

THE SMALL HOUSE

An Artful Guide to Affordable Residential Design



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Introduction

I. EXISTING PERCEPTIONS

The small house is perceived in two contradictory ways in twentieth-century America. One perception is of projects designed by nonarchitects, the second is of small houses designed by professionals.

The first perception is of Levittown, of "ticky-tacky" little boxes, redundant, crowded together, and nestled to their streets, conveying a hopelessly thoughtless response to the need for cheap accommodation. These small houses were the logical elevation for families leaving the tenements of an immigrant generation. The desire to own four walls and a roof over their heads was great enough to allow forbearance of physical limitations.

This "half-a-loaf" philosophy can be seen today in the proliferation of nouvelle tenements otherwise known as condominiums.

The second perception is a contemporary one, though it has its roots in the beginnings of the Modern Movement, early in the twentieth century.

When a revolution sweeps a country, its leaders tend to be young. In aesthetic terms, a new vision can be expressed two-dimensionally, on canvas, paper, or board, with very limited monetary resources. In poetry, literature, or music, the financial investment is minimal. Sculpture requires more space, material, and, of course, cash.

All of these areas of artistic expression facilitate the creativity of impoverished young revolutionary aesthetes with relatively little patronage. But the world of architecture is different. There, tens of thousands of dollars are needed to implement even a small renovation. Obviously the high stakes of architectural patronage make experience more valuable than juvenile brilliance.

How then can young architects express themselves? Small houses by definition cost less than large houses. Architects tend to design for their contemporaries, hence Young Turk architects tend to design for other Young Turks—who have young bank accounts.

These economic realities affect the public perception of architect-designed small houses. The small houses receiving attention for their merit have generally been done by youthful missionaries with severely personal visions. Born of a lack of knowledge and a wealth ofchutzpah, these houses reflect an explosion of repressed visions. Given the paucity of available paths for built expression, these small-house designers have often created manic frenzies of excruciatingly overwrought massing and detail, or constructions of such poetic distillation that they verge on functionless sculpture.

Time and experience bring more avenues for the designer to discover subtlety without losing the creative spark, or so one hopes. But in the wake of an architect's professional progression can lie several embarrassing failures in the form of small houses.

So, whether "crazy young architects" design homes with the appeal of lunar landers or anonymous builders replicate acres of congested boxes, the small house has a negative image in the minds of many.

It is hoped that this book will reveal an aspect of professionally designed smaller homes that will surprise and delight the reader. The projects displayed were chosen to convey a growing sense that the smaller home is no longer a stopgap solution or an architect's cruel joke. Because of demographic, geographic, and economic realities, the architect-designed small house is rapidly becoming the only uncompromising solution to the coming crisis in housing as the baby boom babies have babies.

II. THE NEED

A generation of Americans born after World War II and before 1960 has reached unprecedented affluence and social maneuverability at a tender age. With so much emphasis on career and personal control, the sizes of families have consistently shrunk over the last 2 decades until recent years, when the pent-up nesting desire has created a modest re-booming of families.

With divorce creating so many smaller family units, with extended life spans and non-nuclear families creating so many independent elderly, with childless "coupledom" now commonplace, and with the growing acceptance of single and gay lifestyles, our accommodations can and will "shrink to fit."

The "training wheels" for baby boomer home ownership might well be the now-conventional condominium. Condominium projects often have shared site services and structure and high population densities. They represent a new form of affluent ghetto, and the socioeconomic group typically accommodated is the smaller, more-affluent baby boom family.

So far, the home owners of today have evidenced the desire for quality over quantity in every personal possession save their homes. They choose automobiles that are smaller and better-designed and detailed than are their "full-size" counterparts. This generation buys clothes with designer labels and quality craftsmanship and materials, thereby decongesting their closets, as fewer, more-expensive, classically designed clothes supplant trendy impulse purchases. So it is with home furnishings: people are collecting their prized furniture and accoutrements over time versus buying a collected set of cheaper merchandise.

In light of this growing desire for quality over quantity and the reduced need for space brought about by many of the households seeking accommodation, what is needed now is a reexamination of traditional assumptions about what makes a home desirable. The unprecedented increased cost of financing and the ever-worsening scarcity of available building sites have pressurized the housing market to the point where there is more frustration than accommodation. This book presents an answer to the question of housing in an era of reduced spatial need and growing costs.

