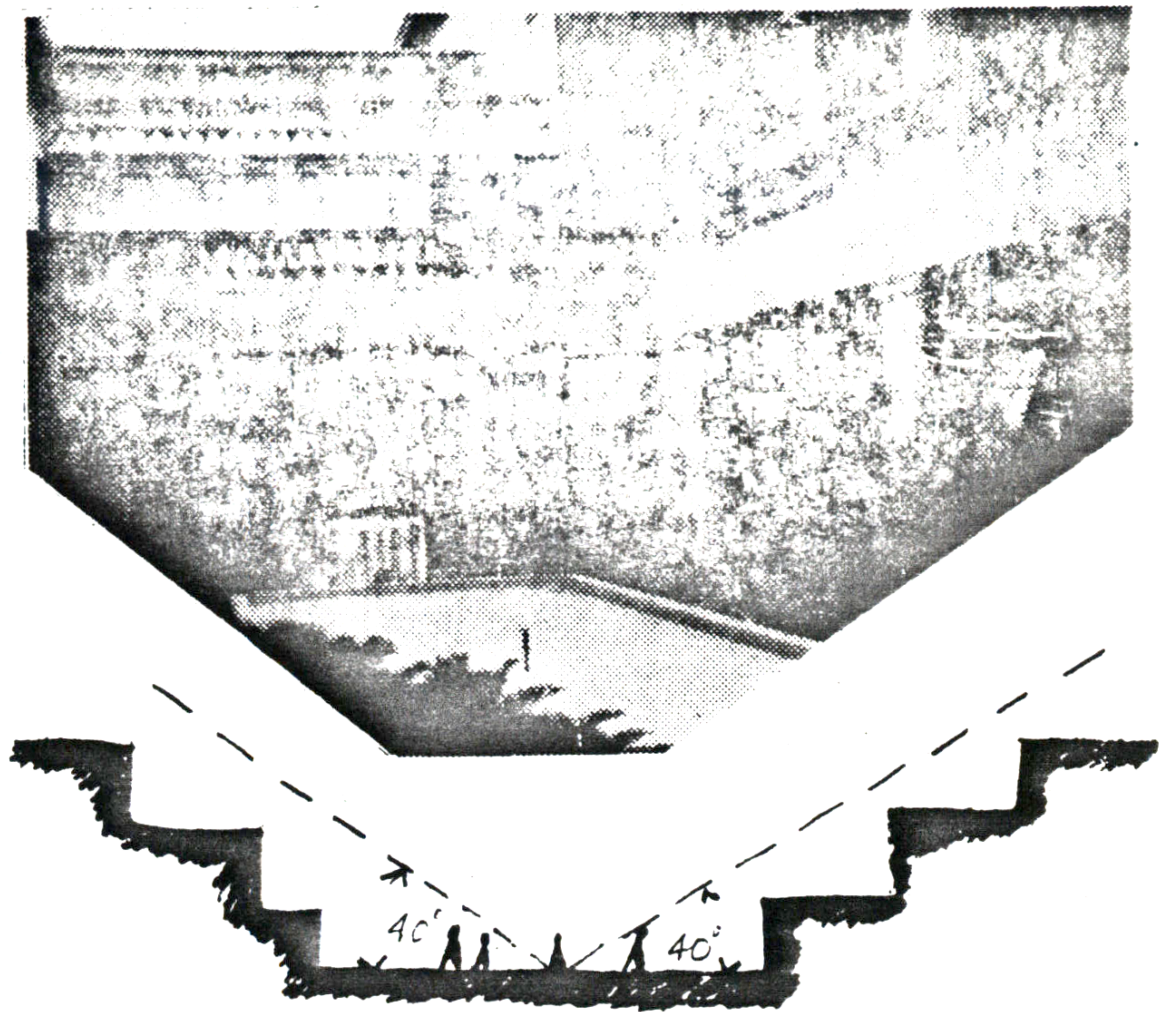*Therefore: To create comfortable courtyards, step back the buildings which surround the courtyard, at an angle of less than 40 degrees.*
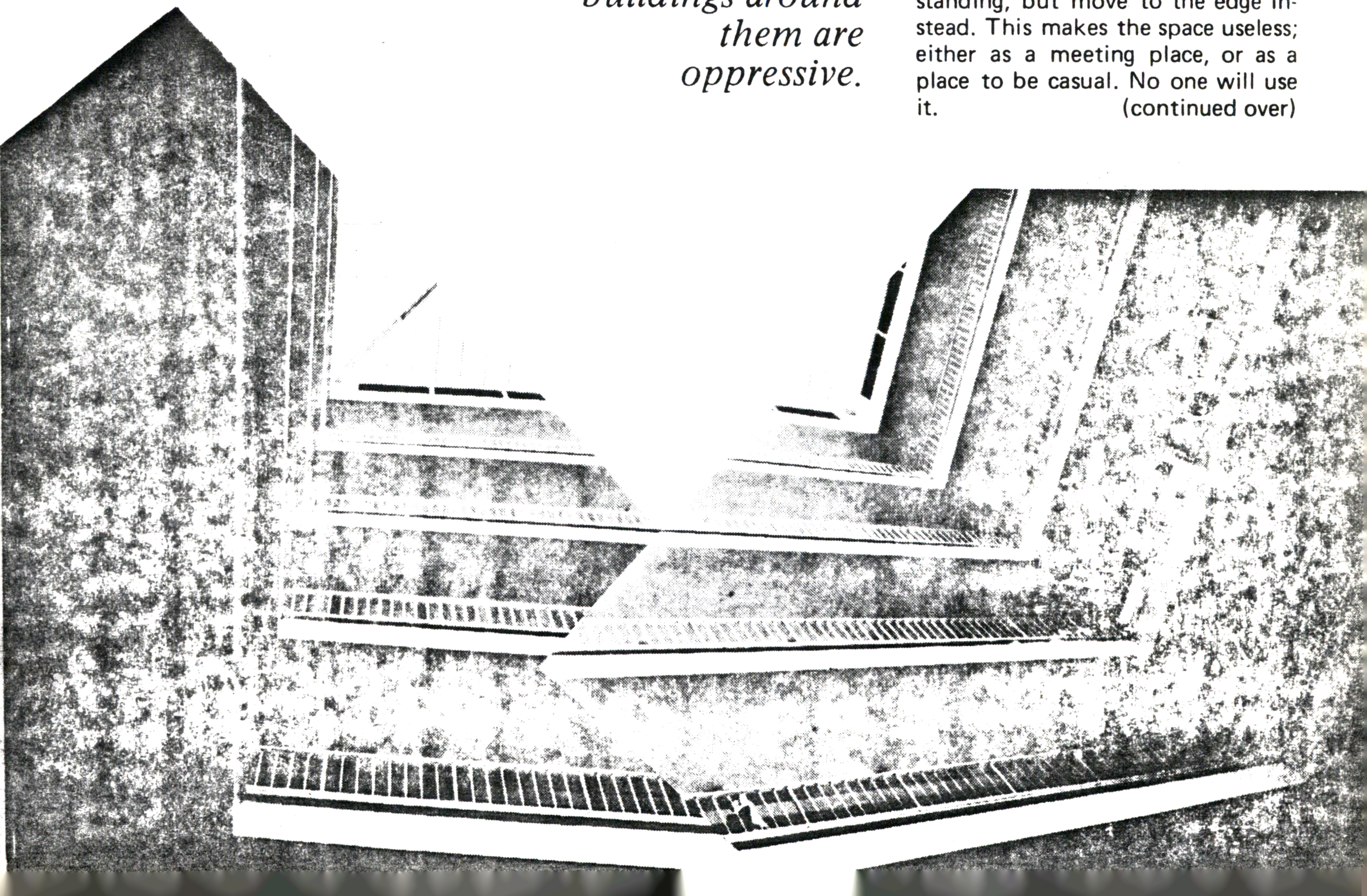

