

Housing Modes, Impediments and Opportunities

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Introduction

There is a need for affordable housing on US rural lands for lower-income people. Lowest possible cost is the overriding need with many factors influencing the actual cost of house provision. At the very least, the following can be considered: a) the selection of land for housing that does not require costly foundation or infrastructure development, b) house siting and form that minimizes the reforming of land, c) simple forms of methodical construction amenable to neophyte self-help¹ labor, d) the selection of local sustainable² building materials, e) the creative utilization of rejected older building materials through recycling, f) design options that allow for phased incremental construction, sized to match occupant financial capabilities, g) that state and local governments develop land, tax, and regulation strategies to aid in housing provision and land acquisition, h) the development of sensibilities and strategies that move church, mosque, synagogue, NGOs, PVOs, and groups with environmental and human services concerns to aid in such areas as the purchase of land, the education of self-help builders in construction, the funding of professionals to aid lower-income groups, and the funding of pilot housing projects, and i) that communities of lower-income people work together with design and building professionals in ways that improve their chances at securing housing and that enhance the quality and longevity of their built environment.

Modes of house construction change over time as social, economic, and technological impacts demand. Today's large pool of minimum-wage workers do not fit the financial profile bankers demand when lending money on the typical modes of housing now available on the market. The situation suggests that we strike out to explore different ways in which to make housing more affordable.

In a very real sense there is a need for today's poor, seeking or forced to live their lives on rural lands, to learn from the housing experiences of Mexicans living in today's colonias, and from the rural US colonialists of times past. Both groups build/built

¹ The need to broadly define self-help is ever present in lower-income housing as it must include many variants: the work of one family, the work of a network of relatives and friends, the bartered and/or paid for labor of friends or trades people, the contracting out of portions of the house. Perhaps the best way to define self-help is to say what it is not: it is not the paying of one person or firm to do all contracting and building.

² Economic comparisons of local sustainable materials to lumberyard materials indicate that local and sustainable materials can be consistently less costly.

creatively with their own hands, incrementally, and in consonance with a region's opportunities while sidestepping impediments placed by nature or man.

Changing Modes of Housing in Western Massachusetts

I live in rural western Massachusetts and my observations on housing are from this region as well as from colonias in urban Mexico, and, more recently, on sustainable housing practices in Papua New Guinea villages.

In rural western Massachusetts, land for today's housing is typically split off larger holdings of earlier settlers. These lots almost always front on town roads, obviating investment of capital by the seller, with the survey and soil percolation rate tests being the extent of capital outlay. The usual modes of housing production, in descending order of costliness are: a) custom built residences by a contractor with the owner sometimes acting as director of sub-contractors and often doing finish work, b) manufactured modular housing units, towed on wheels by tractor-trailer and craned onto an approved concrete foundation³, c) new or used "home" trailers towed onto the land and set on an approved concrete foundation, and d) the self-built house. The last mode can be subdivided into those built incrementally over time, and those built by people who have the financial resources and time to build all at once. Today, while no research has been conducted to determine modes selected or changes in these modes over time, there appears to be fewer housing starts by those who elect to house themselves via trailers and/or self-built incremental housing⁴.

The traditions of housing here, since colonial times, have gone through a series of modifications that reflect land values, connections to an evolving cash economy, changes in the technology of building and construction materials, and desires for personal expression in housing. Colonialists, much like those in Mexican colonias, started their housing with what was on hand, and they slowly expanded the size and commodiousness of the house as time and circumstances allowed. House design ran along the traditional lines of clapboards on heavy timber frames; and the additive, incremental, nature of the New England house was a viable model with the initial structure being sometimes no more than a one-room shelter. After the century turned to the 1900s, milled lumber was becoming dominant, and by the 1940s or earlier plywood came into prominence. Since then, housing has progressed from standard house plans to unique configurations that reflect owners' desires, and building materials have swerved from the local to a continent's warehouse, supplemented more and more by the world of chemistry and wizardry with the use of vinyl siding, fiberglass roofing, vacuum sealed windows, acrylic carpeting and the like.

³ The discrepancy in weight capability between tires and concrete foundations speaks of the current state of building code regulation.

⁴ Tentative painted plywood box-houses, bound over time to improve through addition, and dilapidated time-dated trailers, are giving way to the delivered, vinyl sided manufactured house. Coincident with this change has been the wholesale re-education, by Boston regulators, of building inspectors in the region. Rule benders who could look the other way to help folks shelter themselves were educated out of the system.

There is less of local sustainability and more of the cash economy. What Thoreau could harvest from the forest with a borrowed axe now requires a 20- or 30-year mortgage. And the trailered-in house, manufactured hundreds of miles from the site in another state and with a generic design devoid of regional influence, built so much with synthetic materials, put together with air-powered fasteners in factory buildings brings us to the present, and to the dilemma that such housing requires mortgages which, for many poor, are not forthcoming. A less costly approach, that of self-help construction, needs to be reintroduced in our time as a realistic way to provide least-cost yet commodious housing.

Impediments to rural housing

In this matrix of country housing, today's poor have little aid from government or so-called socially responsive groups. Community development corporations, limited by state and federal funding schemes, can only nominally lower the cost of housing. Banks require not only steady employment, but they only provide funding for houses that, in their estimation, they can sell out from underneath owners who fail to meet mortgage payments. Slowly self-built incremental houses with undone work and expressions of personal desires are anathema to bankers.

Strictly enforced government regulations create a housing culture that increases costs beyond the reach of the poor. While many building code requirements assure, through compliance, a safe structure, some requirements that impact negatively on housing accessibility could be reassessed⁵.

