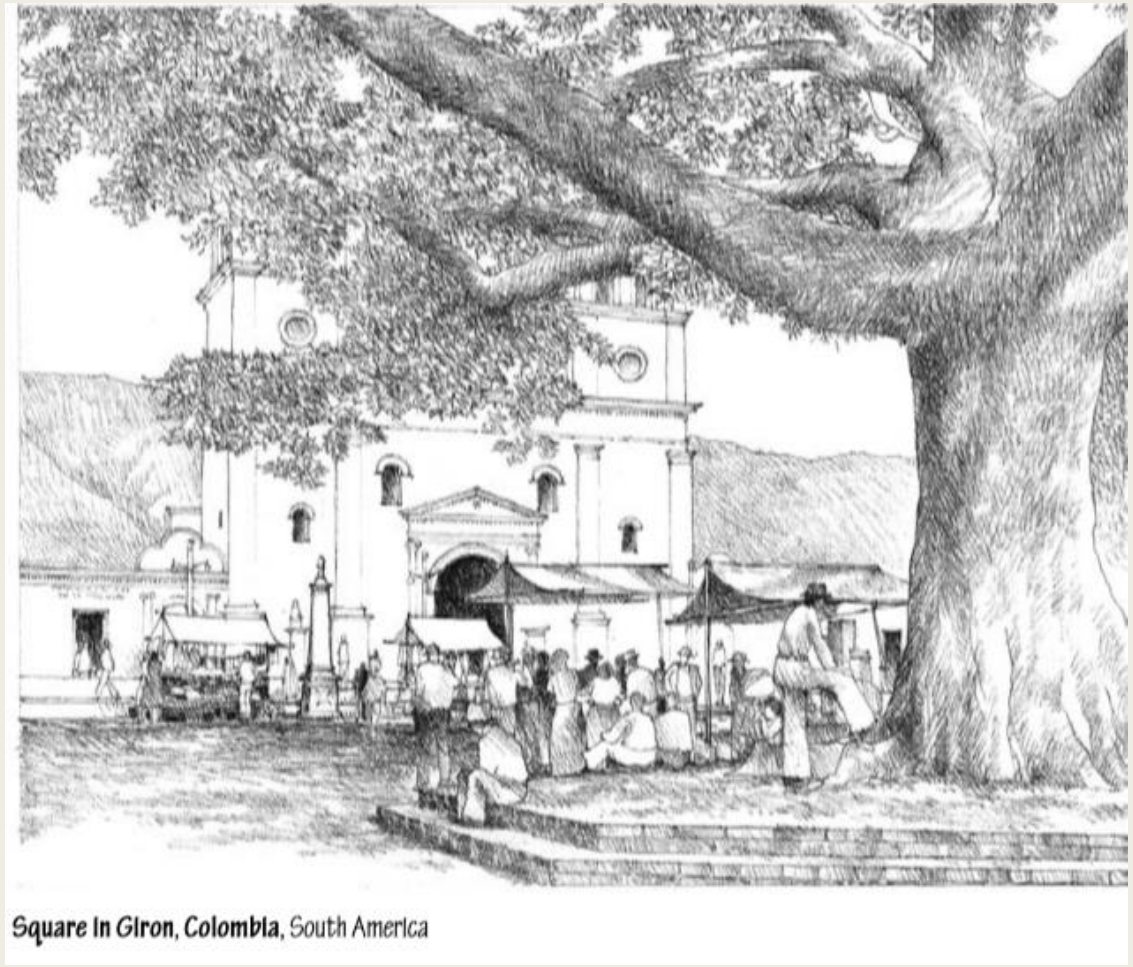
A. Some spaces, such as offices, have specific but similar functions and can be grouped into single, linear, or clustered forms.

B. Some spaces, such as concert halls, have specific functional and technical requirements, and require specific forms that will affect the forms of the spaces around them.

C. Some spaces, such as lobbies, are flexible in nature and can therefore be freely defined by the spaces or grouping of spaces around them.



FORM DEFINING SPACE



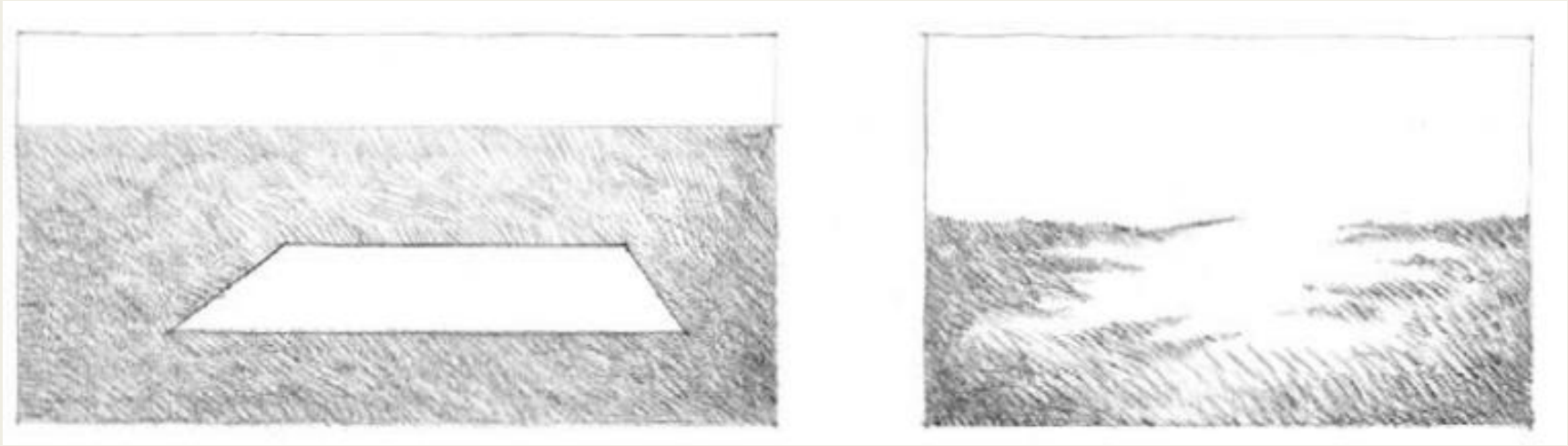
Square in Giron, Colombia, South America

