

What's the Future of Home Building?



Despite the recent blow to the housing market, to most of these industry insiders, the future looks bright

INTERVIEWS BY FERNANDO PAGÉS RUIZ

It turns out that trying to predict the future is actually a good way to understand what is happening in the present. To get a clearer picture of how to navigate these uncertain times, I asked a handful of influential builders, architects, and scholars to peer into the crystal ball and share their visions for the future of home building. These folks have opinions that will shape the near- and long-term future of housing. Their opinions may differ from yours and mine, but the opinions are important to consider either way.

Fernando Pagés Ruiz, a builder in Boulder, Colo., is the author of *Affordable Remodel* (The Taunton Press, 2007).

IDEAL FOR EXISTING NEIGHBORHOODS

The exterior is traditional, and the house requires a footprint of only 26 ft. by 50 ft., including the porch. Marianne Cusato's New Economy Home is a concept that she predicts will become a reality as we recover from the housing-market crash. The 1771-sq.-ft. plan has four bedrooms and 3½ baths, and is designed to be affordable to build and maintain with a floor plan that can adapt to changing family needs over the course of ownership.



Tough times will lead to BETTER HOUSES

Marianne Cusato is ranked the fourth-most-influential person in the home-building industry in Builder magazine's annual "Power on 50" list. Cusato developed the New Economy Home and designed one of the Katrina Cottages, which won the "People's Design Award" from the Smithsonian's Cooper-Hewitt, National Design Museum.

"We all need a home, so housing is not dead. As a recessionary silver lining, we will continue to see more attractive affordable housing. New homes may be smaller, but not tiny, maybe 1700 to 2000 sq. ft. There's a lot more of us living and buying at the low end, and developers will have to compete for our business.

There's a place for single-family homes. We have a surplus now. But mostly it's not housing that we want, and it's not where we want it. The design focus will continue to shift toward things we can feel and enjoy. You can't lounge on a soaring gable, but you can sit on a front porch. You don't get much from fake stone facades, but you get satisfaction from an extra window that provides more light and cross ventilation.

The 300,000 houses that were built in 2010 seem like small potatoes when compared to the 2 million that went up in 2005, but the questions remain: What will next year's 300,000 homes look like? Where will they be built?

Right now, most buyers are first-timers. They are younger, and they've seen the pitfalls of buying too much house. There's a deep, social realization occurring that quality of life comes with freedom to enjoy it. This recent experience of homeownership as hardship may not be universal, but it is still deep and broad, and will be reflected in the new housing stock.

Nobody knows exactly what our next generation of homes will look like, but current trends lean toward clean lines and less clutter. An emphasis will be placed on simple designs that incorporate flexible spaces that adapt to changes in how we live.

Changes in home design will follow social trends, not the whims of architects and builders. This period will last 20 years or maybe longer and will give us the opportunity for invention and innovation. The hope is that we will all have new options. It's no coincidence that the worst-hit places in the country were also those with an explosion of poorly designed developments. We need agriculture closer to our cities, not suburbs. It's not viable to live way out there, far from work, entertainment, and friends. The old McMansions may not be worth rehabilitating; they may just have to become chicken coops."



SECOND FLOOR In this example, the second floor is packed with three bedrooms, two baths, and an unfinished storage area, but the plan is flexible. If the first-floor suite is used as a master suite, the second floor could have larger bedrooms and a single shared bath. For more living space, the attic is just waiting to be colonized.



FIRST FLOOR The bedroom and the bathroom have a private entrance that opens a variety of possibilities for the space, from a master suite to a private in-law suite to a rental opportunity.



KITCHEN UPGRADE Buyers can decide to spend as much as they like on upgrades in the New Economy Home. Kitchen finishes can range from cost-effective laminate counters and painted backsplashes to more attractive stone counters and more durable tile splashes, depending on the buyer's budget and taste.

The future calls for BETTER NEIGHBORHOODS



Jim Leach is a Colorado developer who makes his living building communities. Over the past 20 years, Leach's company, CoHousing Partners, has built more than 20 cohousing developments, a trend foreshadowing a future beyond custom homes to custom neighborhoods.