Rural town zoning regulations set standards that are often meant to enforce minimum economic capabilities of residents, to safeguard real estate values. Health standards require leach fields that readily handle house sewer effluent or engineered mounds that require expensive imported fill and often pumping stations. And town taxes are set, after a few years, on the supposed value of the finished house instead of the actual value of any partially completed domicile.

Socio-cultural mores, often held as dearly by the poor as well as by the rich, also impede housing access. Garages, dens, dishwashers, and television outlets are obvious expenses that can be foregone for some time by the needy.

Housing Opportunities

The impediments sketched above all conspire to make housing acquisition difficult for lower-income people. Alternatives to these impediments, opportunities that bring housing affordability within the grasp of the poor, require a tabula rasa not only for regulators and administrators, but for self-help house occupants—builders-to-be—as well. In this new territory rests numerous opportunities that can burgeon into a different kind of rural America, one closer to the sensibilities of Jefferson and Thoreau. Consider the following:

⁵ The need for thermally efficient glazing, for example, can be implemented slowly when using recycled windows, adding multiple layers of glazing over time, adding thermal curtains, and shutters.

Zoning. Decreasing minimum lot size to reflect actual bearing capacity of the land as well as actual land use by residents. Setbacks can be restudied: the traditional siting from colonial times had houses and barns very close to the public road, reducing driveways and gathering open land for gardening to the side or rear of the lot.

Sustainability. Building with renewable local materials not only aids the local economy but is usually less costly than non-sustainable options. Compare, for example, the real costs of cutting, milling, grading, kiln drying, and transporting timber from the US west coast to New England to local timber rough sawn and used “green.” Similarly, recycled windows—rejects from affluent suburbs—can be had for the picking or for little cost and can be improved over time to become more energy efficient.

Building Codes. There are no provisions in the Massachusetts State Building Code (reflective of a national building code) for incremental house construction. There is a need for a special building code for self-help housing. Such a code would reflect the need for human safety but would allow occupancy during incremental construction. It would allow energy efficiency to be improved over time⁶. No work should be the regulated domain of particular trades people; the occupant-builders can do all the work, including plumbing and electrical; and local material use would be fostered⁷. Building code officials could be trained to aid neophyte builders by offering sessions on house construction, by offering hands-on advice during construction.

Taxes. Land taxes are imposed on all regardless of income, family circumstances, and the time devoted to building by the owner. Taxes could be formulated to reward those who build from sustainable materials, to ease the financial burden of those who must self-build incrementally⁸. Taxes on lands greater than 5 acres, with an agricultural component, today receive set-aside tax abatement. Small building lots, with family or market garden plots, are also contributors toward local agriculture and should equally qualify. As it stands now, only those with large holdings enjoy the tax relief (often for passively held woodlands), while the small landholder with a self-sufficient garden pays the full tax bill.

Professional Involvement. Architects, planners, social workers, engineers, lawyers, environmentalists, builders, financiers, church and social work groups, and others can involve themselves in the socially relevant, satisfying, and taxing work of housing design/construction and community design for lower-income populations in the US. The precedent established in Mexico by low-income community-based settlements and their

⁶ It might be instructive to contrast energy conservation mandates in housing for the poor to unregulated trips in fuel-consuming airplanes that carry others off to non-mandated Caribbean and European vacations.

⁷ Local woods are allowed for house construction in Massachusetts, but only if they are graded at the local sawmill as #2 or better—such grading being unacceptable to those affordable small local sawyers who steer clear of government regulation.

⁸ Tax abatement incentives are not uncommon. Florida, for years, enticed retirees to settle by offering a homestead exemption tax.

church advisers allows professionals⁹ to share their expertise with lower-income people, and thus realize a moral dimension of their work.

Land. There is only so much frontage on town roads. The time will come when subdivisions will be posited and regulations enforced that require urban-quality roadways and storm drainage systems. Additionally, government land can be assessed for its long-term environmental and recreational needs, and non-critical acreages made available for lower-income families with the proviso that such land must be forever available to lower-income people. Passive land investors who hold land off the market should be taxed at high rates that force their land onto the market, possibly lowering its cost to the consumer.

House Design. Traditional, contemporary, stylized log cabins, and other house design preconceptions can be analyzed with respect to cost and compared to each other and to alternative designs that are rational while allowing for a) integration into regionally unique landscapes, b) incremental construction, c) the use of local sustainable materials, and d) are readily built by neophyte self-help owner-builders and their friends. The development of a rational, systematic approach to self-building that is usable by neophytes substantially lowers the barrier to housing¹⁰. Communities of such builders change the scale, commitment, and possibilities for both the community and the professionals involved.

Conclusion

The modes of housing change over time. A separate path for the needy is posited here—with its own mode of construction—to sidestep the impediments to affordable rural housing. There is a need for societal support in revising regulation and taxation practices. There is an opportunity for professionals and others to find a moral dimension to their work by assisting in housing provision. Research, of course, must begin on these many matters if we are to develop policies that result in the realization truly affordable housing to rural Americans.

⁹ CENVI and COPEVI are acronyms of professional groups of architects, engineers, and social workers who have provided expertise to lower-income housing groups in Mexico.

¹⁰ Most everything outlined in this short paper is explored in greater depth in *Housing Ourselves: Creating Affordable, Sustainable Shelter* (Burnham, R., 1998. New York: McGraw-Hill). This is especially so with regard to a systematic approach to self-help incremental rural housing, an approach with antecedents in the works of Mexican architects as well as in the theories of early 20th-century European architects.