Buildings Surround Open Spaces

What arrangement of buildings and open space gives the most daylight and the best use of land.

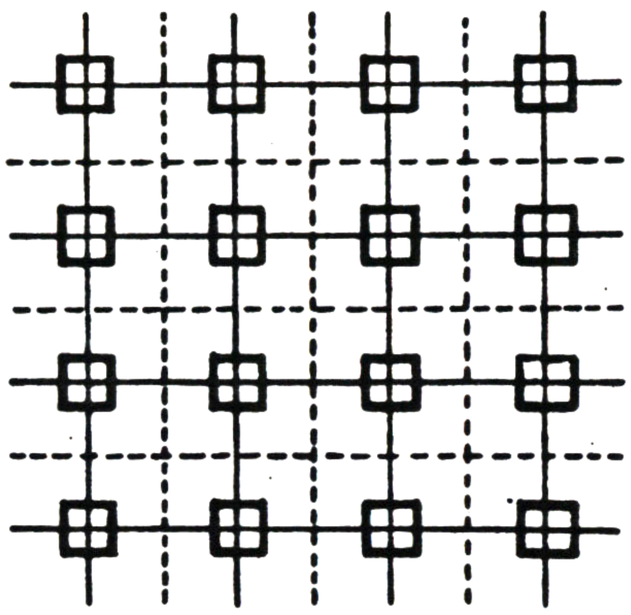
Lionel March and Leslie Martin have shown that two main factors influence the relative layout of built and open space.

1. The intensity of land use.
2. The amount of the building in-

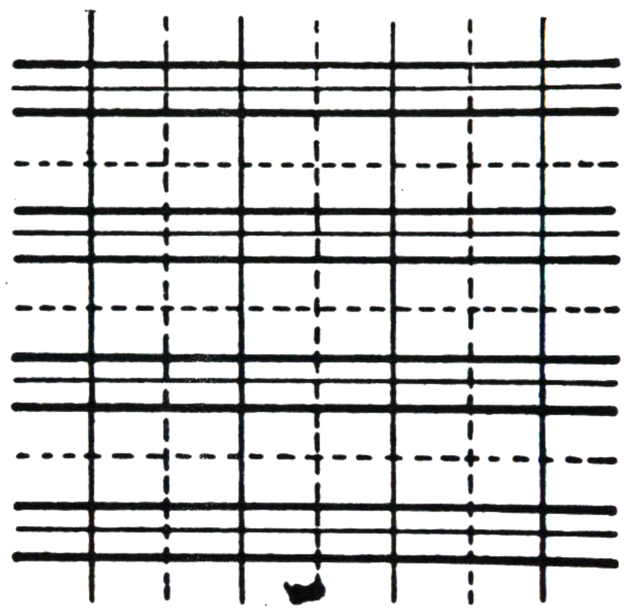
Intensity of land use, is conveniently measured by P, the ratio of built floor area to total site area. Access to daylight is conveniently measured by d, the semi-depth of the building.

March and Martin have compared these factors for three different arrangements of building and open space, which they call S_0 S_1 and S_2.

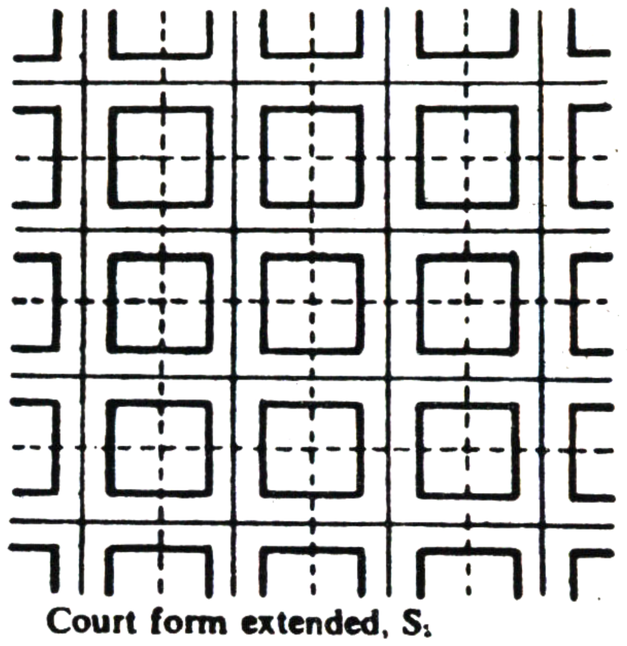
(continued over)