When we place a two-dimensional figure on a piece of paper, it influences the shape of the white space around it

HORIZONTAL ELEMENTS DEFINING SPACE

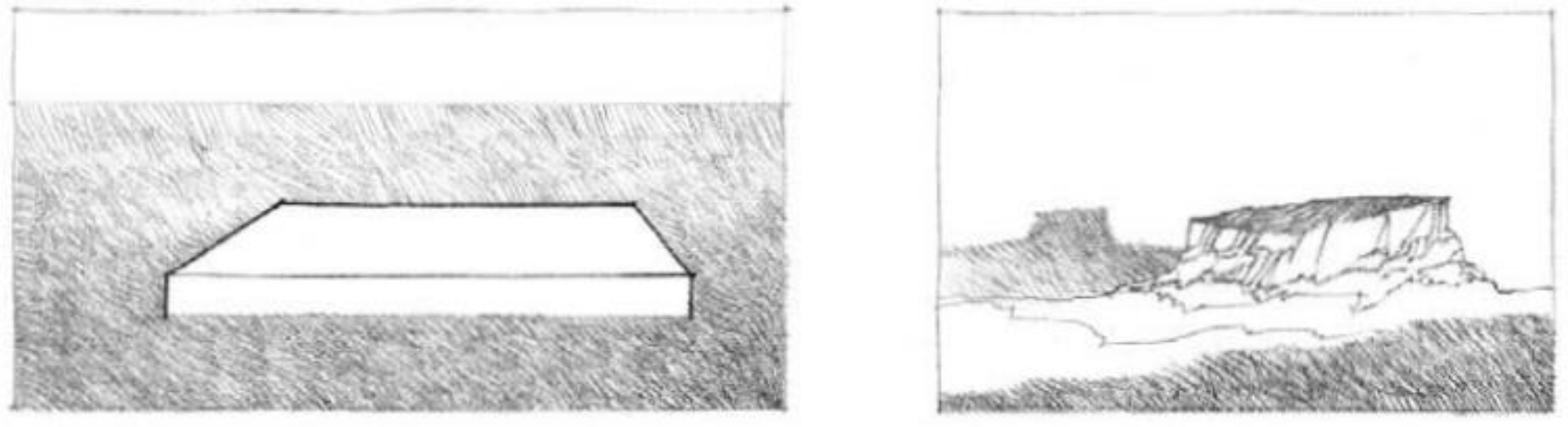
1. **Base Plane**

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



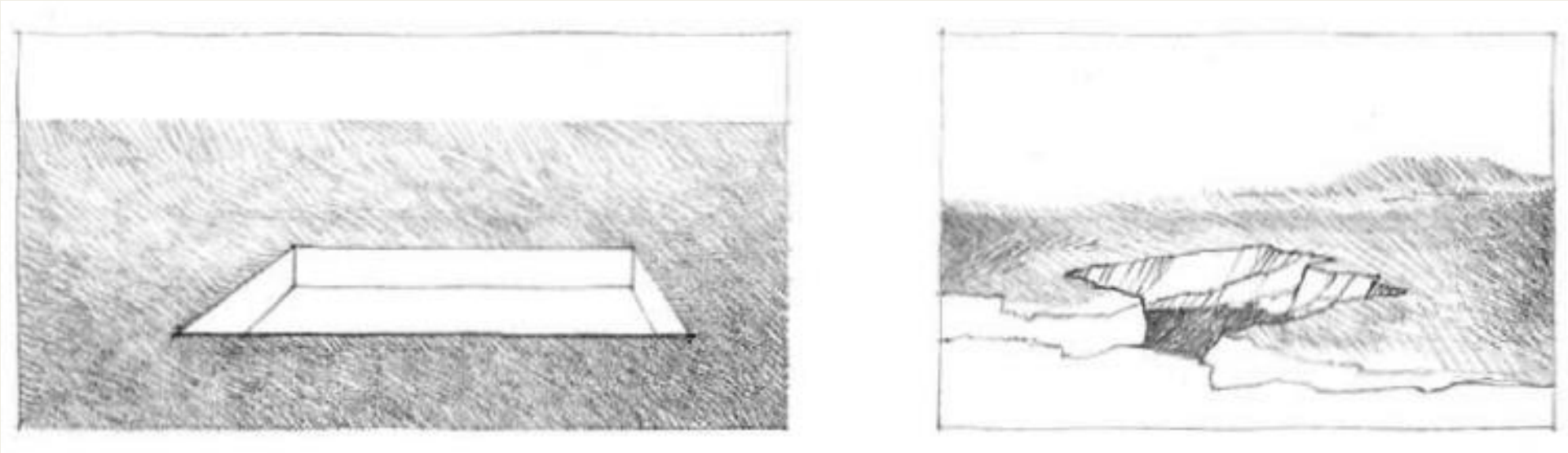
2. Elevated Base

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.



