MAKING SQUARE FEET DO MORE FOR YOU

PREFACE: THREE BASIC UNDERSTANDINGS

1. NOT ALL SQUARE FEET ARE CREATED EQUAL
   Some square feet work harder than others, while some are completely wasted. And some square feet cost a lot less than others. For instance, a square foot in a luxury kitchen might cost $250, a square foot in an average house built in America this year $100, a square foot of new porch space $30, and a square foot of patio you build yourself out of salvaged brick might cost you nothing.

2. MEASURING AREAS BY SQUARE FEET IS ONLY ONE WAY TO UNDERSTAND SPACE
   A couple centuries ago, René Descartes gave us X-and Y-axes, leading to square miles, yards, feet and inches. Aided by T-squares and most other drafting instruments, Autocad-type software and the machine production of building components, right-angular thinking has dominated our divisions of land and making of buildings. Most buildings get shaped as if they were mat board, not mud.
   However, straight lines, squares and cubical volumes are nearly unknown in nature, where form is shaped according to real physical and evolutionary forces. Consider tree trunks, rams' horns, pineapples and sunflowers, crystals, clouds, the flow of water, and the complex curvature of our bodies. Stepping out of a world of boxes, there is a realm of organic form that is more complex, sensuous, sinuous, flowing and connected. "Round feet" has been suggested as an alternative;
   Bucky Fuller worked with "triangular feet," and bees (and tilesetters) know about "hexagonal feet."

3. PLANET-WIDE, PEOPLE'S HOMES DIFFER WIDELY IN SQUARE FOOTAGE
   A short chart makes this perfectly clear:

3 of us for a summer on a friend's boat	3 in 6 x 16' space:	32 SF/person
Squatter home (1/5 of world's population)	family of 5 in a 15 x 15' room:	45 SF/person
Studio apartment for a single person in U.S.	400 SF:	400 SF/person
Compact couples' home	2 in 1300 SF:	650 SF/person
Typical US single-family suburban home	family of 4 in 2600 SF:	650 SF/person
Prestige-oriented monster estate home for child-free couple	2 in 13,000 SF:	6500 SF/person

The differences in meaning and value of a square foot of space, together with the spread presented above, make it impossible to give an absolute and universal answer the question of how much square footage someone needs. You can't make sense of square footage number without knowing someone's social and cultural world, the building technologies and land available to them.

When you look beyond the Sunday newspaper's ads and beyond your own neighborhood, you are led to a troubling perspective on the profound injustice of the global inequalities of means. As with most other realms of consumption, the U.S. stands at the top of the heap, but there is a small groundswell of frugal, less consumptive space-making. It may be done out of financial necessity, for the liberation of moving toward voluntary simplicity, for the satisfaction of sharing the planet's limited resources, or simply to make houses that are more joyful, interesting & efficient. Toward all of these ends, I'm off the soapbox and offer these guidelines for making square feet work harder in the design of houses and related buildings.

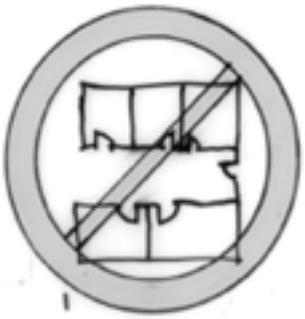
19 DESIGN PRINCIPLES TO MAKE SQUARE FEET WORK HARDER

BEFORE YOU BEGIN DESIGNING, do this 4-part exercise in self-knowledge:

1) Study your lifestyle very carefully,
2) Think as freely as possible about the qualities of the spaces – and places - you have most loved and hated,
3) Fight to minimize your clutter and accumulations, and
4) Free yourself up from advertising, media imagery and pressures to consume, since if you don't, "The urge to buy terrorizes you," as a graffiti message in Seattle suggested in about 1989.

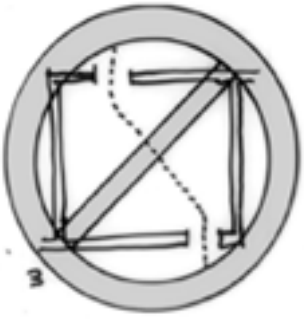
Then, when you begin designing – or working with a designer -- use as many of these principles as possible:

1. Minimize circulation space by reducing or eliminating hallways and minimizing the paths to and from the doors. Excessive circulation space is one of the biggest drawbacks of many floorplans.



2. If you do have to have a hallway, enrich the pass-thru experience with bookcases, niches, photos, mirrors, art objects, skylights, or textures.

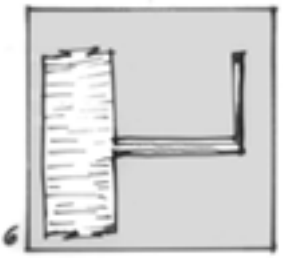
3. Avoid circulation paths that cut diagonally through a space. This almost always chops something up that would otherwise be a whole with its own integrity.



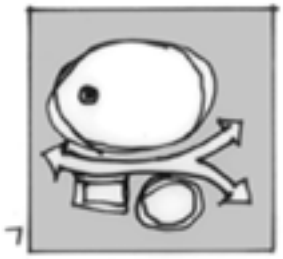
4. Don't close rooms off from each other unless you have to. It's easy to see how this helps minimize interior walls.

