again in Fresnel's diagram (Fig. 8.5) in which each successive annular ring diminishes in width but has exactly the same area as its predecessor. The outer band in the square form of this diagram has exactly the same area as the central square. And this lies at the root of our understanding of an important principle in relation to the way in which buildings are placed on the land.

Suppose now that the central square and the outer annulus of the Fresnel diagram are considered as two possible ways of placing the same amount of floor space on the same site area: at once it is clear that the two buildings so arranged would pose totally different questions of access, of how the free space is distributed around them and what natural lighting and view the rooms within them might have. By this process a number of parameters have been defined which need to be considered in any theoretical attempt to understand land use by buildings.
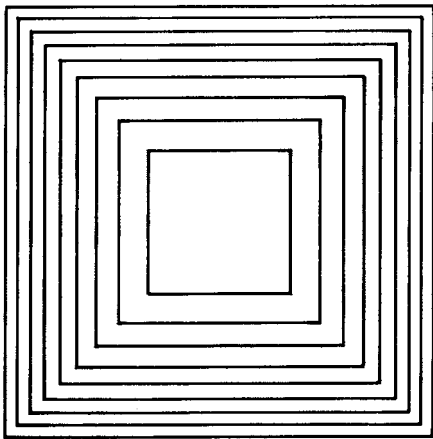
This central square (which can be called the pavilion) and the outer annulus (which can be called the court) are two ways of placing building on the land. Let us now extend this. On any large site a development covering 50% of the site could be plotted as forty-nine pavilions, as shown in Fig. 8.6, and exactly the same site cover can be plotted in court form. A contrast in the ground space available and the use that can be made of it is at once apparent. But this contrast can be extended further: the forty-nine pavilions can be plotted in a form which is closer to that which they would assume as buildings (that is low slab with a tower form over this). This can now be compared with its antiform: the same floor space planned as courts (Fig. 8.7). The comparison must be exact; the same site area, the same volume of building, the same internal depth of room. And when this is done we find that the antiform places the same amount of floor space into buildings which are exactly one third the total height of those in pavilion form (Martin and March 1966).

This brings the argument directly back to the question of the grid and its influence on the building form. Let us think of New York. The grid is developing a certain form: the tall building. The land may appear to be thoroughly used. Consider an area of the city. Seen on plan there is an absolutely even pattern of rectangular sites. Now assume that every one of those sites is completely occupied by a building: and that all these buildings have the same tower form and are twenty-one storeys in height. That would undoubtedly look like a pretty full occupation of the land. But if the size of the road net were to be enlarged by omitting some of the cross streets, a new building form is possible. Exactly the
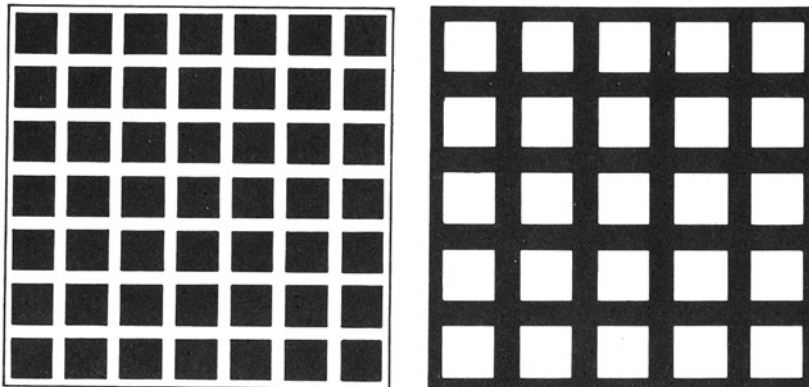

FIGURE 8.5

FIGURE 8.6