"Although the building business is worse now than ever, 20 years ago, we were in difficult times, too. That's when it happened. A bunch of people came to the office with a European book on cohousing and pitched the creation of an intentional community. They needed a builder, so I rolled up my sleeves and helped them to find a way of partnering with a developer to get the neighborhood they wanted built.

Together we designed, developed, and built the nation's first developer-driven cohousing project. I realized that beyond ecology, cohousing foreshadowed a new form of social sustainability. Twenty years later, my company has developed cohousing projects in Colorado, California, and Arizona.

Cohousing is a neighborhood designed by the residents. A core part of the cohousing concept is sharing amenities so that you can live in a smaller house with less stuff, but not have to do without. When you share with your neighbors, each lawn does not require a lawn mower. When you pool resources, you find a few neighbors

are keen gardeners, and you end up with the best gardens in the city. The people living in cohousing decide what amenities they need and want. For example, in one community we have a first-class woodshop. In another, we have a lot of storage. Some may have a wonderful kids' play space coupled with a gourmet kitchen where parents hang around cooking and sipping wine while the kids play within eyeshot. Other communities have a media room and library, a meditation or yoga studio, a place of worship, a climbing wall, a community garden, or rentable office space. Each cohousing community is unique.

The cohousing concept also has benefits for the developer, who works as a partner. We open the books to the community and even share the profits. From



BY THE RESIDENTS, FOR THE RESIDENTS FrogSong Cohousing in Cotati, Calif., is a custom neighborhood created by its 30 households. The community has 7500 sq. ft of storefronts, 30 condominiums, and a 3500-sq.-ft. common house with a state-of-the-art kitchen where residents socialize and share meals several times a week.



COMMERCIAL OUTSIDE, COZY INSIDE

As a live-work community, this development's "main street" has storefronts with residences above. Although it's in a walkable, compact setting, the community provides residents with ample open space on the 2.3-acre infill site.



a developer's standpoint, this is a lot more work from the start, but if you do it right, it works extremely well. Once people understand the process, they become much more tolerant of any unforeseen issues that may come up in the design and construction of the community, and work at solving the problems together rather than pointing fingers. It's not trouble-free work by any means, but fewer problems develop. These communities tend to be built to a higher standard as well. There's a sense of community that develops even within the trades, and that tends to lead to better craftsmanship.

The cohousing model is still experimental. Cohousing still has limited appeal. You're not going to see big developments become cohousing in the future, but you will see more cohousing become injected into larger communities as a niche market. The cohousing community provides social sustainability, which is more than even the best New Urban neighborhoods can provide. Sidewalks and porches are not enough."



Generation Y will change how and where we live

Catherine Ross directs the Center for Quality Growth and Regional Development at the Georgia Institute of Technology. She is an adviser for the Obama administration's White House Office of Urban Affairs, a transportation and urban-planning expert, and the editor of *Megaregions: Planning for Global Competitiveness* (Island Press, 2009).

"To see what's ahead, I look at the big demographic factors: the graying of the baby boomers and the coming generation Y. These two populations both have come to value relationships over real estate and are changing the old real-estate mantra "Location, location, location" to "Lifestyle, lifestyle, lifestyle."

Baby boomers want access to services and social opportunities, which does not mean bingo and shuffleboard. You can't stack today's old folks 30 stories high in

little apartments and offer them cafeteria food. Baby boomers have enjoyed a high standard of living and will demand a more active, higher-quality retirement.

This applies for generation Y, too. My son just bought a house, but he doesn't think about housing as a means toward financial growth. He sees it as a place to live. When housing is no longer a nest egg, then the decision on where to live is based on entirely different criteria—mostly on connectivity. Generation Y wants to be close

to work, to entertainment, and to each other. If it means owning a small house, or renting, so be it.

Levittown and its ilk encouraged Americans to settle in gas-and-land-guzzling hinterlands, ushering in the age of strip malls and cookie-cutter developments. That will change. The highway system will still work in 25 years, but instead of connecting distant suburbs to the cities, it will connect smaller urban hubs to each other. Energy costs will likely continue to rise, and the financial

commuting equation will become an ever more important factor in housing. We have, unfortunately, demonized public transportation, which could help solve the transportation dilemma. Clean-energy buses running in a bus-only express lane will get you to work quicker than the freeway.