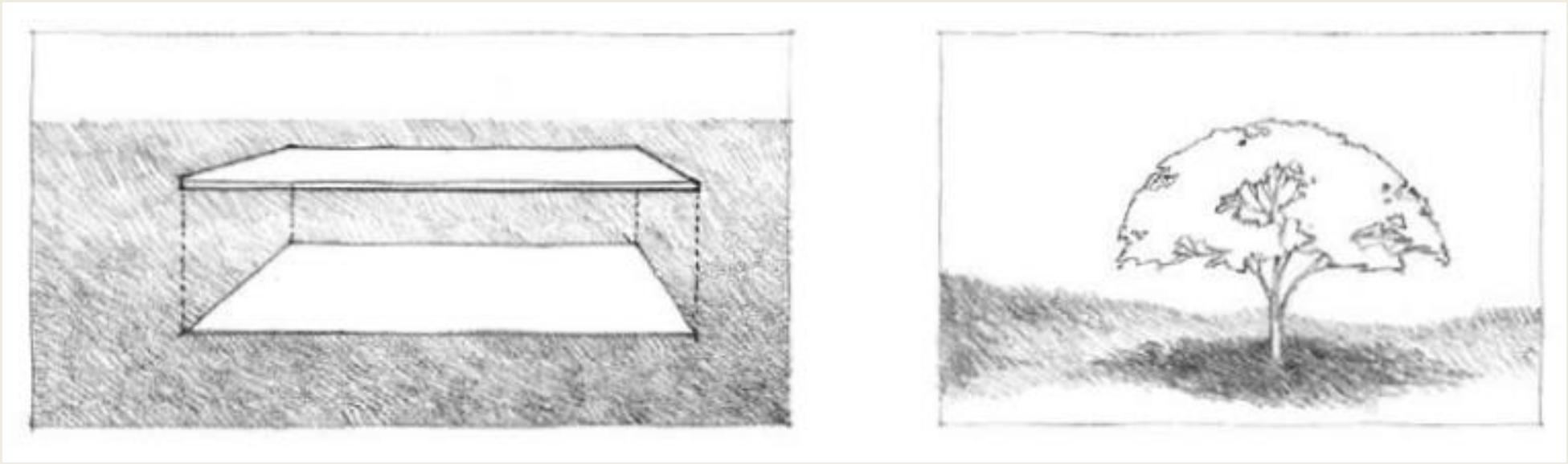
3. Depressed Base

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.



VERTICAL ELEMENTS DEFINING SPACE

- Vertical Linear

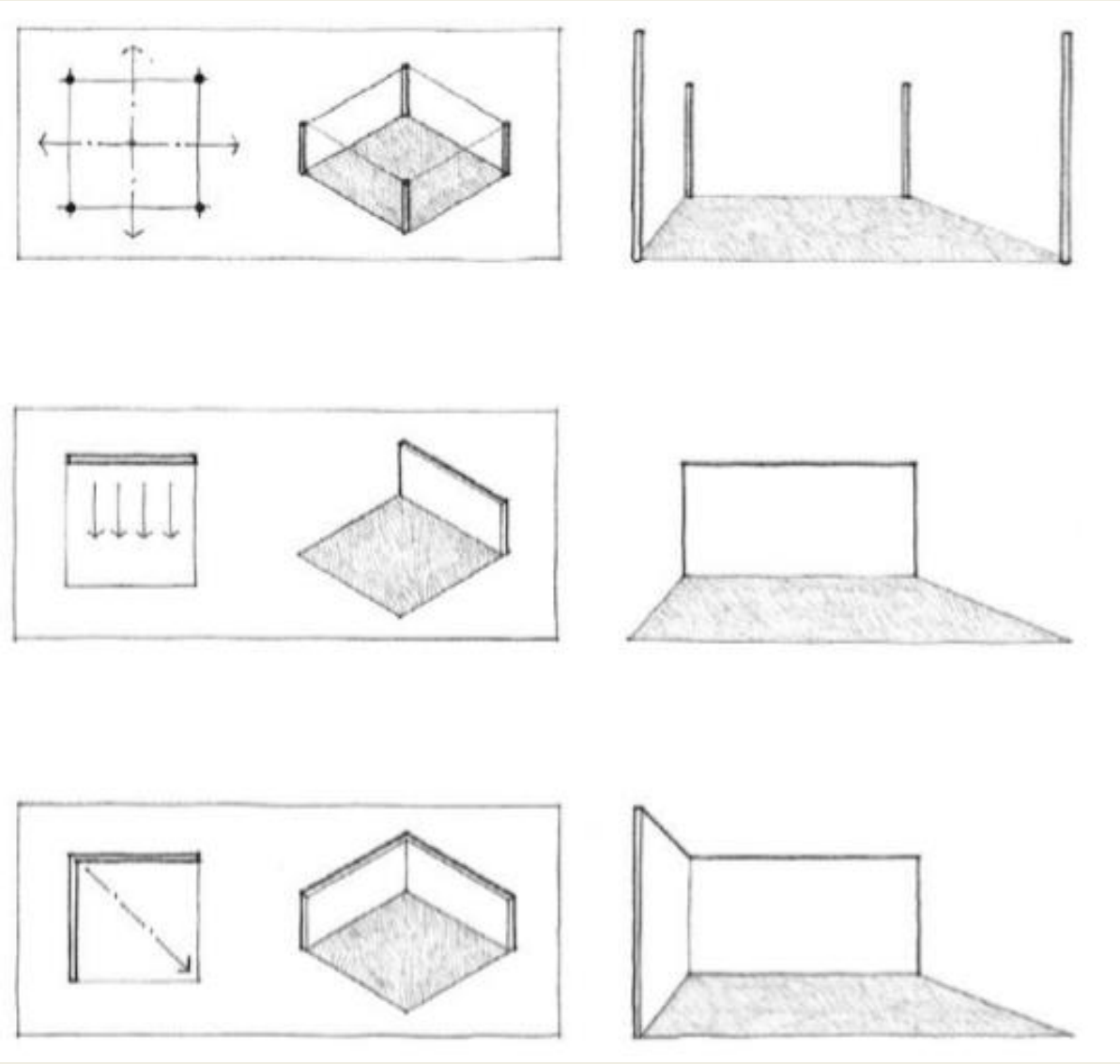
Elements Vertical linear elements define the perpendicular edges of a volume of space.