5. Consider partial separations between rooms, to give an ambiguity of connectedness: arches, interior windows, half-walls, curtained spaces, freestanding headboards for beds, interior columns, and similar features. Often there are reasons to want some separation of a space from another, without needing to devote a separate room to each one.

6. Have interior walls as thin as possible, in contrast to the many compelling reasons to have thick exterior walls. For instance, a rammed-earth house with 30-inch exterior walls might have an interior partition that was 2-1/2" thick, with drywall on 1-1/2" framing members. Something thinner than an inch can often serve as a wall, as with Japanese shoji doors.

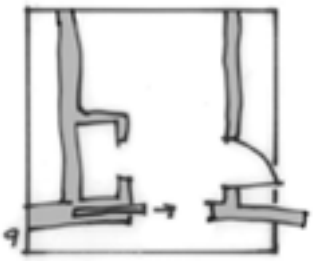


7. Organize the floor plan around activities, like eating dinner, doing a craft or hobby, or greeting visitors, rather than preconceived rooms. Look for the centers of action, movement and attention, then shape spaces around them.

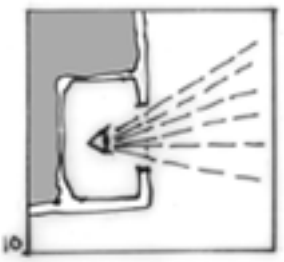


8. Minimize the number of doors, after considering your real needs for privacy.

9. If a doorswing seems to take up too much space or unavoidably conflict with something else, consider a pocket door.

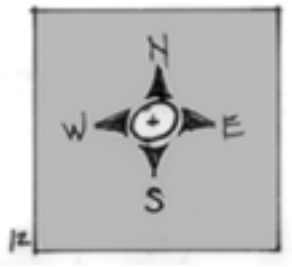


10. Relate in careful detail to the different views in different directions, including connecting with the heavens above via roof windows and skylights. Intimate, small-scale views can be just as enjoyable as the sweeping, dramatic ones. The perceptual effect of a view is to expand the space you see it from.

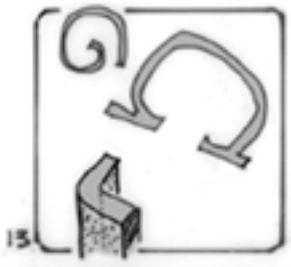


11. Have easy connections of inside to outside spaces, such as patios, decks and outdoor showers, designing them as outdoor rooms with their own definition and sense of partial enclosure. For seasonal variations in your climate, have different outdoor spaces for winter and summer.

12. Consider other planetary connections: a compass in the floor, Stonehenge-like shaft of light at the equinoxes or solstices, a sundial or shadow-casting play place, prisms in a window to send rainbows flying around. These connections can help make a house feel like part of a much larger whole.



13. Avoid right angles, as much as permitted by your budget, your building system, and your skill in building. Where you do have them, consider softening them by means of sculpting your wall material, trim, ornament, or connecting walls to a built-in feature like a fireplace or display cabinet.

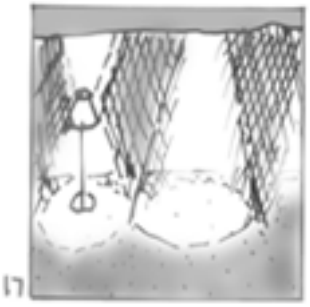


14. Vary ceiling height, generally giving smaller spaces lower ceilings. This will dramatize the perceived size of the larger spaces by increasing the contrast between spaces. Floor levels can also be varied, with even a few inches' difference adding to the diversity and apparent bigness of spaces.

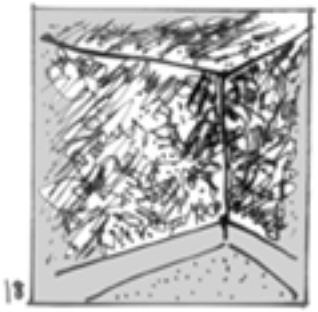
15. Have non-flat ceilings, such as open trusses, curved vaults or cornices. The shape which rises will pull your feelings with it.

16. Have a diversity of windows. A single glass block or 1-square-foot window can energize a large blank wall, and "zen views" can make much of a smaller window.

17. Plan lighting to create pools of light, rather than uniform illumination everywhere.



18. Use rough interior materials, or decorative paint and plaster techniques, to add detail and visual interest to the surfaces the eye falls upon. Experiment and invent.



19. To extend rooms and create diversity, use "non-room" spaces, such as window seats, sleeping alcoves, niches, built-in benches, recessed shelves. Thick-walled building systems like straw-bale and rammed-earth more naturally allow these kinds of spaces, but stick-framed thin-wall methods can also be used to make spaces in this way.

Of course these guidelines aren't absolute, and sometimes the exceptions are as intriguing as the rules! Nevertheless, in well-crafted houses embodying most of these principles, I propose that a vibrant level of complexity will automatically unfold, and small spaces can be intensified to become richer and more enjoyable. And it might just be that houses made in this way will be understood as a contribution to the well-being of the planet.

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