My take on the future: Energy costs and population trends will influence housing. But if I had to choose the biggest influence, I think it's generation Y, who will lay down a new template for how and where we will live."



The opportunity is in rental property

Carl Seville is a nationally recognized green builder from Atlanta. He writes the *Green Building Curmudgeon* blog at GreenBuildingAdvisor.com, consults with builders and developers to create sustainable projects and processes, and trains aspiring green builders through the National Association of Home Builders.

"Like most in the green-building industry, I'd like to see change come quickly, but in reality, it's happening as it should. Our industry is poorly educated, and we need time to train and certify every contractor in the country.

If you build a house according to the latest energy code, you've pretty much built a green home. The challenge is builder buy-in. Education is the essence of the green-building movement.

There are only three things that will motivate green building in

the future, and all three appear aligned to occur: Regulation that requires builders to follow the rules; financial incentives and disincentives, such as subsidies for energy retrofits and sanctions for inefficient building; and high energy prices.

There's already enough single-family housing. We need to improve existing homes. Ironically, green building is more entrenched in the new-home industry than remodeling. Regardless of the housing stock, we really don't want new suburbs

requiring long commutes. There's nothing that says people who own homes live happier lives, or even more economically stable lives. A recent article in *The Atlantic* said Sweden has the highest standards of living on earth and, simultaneously, the lowest homeownership rate.

It would be interesting to see how many people would prefer to rent if federal economic incentives were not skewed toward homeownership. Look at the new-car market: Many more opt for the low payments and

easy walkaway of a lease. If we offered equal incentives for home rentals, more people would rent, and landlords would come up with better packages for middle-class and luxury renters.

The New Urbanist movement has the right model, although the execution tends toward elitism. People want to live in a walkable urban city, whether big, small, or moderate in size. But urban real estate costs more. On the other hand, distressed inner-city property is cheap. That's where the future lies."

Start dreaming of a BETTER PLANET



Mitchell Joachim is a futurist and leader in ecological design. In 2010, *Popular Science* magazine featured his work as a visionary for "The Future of the Environment." He was among *Wired* magazine's 2008 "Smart List: 15 People the Next President Should Listen To," and won *Time* magazine's Best Invention of 2007 award. He is now an associate professor of architecture and urban design at New York University.

"I don't make promises or predictions. I make propositions. In a way, my work resembles science fiction. Sci-fi writers don't claim you will soon or ever be able to buy the technology they describe. Instead, they imagine the world as if this technology already existed. To get anywhere, we have to start with an idea.

When NASA was challenged to land a man on the moon, they didn't have a map on how to do it, so they turned to Jules Verne. A lot of what Verne designed never got built, but some very significant ideas, such as getting to the moon in a staged rocket with a re-entry capsule that landed in the ocean, did. If you want the best economic forecasting, turn to science fiction.

My background is ecology, urban design, and architecture. My partner is a molecular biologist. Together, we are exploring, for example, the use of mycelia fungi as a combined insulation and structural material. We're developing materials with bioluminescence—surfaces with lighting embedded into the cellular structure. We're also working on pleaching, using cellular plant systems to design structures. Stretching the concept beyond the garden structures and topiaries created by botanists, we employ CAD and cellular biology to create a computer model that triangulates plants into strong organic structures that can be cultivated into very specific architectural shapes. In other words, we're growing homes out of trees.

This approach leads us past the limited concepts of efficiency and sustainability. Sustainability has no real meaning, although it has positive implications. The use of the term is too pervasive. We're designing products that actually improve the environment by scrubbing the air or adding oxygen while recycling carbon dioxide.