- Single Vertical Plane

A single vertical plane articulates the space on which it fronts

- L-shaped Plane

An L-shaped configuration of vertical planes generates a field of space from its corner outward along a diagonal axis



- Parallel Planes

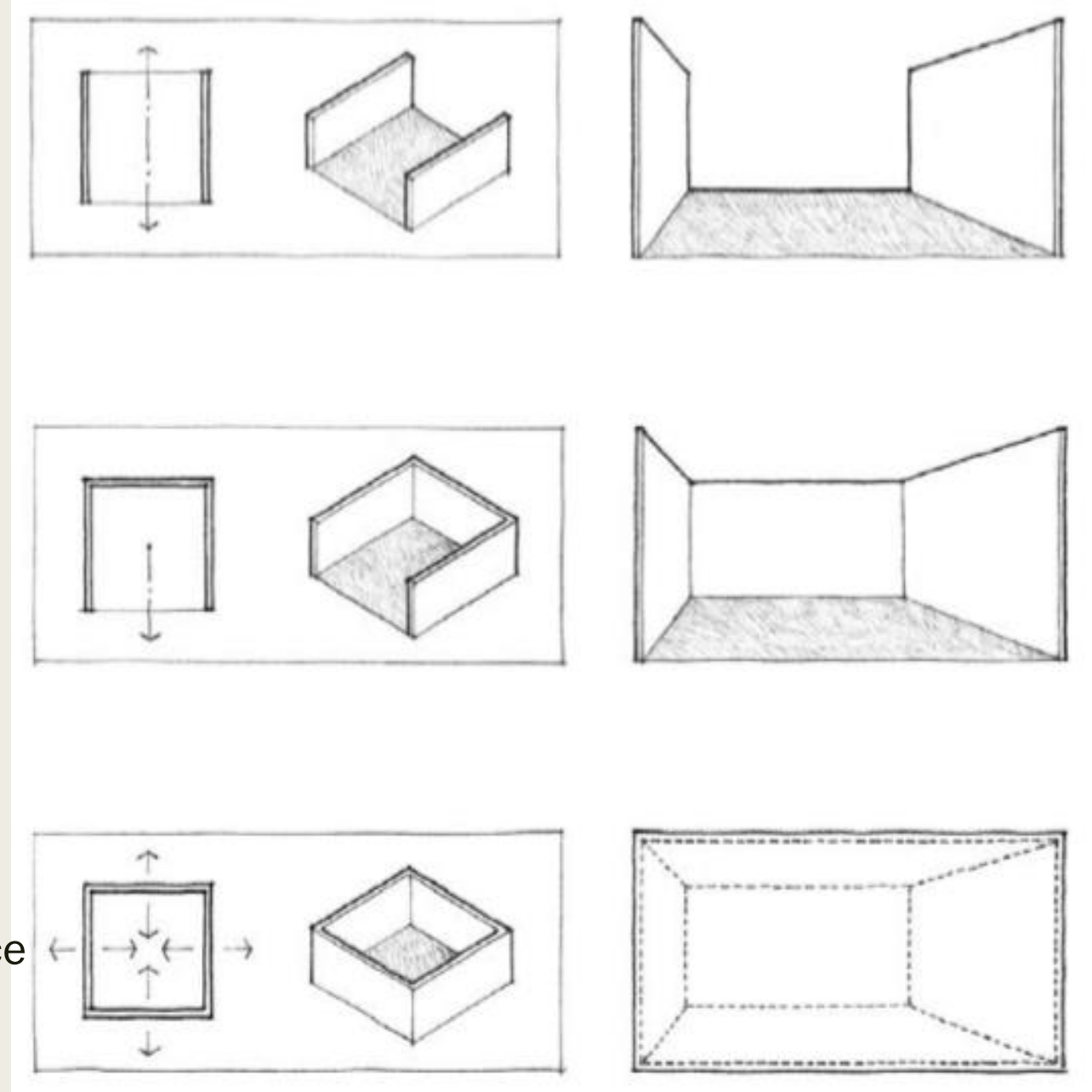
Two parallel vertical planes define a volume of space between them that is oriented axially toward both open ends of the configuration.