Building Stepped Back

Courtyards and plazas with high buildings around them are oppressive.

People don't feel comfortable in the middle of the space—they will not stop there, either sitting or standing, but move to the edge instead. This makes the space useless; either as a meeting place, or as a place to be casual. No one will use it.　　

Building Stepped Back

Problem (continued)

If the buildings around an open court are too close around it, then people do not feel comfortable in the middle of the space; they will not stop there, sitting or standing, but will move to the edge instead. This makes the space useless as a meeting place—no one will use it.

This much corresponds to common experience and intuition. But in order to solve the problem, we must be able to precisely specify under *which* circumstances people feel oppressed by buildings around them, and under *which* circumstances they do not, and to do this, we must know *why* people feel oppressed.

We conjecture as follows: People feel uneasy when high buildings surround them, essentially because, consciously or unconsciously, they are afraid things will fall on them or be thrown down, afraid because they are threatened by the possibility of something hovering above them, and self-conscious about people looking down on them.

If this conjecture were true we should expect the following: The feeling that a building is threatening should come into play most forcibly when there are parts of the building too high to be seen clearly, but placed so that their "presence" is felt, towering above. This will happen if the building rises above the field of clear vision.

It is known that a man normally fixates about 10 degrees below the horizon, and that his visual field extends about 50 degrees above his line of sight. [*Henry Dreyfuss, The Measure of Man, Whitney Publications, New York, 1959, Chart F.*] His clear vision therefore extends about 40 degrees above the horizontal. Anything more than 40 degrees above the horizontal, from where he stands, will be out of view—but "felt." It therefore seems reasonable to expect that buildings become oppressive if they subtend more than 40 degrees to the horizontal, in an open court.

There is a second argument which suggests that a stepped back court may help to solve the problem, irrespective of its angle.

If the conjecture stated is correct, then the feeling of oppression and threat is probably caused, at least in part, by the fact that things can fall down out of windows and off roofs. (This might explain why a deep canyon in the mountains, though somber, is not nearly as threatening as a deep well-like court in the heart of a building, lined with windows.) If the building is stepped back, then things cannot fall out of windows or off the roof, and people who lean out of windows will not be able to look down *onto* the people below. The threatening feeling should vanish almost entirely.

Since so little is known about the phenomenon, we shall for the time being assume that our conjecture is correct. The pattern is based on the conclusions which follow from the conjecture. *It must be emphasized, though, that there are no sound theoretical or empirical grounds for the conjecture.* It may well turn out that the phenomenon of oppression is caused in some entirely different manner.

Context. This pattern applies to all courts (interior and exterior), where the surrounding buildings are high, compared with the diameter of the court.

When the buildings round a court are low, the problem is just the opposite—often the court is not enclosed enough to provide a favorable setting for human activities.

In this sense, this pattern may be a special case of a much more general pattern which applies to *all* outdoor gathering places, and describes the height-width ratio which makes them feel comfortable. Alberti said that this height-width ratio should be 1:3 to make people feel comfortable. It is interesting that a court whose edges subtend an angle of 40 degrees at the center will have a height-width ratio of about 2.5:1.

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