

Arrangements of the Layers

To illustrate the organization of a repetition structure, let us start with arranging four layers of spatial cells or unit forms.

The simplest arrangement is to have each layer directly above the next. (Fig. 172)

Then we shift the positions of alternate layers. (Fig. 173)

Or we can arrange them in positional gradation. (Fig. 174)

Directional variation is also possible. Directions of alternate layers can be shifted. (Fig. 175)

Or we can arrange the layers in directional gradation. (Fig. 176)

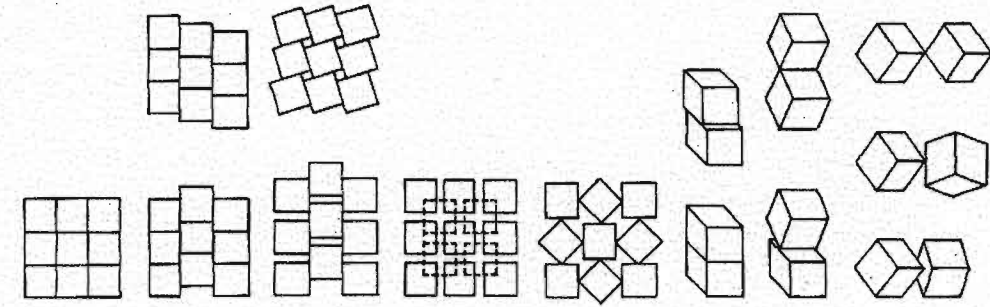
Organization Within Each Layer

Within each layer, there are numerous ways of arranging the unit forms, and alternate layers can be arranged differently. We have illustrated nine spatial cells or unit forms in one layer to explore the various possibilities.

First we arrange them in three rows and put them closely against one another. (Fig. 177)

The positions of the rows can be shifted. (Fig. 178)

There can be gaps between the spatial cells or unit forms. (Fig. 179)



If all the spatial cells or unit forms do not touch one another, the adjacent layer can be arranged differently to help hold the spatial cells or unit forms of the first layer in position. (Fig. 180)

Directional variation can be introduced among the spatial cells or unit forms. (Fig. 181)

Joining of Unit Forms

Spatial cells, which are usually of simple geometric shapes, can usually be joined to one another by face contact, but unit forms, when used without spatial cells, may be of shapes or in positions which demand various kinds of joining.

Face contact certainly gives the firmest bond. This can be full face contact or partial face contact. (Fig. 182)

Edge-to-face or edge-to-edge contacts tend to be weaker and may give flexible joints. (Fig. 183)

Vertex-to-face, vertex-to-edge or vertex-to-vertex contacts are generally difficult to control, and care must be exercised if such joints are necessary. (Fig. 184)