- U-shaped Plane

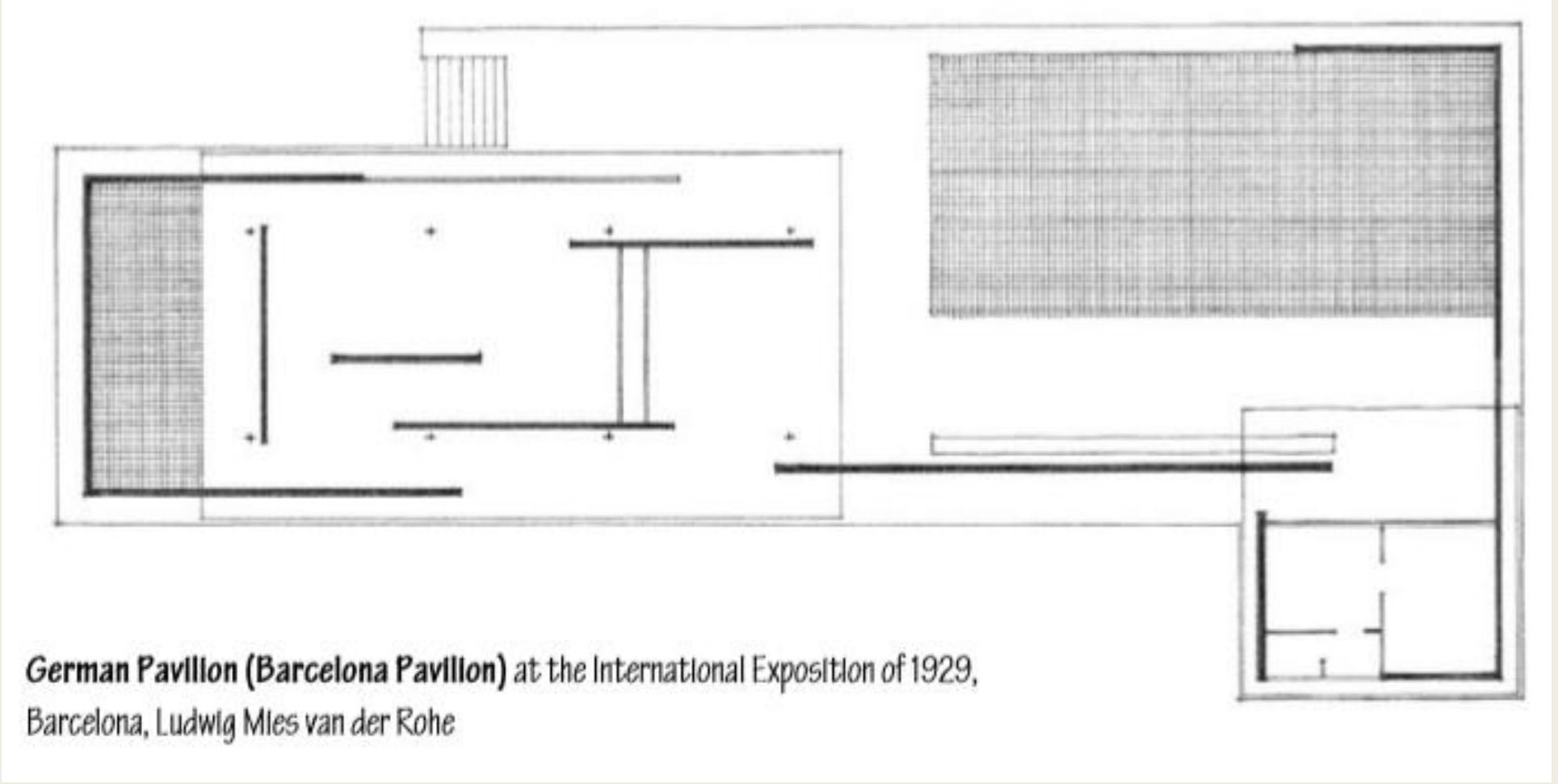
A U-shaped configuration of vertical planes defines a volume of space that is oriented primarily toward the open end of the configuration.

- Four Planes

Closure Four vertical planes establish the boundaries of an introverted space and influence the field of space around the enclosure.