Multiple-family housing, whether in the form of urban co-ops, suburban condominiums, or rural cluster housing, does not serve well the simple human need for personal possession of home and environment. Forbearance of inadequacy can be justified when economics dictate, but the same financial plateau that accommodates the luxury of having a baby creates the need for ownership of more than just one's particular slot of space.

If the condominium is merely a Band-Aid solution, then what is the natural answer for a generation that has grown to value quality and has put new emphasis on pride in ownership? I advocate the free-

standing, custom-designed home as the essential desire of all those forced into the condominium compromise. Since time tends to increase resources, I believe that the next generation of home owners will opt to exchange a communal parking lot for a picket fence. The viability of the single-family dwelling will be renewed via the simple cost-saving feature of making the house smaller.

In this book, I advocate architect-designed small houses as the best solution for a growing number of potential home owners. If you simply take a standard plan and erase the den and a bedroom, then set the photocopy machine to reduce by 15 percent, the results will be similar to the constrictive tract houses that are untenable as places in which to live in the 1980s. It is only by using knowledgeable architects that people can make sense of their homes in a world of shrinking expectations.

III. THE ROLE OF THE ARCHITECT

As stated, architects have created an image of unrestrained ego and thoughtless budget-busting. Unfortunately this image has been correct all too often.

Architectural students see Frank Lloyd Wright's Usonian houses, Le Corbusier's Villa Savoye, Mies van der Rohe's Farnsworth House, Philip Johnson's Glass House, or H. H. Richardson's Glessner House, and they are exposed to genius adapting to restrictive programs, sites, and budgets. They also see distilled aesthetic theory that is very compelling as a slide lecture or illustration in a book, but too often designed in an era when a polemic was more important than a conscience.

Leaving school, the architectural novice finds a job detailing or drafting someone else's designs, and daydreams of slides and heroes. When the opportunity presents itself, the protoarchitect unleashes his or her full aesthetic fury, and the results are often absurd enough to remain unbuilt.

It is the paradox of architecture that to gain competence you must have experience and that to get experience you must display competence. And then, once experience is gained, the profit motive tends to grow, leaving the small project, be it house or addition or renovation, in the realm of undesirable opportunity for some architects.

Why will the new generation of exurban condo expatriates use architects, given their track record for small houses?

In short, because they have no choice.

Small houses should not appear small or feel small. The only way to prevent a misfit or a binding abode is to maximize the efficiency of the house's working parts to liberate the house's living parts. The only way to counteract diminutive scale and potential aesthetic insignificance in a small house is to play with the scales available and reinforce a singular identity.

Can this be done by wishing? Obviously not. Can a person untrained or inexperienced combine spatial and formal delight with functional and structural efficiency? It would seem highly unlikely.

When these simple desires are combined with a great desire for energy efficiency, the prospects for high-quality nonprofessional design dim considerably. And when the oddball nature of most affordable sites (back lots, subdivisions, sites with poor access, etc.) is confronted, the need for an architect versed in small-house design is undeniable.

And yet, the vast majority of homes built in America today are not designed by licensed architects. So why should a small house be different?

Because it is small.

Not unlike a government that throws money at problems to solve them, those who make houses in America, architects or not, have traditionally thrown space at tricky problems. Architects have often used space as a design element, creating an enclosed environment on a scale with exterior space to enhance some aspect of their designs. But when a house is small by choice as well as necessity, space must be held to be sacred.

It is not only simple economics that imposes such limitations on home owners and designers. Every project has a budget. Money can be spent to create space and/or to create inspiring detail, use quality materials, or facilitate long-term economies of low-maintenance, energy-efficient design. The less space built, the greater the opportunity to invest time and money in those aspects of a building that provide the essential pride in ownership that motivates the home owner to build in the first place.

Obviously an architect, with professional perspective and creative insight, can help create a thoroughly efficient, aesthetically intriguing home. But without the client's direct and abiding input, the building will most assuredly fail in its most rudimentary purpose: to house people in a manner which best suits their needs.

The intimacy of mutual utility between the occupant and the designer of a new house is in direct proportion to the diminution of the building's size. Assumptions by the designer can be absurd when there is a lack of spatial lubricant for unplanned idiosyncratic behavior. A small house is very unforgiving of miscalculated priorities or neglected requirements.

The potential for architects is that while solving intimate problems they can convey essential aesthetic truths. The small house is not unlike a haiku poem. When conceived in thought and inspiration, it is a living joy. When effected without enough care and creativity, it is an enigmatic bore.

