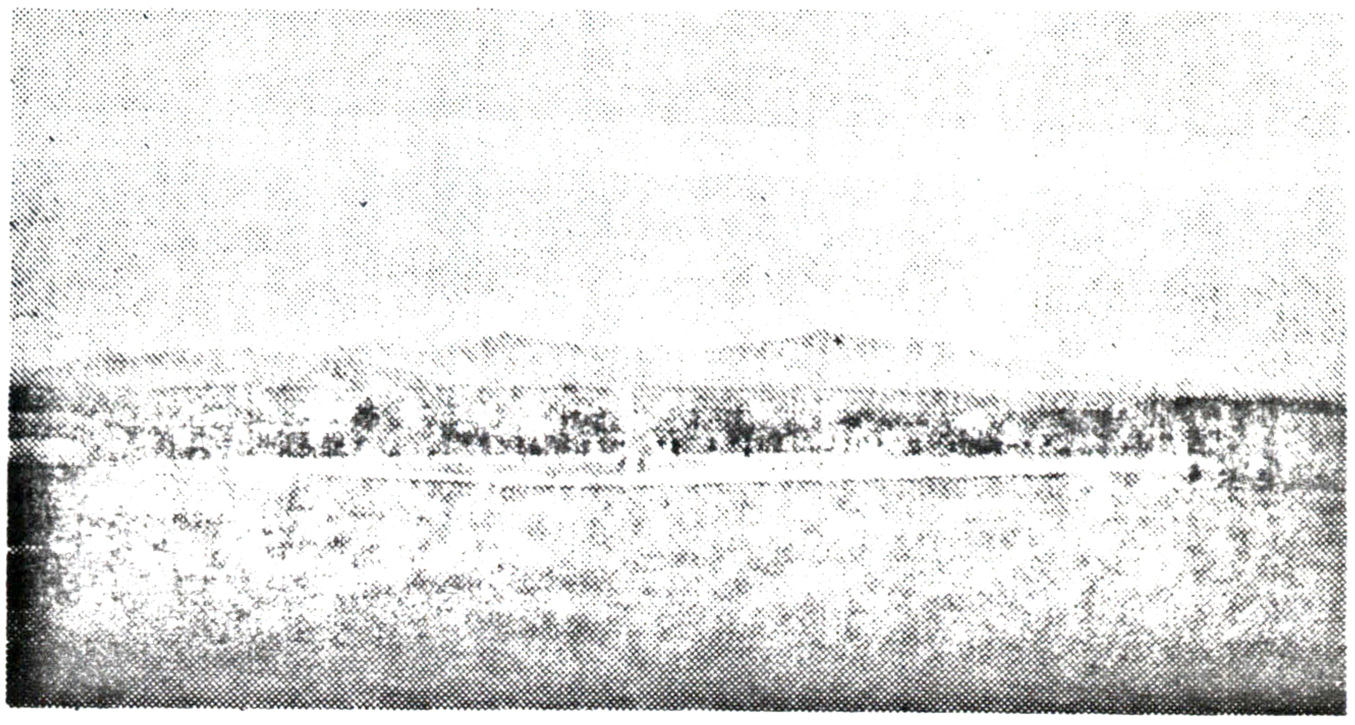
Small Open Spaces

Plazas that are too large look and feel deserted — nobody goes there.



Time and again in modern cities, architects and planners build plazas that are too large. They look good on drawings; but in real life they end up desolate and dead.

Our observations suggest strongly, that public open spaces, intended as plazas, should be very small. As a general rule, we have found that they work when they have a diameter of about 60 feet — at this diameter people often go to them, they become favorite places, and people feel comfortable there; when the diameter gets above 60-70 feet, they begin to seem deserted and unpleasant. The only exceptions are places like the Piazza San Marco, or Trafalgar Square, which are teeming with people.

There are several possible functional bases for these observations. First, we know from the pattern, *Pedestrian Density in Public Places,* that a place begins to seem deserted when it has more than about 300 square feet per person.