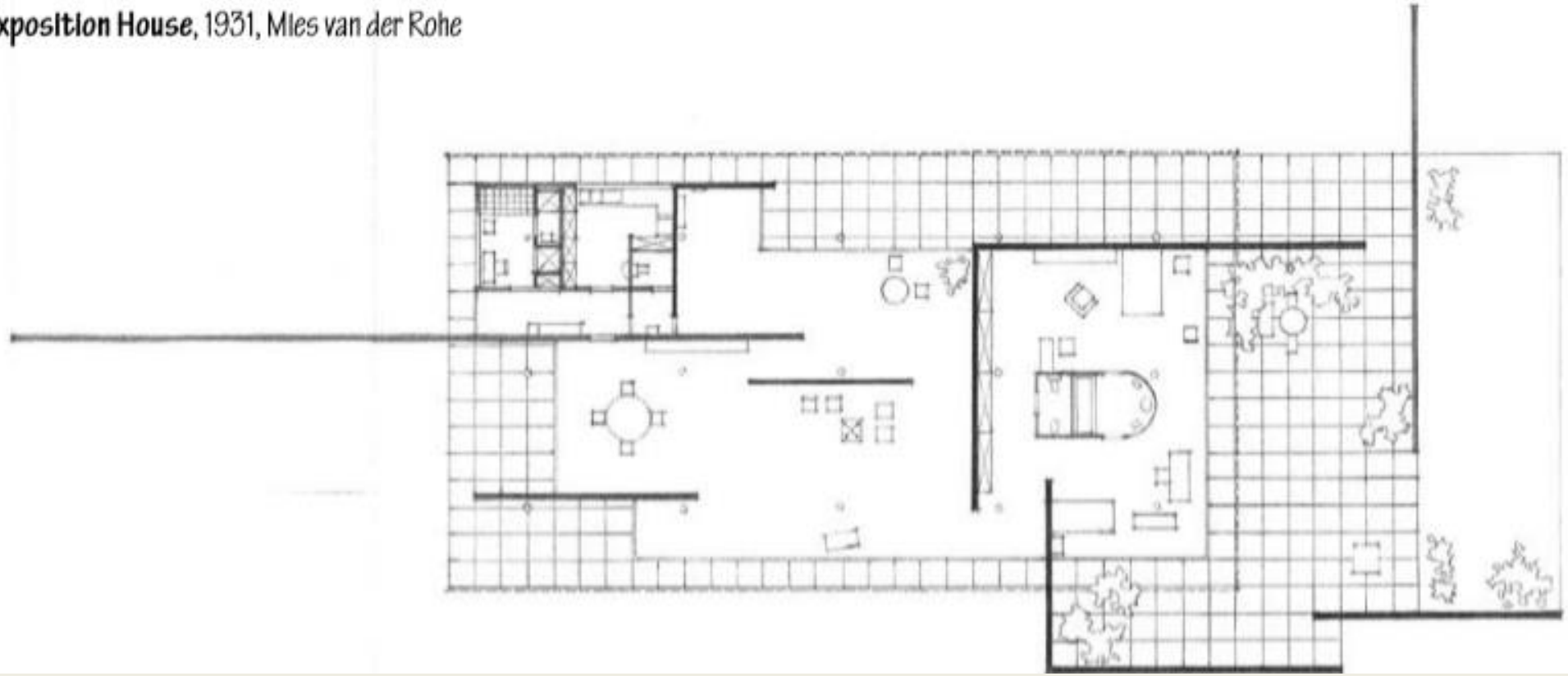


A composition of vertical planes cuts the continuous field of the architectural volume, creating an open plan of spaces that merge with one another. The partitions never form closed, geometrically static areas.



