

The courtyard house can be found in almost any culture and climate where the summers can be uncomfortably hot. Here are some charming courtyard houses from Syria.



Courtyards typically take up about 25-40% of a building plot, so to economize on valuable urban space it is important to build right to the edge of the plot. Depending on the height of the building, different sized courtyards are necessary. Bigger buildings have more than one.



In Libya two houses were compared: in the summer outside temp ranged between 20°C-40°C. The temperature inside the traditional courtyard house remained almost constant at 28°C, while inside the modern detached house it ranged between 34°C-39°C. Unlivable without AC.



In arid climates, trees provide valuable shade during summer and in the winter the bare trees let the sun warm the rooms of the courtyard house. Fountains can be added to provide additional evaporative cooling.



The building surround the courtyard itself is also important, since they rely on inert mass to even out temperature differences between day and night, and different parts of the house. A trad house has about twice as much mass a modern house. Easy if you build with adobe, stone.





Most courtyard houses are built more or less symmetrically, but in arid hot climates you tend to want to find a good balance between sunlight and heat, hence the south west of the courtyard house usually have more space.







As with any traditional architecture, courtyard houses are extremely versatile: they can be private homes, government offices, hospitals, shops, restaurants, inns, hotels, schools, university campuses, religious centers, workshops, factories, swimming pools, orchards, etc.









"The courtyard is more than just an architectural device for obtaining privacy and protection. It is, like the dome, part of a microcosm that parallels the order of the universe itself." — Architecture for the Poor: An Experiment in Rural Egypt, Hassan Fathy, 1969, 2010

The serenity of an enclosed courtyard is not imaginary, it is not a piece of far-fetched symbolism, but a fact to be experienced by anyone who walks into an Arab house or into the cloister of a monastery or college. The value of the enclosed space was recognized not only by the desert dwellers but all along the Mediterranean seaboard, by the Ancient Greek and Roman villa builders, by the Spaniards with their patios, as much as by the Arab architects in the mosques of Cairo and the houses of Damascus, Samarra, and Fustat.

Yet, to the Arab especially, the courtyard is more than just an architectural device for obtaining privacy and protection. It is, like the dome, part of a microcosm that parallels the order of the universe itself. In this symbolic pattern, the four sides of the courtyard represent the four columns that carry the dome of the sky. The sky itself roofs the courtyard, and is reflected in the customary fountain in the middle. This fountain, or basin, is in fact an exact projection of a dome on squinches. In plan it is precisely the same, basically a square with, at a lower level, the corners cut off to form an octagon; from each of the new sides thus formed a semicircle is scooped out, so that the whole basin is an inverted model of a dome, just as if a real dome were mirrored in the water.

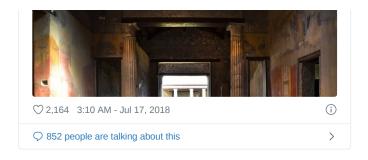
The inward-looking Arab house, open to the calm of the sky, made beautiful by the feminine element of water, self-contained and peaceful, the deliberate antithesis of the harsh world of work, warfare, and commerce, is the domain of woman. The Arabic name sakan, to denote the house, is related to the word sakina, peaceful and holy, while the word harim, which means "woman," is related to haram, "sacred," which denotes the family living quarters in the Arab house.

Now it is of great importance that this enclosed space with the trembling liquid femininity it contains should not be broken. If there is a gap in the enclosing building, this special atmosphere flows out and runs to waste in the desert sands. Such a fragile creation is this peace and holiness, this womanly inwardness, this atmosphere of a house for which "domesticity" is so inadequate a word, that the least little rupture in the frail walls that guard it destroys it. That is why the patio, open on one or two sides, which perhaps is pleasant enough in Spain where the countryside is comparatively tame, would never do in the Middle East, where the fierce desert will jump in like a jinn and devastate the house. If even one side of the courtyard is a simple wall, the atmosphere will be spoiled. The sakina is disturbed. Only rooms that are really lived in can hold the magic in place, and this is because, of course, it is not a substance—we can only talk in parables-but a feeling, and it is created exactly by this turning inward of the room.

Here is a thread on Roman courtyards, and a little bit on tropical courtyards.



The summer heat continues. Let's have a look at how the ancient Romans built themselves a cool, breezy, indoor climate and supplied themselves with almost unlimited fresh, filtered, indoor water, miles from wells or aqueducts, at the same time: the impluvium.



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