IV. UNEXPECTED BENEFITS

The economies of building a small house are self-evident. The aesthetic distillation possible in a small house presents wonderful opportunities for the designer. The functional efficiencies of condensed work spaces also save time and effort in the actual use of the house. But there are happy benefits that are not immediately obvious.

First and foremost is the benefit of energy efficiency. Superinsulation, air locks, solar orientation, eave design, and various air-moving and sun-shading technologies all help mitigate the cost of cooling or heating a building. But the simplest and most effective way to reduce heating and cooling costs of a house is via the reduction of the volume of air to be treated. Small houses better afford cross ventilation for cooling. Small houses also have less area to be artificially illuminated and allow for better solar penetration for natural lighting.

Second, the cause of innovation is well served in designing and living in a small home. Rather than look to a book of standards, the designer and occupant must rethink the very nature of all the typical givens, be it bathroom layout, laundry location, or techniques of storage.

Third, any site is better served when a building's footprint can be scaled down to use the best aspects of the site to full advantage. It is always easier to expand a building's impact by nonarchitectural means (walls, plantings, grade changes) than to rework a bloated building to fit a given site. This is especially true for the "problem site," where access, view, solar utility, or natural terrain force the house location into an inevitable compromise.

Last, long-term economies are effected when a scaled-down house is built. Obviously, lower building costs create lower financing costs, and energy efficiency greatly lowers the long-term cost of occupancy. But another long-term economy can be effected by reducing the size of the building to be built, and thus providing funds for the sort of materials and detailing that prevent long-term maintenance problems. A red cedar roof on 1 X 3 inch sheathing lasts twice as long as an asphalt shingle roof. Stonework needs little maintenance compared to wooden fences and concrete walks and steps. Wood paneling and tile work may never need refinishing during a typical 20-year occupancy, whereas paint and vinyl tile most assuredly will. In addition to the basic satisfaction of long-term maintenance savings, all these steps afford a certain visceral gratification as well.

V. METHODS AND RULES

As does any type of construction, the typical American home has traditional rules, both implicit and explicit, for its design. Traditionally, a "better" home has meant a bigger home. As affluence spread, storage space began to assert its impact on the American house plan with a vengeance. Fully one-third of the square footage was devoted to uninhabitable storage and circulation space. Also, rooms began to be added for discrete functions that once shared common living space. As the typical American home grew to embrace the "den," "rumpus room," "family room," and "library" as valued selling points, the average home began to feel the effects of unlimited spatial consumption.

Then, two nonarchitectural events intervened. First, two major energy crises boosted the heating and cooling costs of these newly bloated homes to the point of unaffordability. Second, the rise in real interest rates made big-ticket construction budgets simply unfeasible for the vast majority of home owners. The immediate responses to these economic inhibitors were the condominium and the cooperative—essentially, purchased apartments that afford tax advantages and some sense of ownership. But these dwellings have all the disadvantages of shared living environments—minimal personal space, communal rules, common walls, and spatial constriction—without any personal involvement in the design of the unit.

So it is with the sense of reorienting the priorities of the typical home owner that some architects have begun to explore seriously the possibilities of the small house as an uncompromising, personally integrated design. The goal is to create a freestanding home on its own lot for the cost of a comparable condominium. Obviously a trade-off of space for personalized possession must be effected.

It is in that spirit of reinvention versus a depressing diminution of expectation and hope that I present this list of basic revisionist thinking. None of the "rules" given here are new or magic, but when they are applied consistently to create delightful and efficient small houses, their value is enhanced.

Ease the Squeeze: Rules of Thumb

The Distant Prospect. By situation a house can dominate and define a site, while its form can convey a power and impact far in excess of its true size. If the house is used as an endpoint in a long-range view or a definitive object in a natural space, the building can seem to control its surroundings and gain perceived stature.

Scale—The Most Valuable Tool

Exterior. To diffuse the singular identity of the small-house form is to dilute its potential. The basic image of the house form must be dominant and obvious. In other words, do not put the clear light of a small house under the bushel basket of diffusing exterior articulation of form.

Interior. Create extreme contrasts in scale using axes, cross axes, and the vertical dimension as larger-than-expected elements stand in sharp distinction to the tightly designed storage, bathroom, and kitchen spaces. If the budget allows, use detailing to enrich the entire composition by adding a depth of design to the very personal level—via mill work, furniture, lighting, etc.