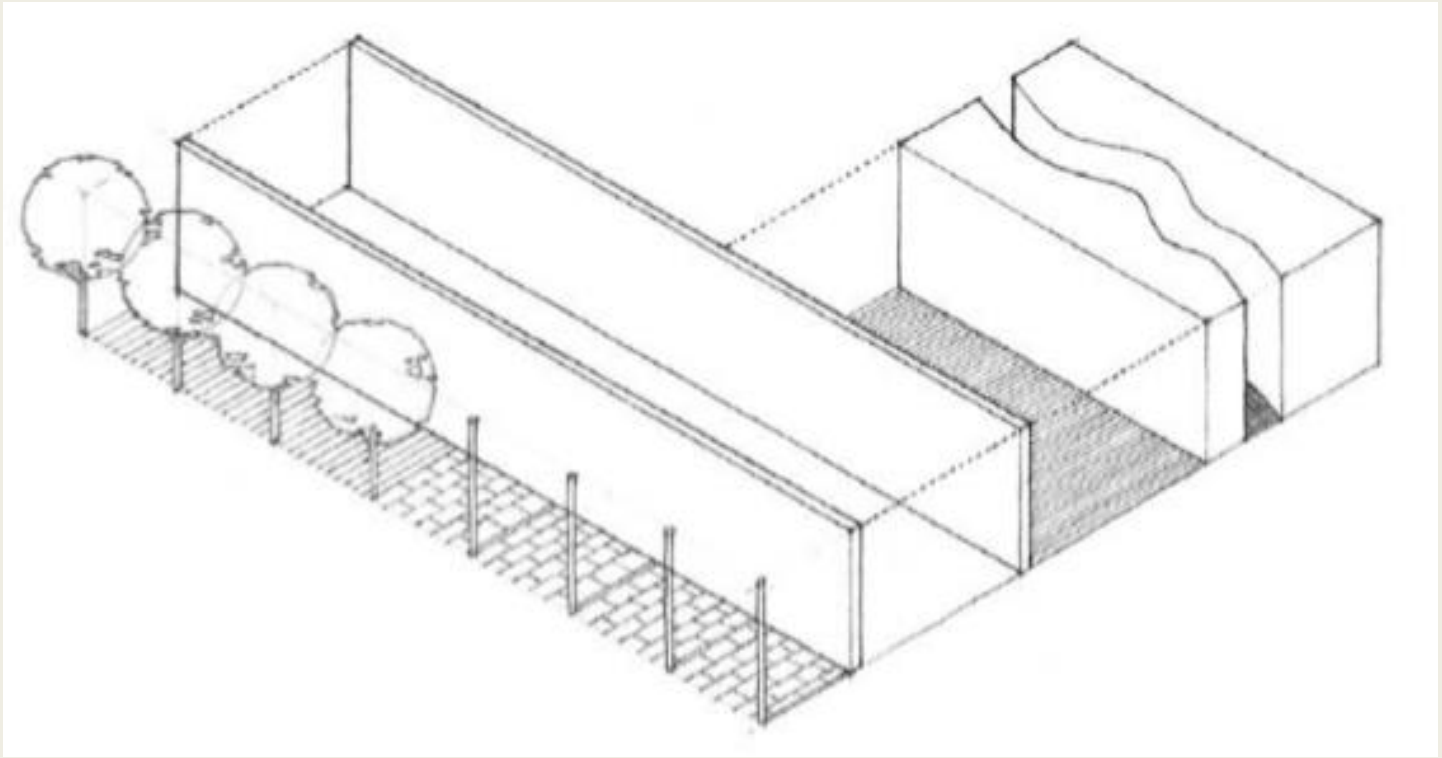
German Pavilion (Barcelona Pavilion) at the International Exposition of 1929, Barcelona, Ludwig Mies van der Rohe

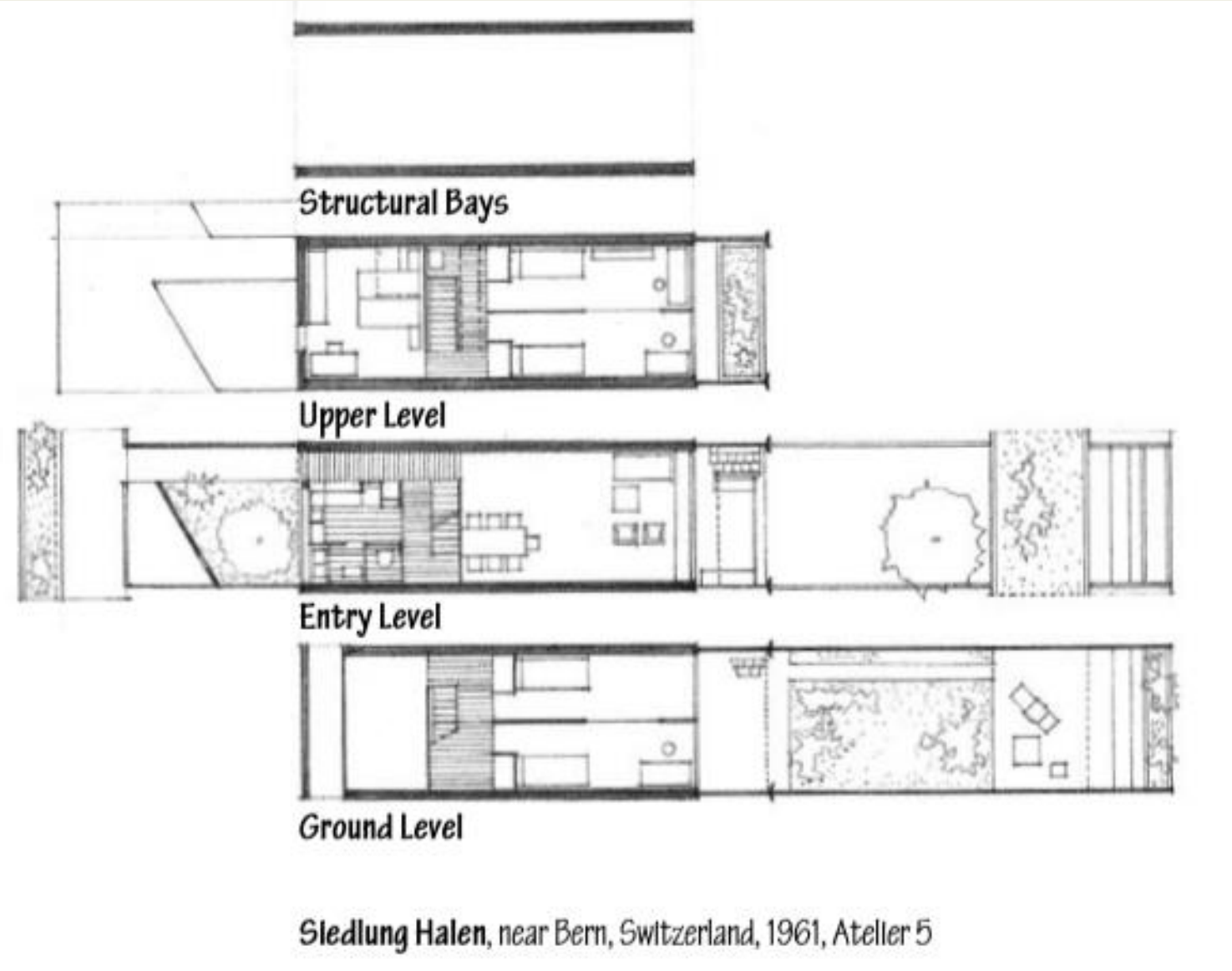
Berlin Building Exposition House, 1931, Mies van der Rohe