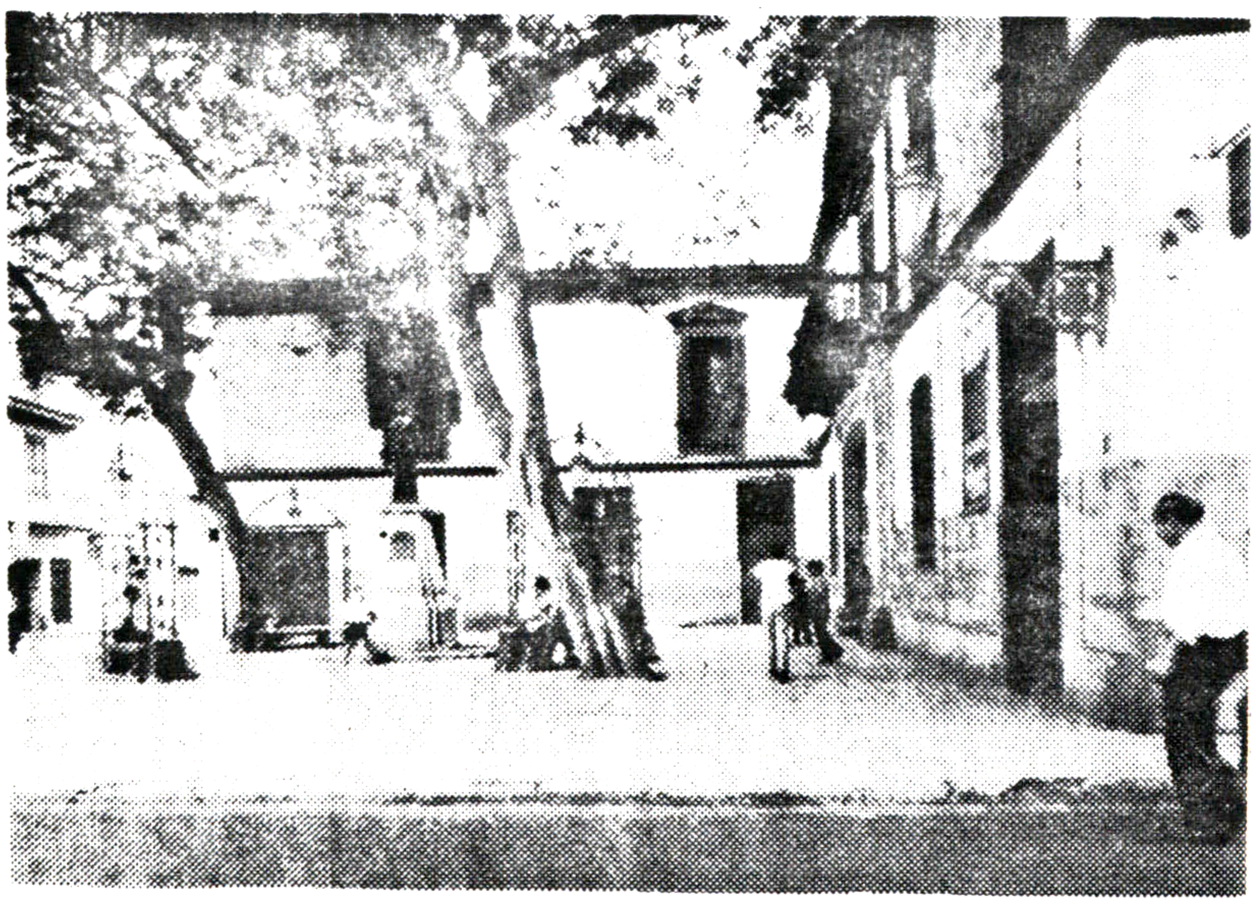
On this basis a square with a diameter of 60 feet will begin to seem deserted if there are less than 12 people in it. There are very few places in a city where you can be sure there will always be 12 people. On the other hand, it only takes 4 people to give life to a square with a diameter of 35 feet. There are much better chances of 4 people being in a place than 12 — so the smaller square will feel comfortable for a far greater percentage of the time.

The second possible basis for our observations depends on the diameter. A person's face is just recognizable at about 70 feet; and under typical urban noise conditions, a loud voice can just barely be heard across 70 feet.