Fenestration. Essentially the same rules as above apply. By varying scale from larger than normal down to smaller than normal, you create a sense of rich contrast and enhance the individual door and window identities. But there is one simple proviso in the area of fenestration: There is no room in a small house for gratuitous glazing or entries. Each portal is precious, and because of its enhanced impact, due to the reduced amount of construction, the element must have a great deal of thought behind its design. Hence a single custom element such as a front door can transform the entire image of a house.

Roof. This is perhaps the single most important formal element—with concurrent spatial implications. A small-house roof must be the indication of its essential plan. To create more than two basic roof elements is to muddy the perceptual waters to the point of confusion. Broad eaves reinforce the power of the roof as cap to a simple volume below. Flat roofs on small houses can create a sense of truncation rather than horizontal flow; often there is simply not enough house to provide the flowing effect.

The Vertical Dimension. This is the most ignored tool for spatial sense in residential architecture. The simple breaking of the standard 8-foot ceiling height causes the eye and head to rise, and with them the spirit. The condensing of functions is tolerated much more easily in a loftier space.

Materials. Use those materials that generate the most home-owner pride and that will require as little long-term maintenance as possible. Quality “reads” in most people’s eyes. Aluminum siding, asphalt shingles, and textured plywood are forever compromises, imitations of the genuine articles. Conversely, high-quality or custom fenestration adds a sense of care and design that no occupant can ignore (especially given the energy efficiencies and maintenance savings that often result).

Space. By definition, space is the most difficult dilemma in the small house. A fundamental distinction must be made between perceived and real square footage. The very nature of the axes and the use of the vertical dimension recommended in this list help excite the occupants by showing up their expectations to be merely assumptions based on previous experience. In order to create the luxuries of axial

orientation and vertical spatial release, two basic methods of obtaining spatial relief must be implemented. First, thorough design with intimate owner involvement and a willingness to reinvent the wheel can result in much tighter organization of the kitchen, bath, and work areas. Second, exterior spaces can release warm-weather spatial squeeze, and perceptual relief can be realized by large-scale openings to those outdoor areas that are defined naturally or as part of the extended house (decks and patios).

Individual Elements. Stairs, beds, fireplaces, desks, and interior glazing can all follow the rules of reinterpretation by their considered application. Intrusions can be minimized, efficiencies effected, and delight enhanced simply by the willingness of the designer and client to rethink assumptions inbred over decades of conditioned response to typical problems in residential architecture.

Exterior Appliqués. Often the latent geometries of a house can be easily extended by the creative application of large-scale exterior elements such as stickwork, roof overhangs, pergolas, or gardens. Not overtly ornamental, these elaborations can serve to greatly aggrandize a project without enormous expense.

If there is one abiding rule, one singular objective, it is to *create* renewed delight and surprise by the *reduction* of the space to be built. The only way to insure a painless reduction of scale in a dwelling is to have a dialogue between dedicated architect and open home owner. In the rethinking of so many basic assumptions by the home owner and architect, an important secondary benefit of personal insight is realized.

Rather than adapting their lives to their accommodations, home owners can reinvent their dwellings to serve their reexamined lifestyles. The resulting sense of personal empowerment engenders the sort of pride and commitment no decorated condominium can match.

VI. CONCLUSION

Given the socioeconomic dominance of the baby boom generation as it grows into full familyhood, the present state of ad hoc accommodations must change.

Multiple-family approaches to housing can relieve some of the short-term accommodation needs. Unfortunately, the home, being the largest single investment of the vast majority of people, demands more consumer satisfaction than simple utility.

The opportunity to create high-quality, high-art homes at costs comparable to those of condominium units has begun to be addressed in recent years. Obviously there is no free lunch, and given the latent economies of multiple-unit construction, the freestanding home must be reduced in size to be competitive in the marketplace.

To reduce its size and maintain its desirability, the small house must be a thoughtfully designed, thoroughly efficient building, containing the appointments and amenities that foster pride in ownership. The only way to achieve this end is via the use of talented architects.

This book presents the tip of a growing iceberg. Traditionally designed as vacation homes, second homes, carriage houses, starter homes, or retirement homes, the architect-designed small house in America is graduating to a new role, that of a primary component in the lexicon of general-use housing.

It is only by demonstrated success that the architect-designed small house can prove itself to be the viable alternative to continued domestic frustration. This book has been compiled to show the state of the art in small-house design. In a great many ways, it is intended to show that good things do indeed come in small packages.