- Various elements in architecture can be seen as parallel planes that define a field of space:

- a pair of parallel interior walls within a building
- a street space formed by the facades of two facing buildings
- a colonnaded arbor or pergola
- a promenade or allée bordered by rows of trees or hedges
- a natural topographical form in the landscape

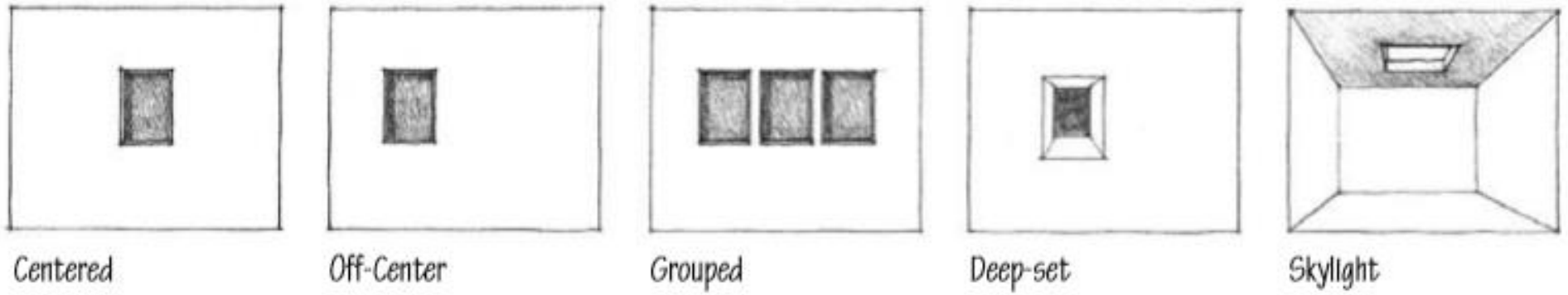




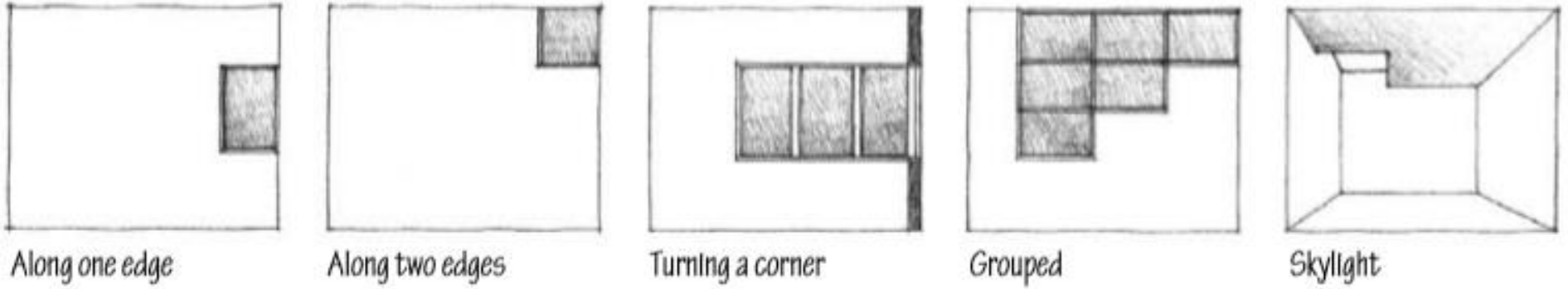
Siedlung Halen, near Bern, Switzerland, 1961, Atelier 5

Parallel bearing walls are often used in multifamily housing developments. They not only provide structural support for the floors and roofs of each housing unit, but also serve to isolate the units from one another, curb the passage of sound, and check the spread of fire.

OPENINGS IN SPACE-DEFINING ELEMENTS



Within Planes An opening can be located wholly within a wall or ceiling plane and be surrounded on all sides by the surface of the plane.



At Corners An opening can be located along one edge or at a corner of a wall or ceiling plane. In either case, the opening will be at a corner of a space.

OPENINGS IN SPACE-DEFINING ELEMENTS

Between Planes An opening can extend vertically between the floor and ceiling planes or horizontally between two wall planes. It can grow in size to occupy an entire wall of a space.

QUALITIES OF ARCHITECTURAL SPACE

How the size, shape, and location of openings or voids within the enclosing forms of a space influence the following qualities of a room:

- Degree of enclosure . . . . .the form of the space
- View or outlook . . . . . .the focus of the space
- Light . . . . . .the illumination of its surfaces and forms

Reference

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