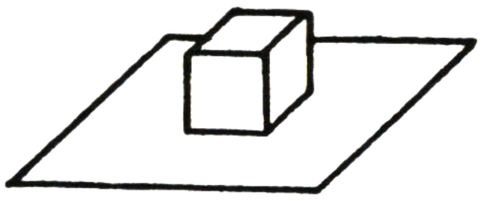
Pavilion form extended, S_0



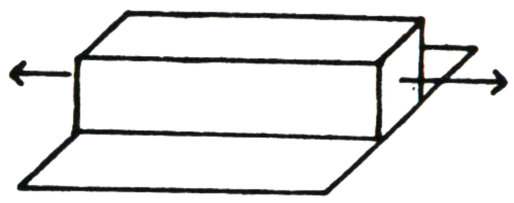
Street form extended, S_1



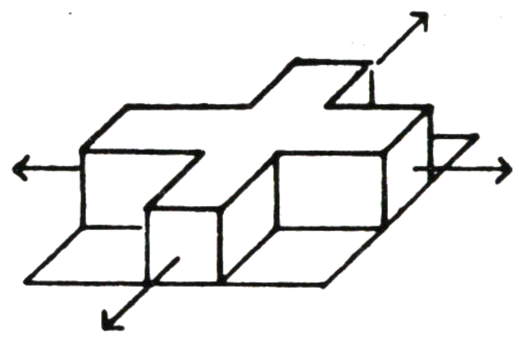
Court form extended, S_2



Pavilion form, B_0

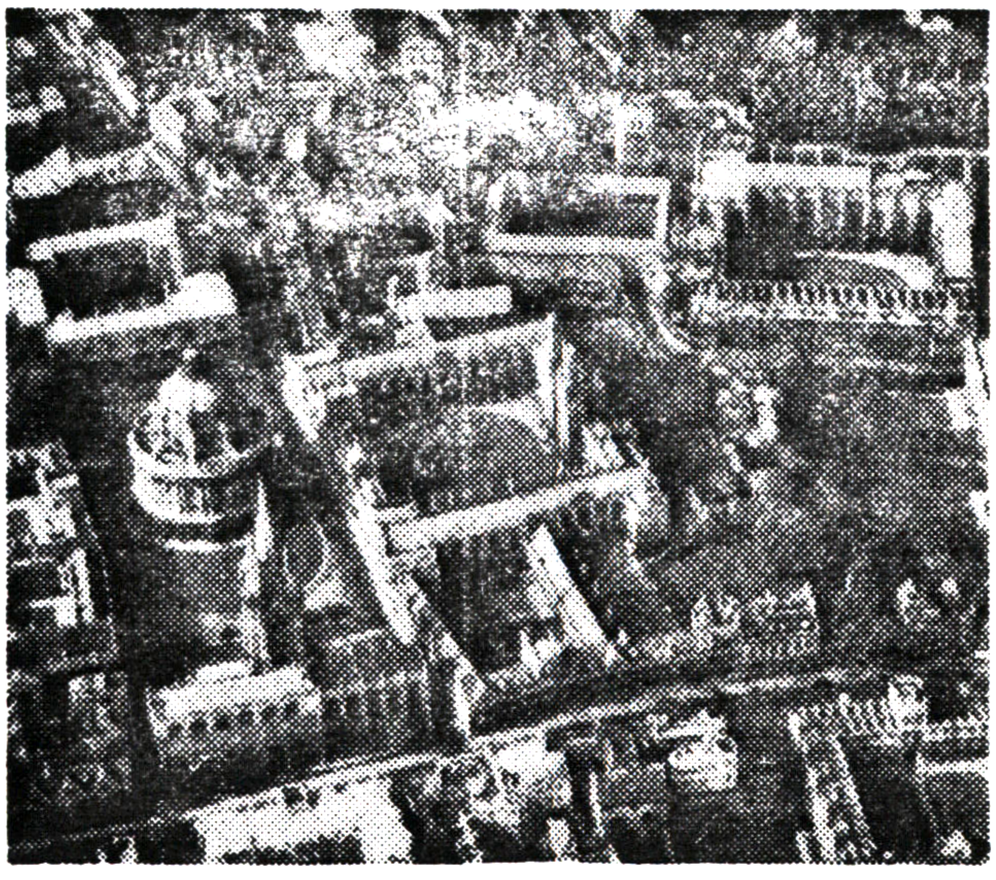


Street form, B_1



Court form, B_2

Therefore: When density and daylight are important considerations, make buildings surround open spaces, do not make open spaces surround buildings.



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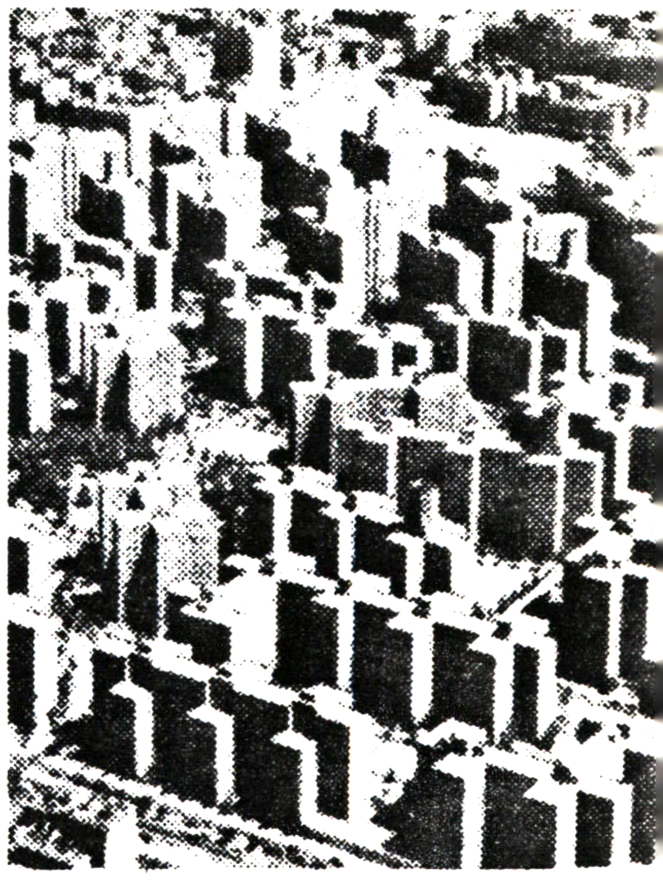

NOT THIS

Buildings Surround Open Space

Problem (continued)
The following curves show that S_2 gives the largest values of P for a given number of storeys, when d is held constant; and the smallest values of d, for a given number of storeys, when P is held constant.

In words: Of the three arrangements, S_2 gives the best daylight conditions, at a given density, and it gives the highest density, for a given level of daylight.

Context
This pattern applies mainly to buildings of reasonably high density. The calculations quoted were worked out for a development in which built space and open space each take 50% of the land. It is probable that the same pattern applies under other conditions; but this has not been shown by the authors.

Reference
Leslie Martin and Lionel March, Land Use and Built Form, Cambridge Research, Cambridge University, April 1966.

By: Leslie Martin and Lionel March.

April 1966 revised 1970