This may mean that people feel half-consciously tied together in plazas that have diameters of 70 feet or less — where they can make out the faces and half-hear the talk of the people around them; and that this feeling of being at one with a loosely knit square is lost in the larger spaces. Roughly similar things have been said by Philip Thiel (*An Architectural and Urban Space Sequence Notation,* unpublished ms, University of California, Department of Architecture, August, 1960, p. 5), and by Hans Blumenfield ("Scale in Civic Design", *Town Planning Review,* April, 1953, pp. 35-46); but we have found few formal observations which support them.

However, although the functional basis of this pattern is still unclear, the basic intuition is overwhelmingly strong:

(continued over)



Therefore: Almost every instinct to make large plazas is wrong. In 99 cases out of 100, make plazas and squares very small, with diameters never much greater than 60-70 feet.

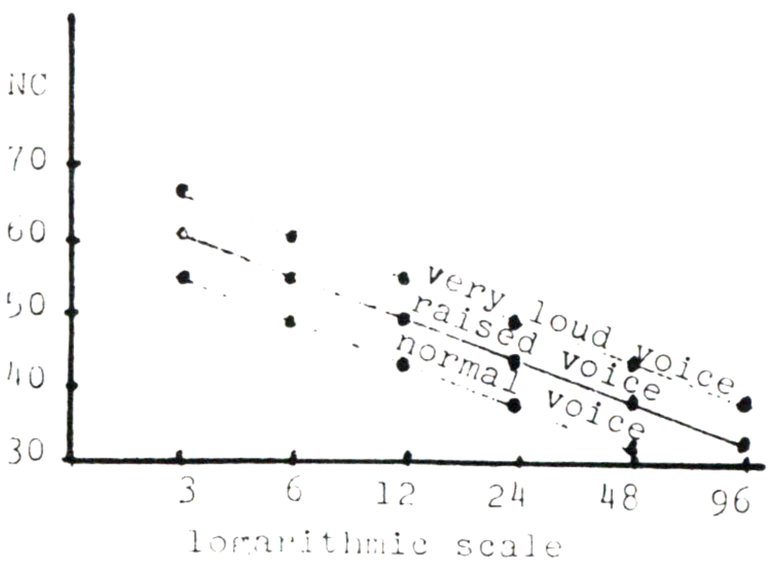
Small Open Spaces

Problem (continued)
We now present the experimental meterial for establishing maximum distances at which people can see expressions on one another's faces, and can talk to one another.

Our own informal experiments show the following results. Two people with normal vision can communicate comfortably up to 75 feet. They can talk, with raised voice; and they can see the general outlines of the expression on one anothers faces. This 75 foot maximum is extremely reliable. Repeated experiments gave the same distance again and again, ±10%.

At 100 feet it is uncomfortable to talk; and facial expression is no longer clear. Anything above 100 feet is hopeless.

These experiments were conducted in the open on a fairly quiet residential street: social and acoustic effects in an interior space, would decrease the distances. The few published results we have been able to find support these estimates.
Hailing Distance. The following table, adapted from Peterson and Gross, (*A. P. G. Peterson, and E. E. Gross, Handbook for Noise Measurement, Fifth Edition, General Radio Company, New Concord, Mass., 1963*), shows the relation between audible speech and background noise level (expressed on the background noise criterion scale).



Most public spaces of the kind under discussion will have a noise level of about NC30-40. At NC40, a very loud voice can be heard at 72 feet. At NC30, a raised voice can be heard at 96 feet, and a very loud voice at 180 feet.

It is therefore clear that the maximum permissible hailing distance is somewhere between 70 and 180 feet, according to the background noise level. E.T. Hall, without taking variation in sound level into consideration, gives the maximum hailing distance, outdoors, as 100 feet. (*The Silent Language, New York: Premier, 1961, p. 164.*)

Seeing Distance. Hans Blumenfeld (*op.cit.*) quotes the following figures:

1. A person's face can be recognised at up to 70 or 80 feet.

2. A person's face can be recognised as "a portrait", i.e. in richer detail, at up to about 48 feet.

Context.
This pattern applies to all plazas and squares which do not have an *extremely large captive group of users* — as do public market plazas, tourist gathering places, etc. It is especially critical for a square which is associated with a small group which seeks to maintain its integrity as a group, or whose social fabric depends on a certain amount of interactions between members of the group. (This would include the arena in a multi-service center, a neighborhood plaza, the courtyard in a university department or high school, etc.)

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