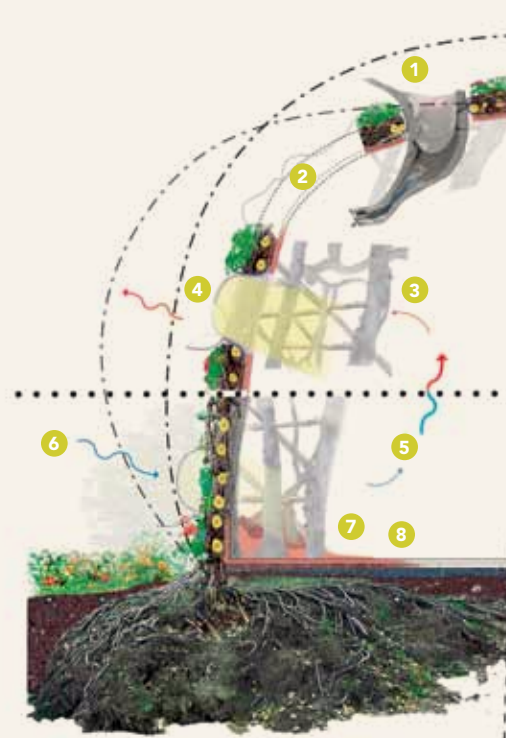
Don't get me wrong—I am all in favor of more efficient construction. Unfortunately, not everyone is on board with the changes. Architects are not that interested in low-flush toilets; there's no sex appeal. Designers are trained to think like plastic surgeons and become obsessed with driving cultural styles.

We need more professionals driven to find smart engineering solutions to practical problems. The answers to our major problems are accessible right now without any major development in technology. When the Obama administration asked us what invention we should get on board with now so we can get on with this green economy, I answered, "New lightbulbs."

Fifty years from now, our homes will be living, self-regulating environments. Technology will become pervasive. Unfortunately, this will not mean less poverty, disease, or war. Human reality has not shifted. We will still remain divided into haves and have-nots."



HOME, GROWN Beyond efficiency and sustainability, architect and urban designer Mitchell Joachim envisions homes that actually grow out of, and become part of, the natural environment. Home, in this sense, becomes indistinct from the natural environment. Not just carbon neutral, these homes produce oxygen and consume carbon dioxide. The dwelling illustrated here is designed using construction methods new to homebuilders, but ancient to gardeners: It's grown architecturally on site using a method called pleaching.



- 1 Rainwater harvester at roof
- 2 Thermal clay and straw-based infill
- 3 Expandable vine surface lattice
- 4 Soy-based plastic operable windows
- 5 Buoyancy-driven ventilation
- 6 Cool-air intake at floor level
- 7 Rammed-earth paver floor tile
- 8 Active solar hot-water system to heat radiant-floor pipes

THE FUTURE OF FRAMING

Pleaching is a method of weaving together tree branches to form living archways, lattices, or screens. Here, self-grafting trees, such as elm, oak, and dogwood, become the load-bearing structure, while branches form a lattice frame for the walls and roof. On the interior, a clay and straw composite insulates and blocks moisture. The final layer of smooth clay is applied like a plaster to provide both comfort and aesthetics.

Drawings: courtesy of Mitchell Joachim, Terreform ONE

Dead malls will reopen as neighborhoods



Lee S. Sobel coauthored *Greyfields Into Goldfields: Dead Malls Become Living Neighborhoods (Congress for the New Urbanism, 2002)*.

"We don't need or want everyone

migrating back to the city. Like the city, our suburbs have existing infrastructure, and it's generally in much better shape than the old inner-city systems. Desirable land also costs a lot less in the suburbs. So instead of limiting consumers to choosing a mini-mansion with a three-car garage at the edge of civilization or a trendy loft in an expensive urban center, we can start to remodel the financially struggling suburban mall. These old retail centers can easily become modern hubs for urban-style housing, small-scale retail, civic buildings, and transportation nodes, creating urban nexuses right in the burbs.

Towns strained for money find it hard to provide new services for more subdivisions. Repurposing the suburban mall as a mini-urban center provides an affordable avenue toward renewing suburban growth. Not only does it make sense for the community to reposition the suburban commercial center as a mini-urban environment, but it also aligns with powerful economic and demographic trends. The suburban town setting gives you proximity, suburban locations provide this with lower-than-city density, and they provide a revitalized retail center within easy access of the existing single-family stock.

One example is the Old Villa Italia Mall in Lakewood, Colo. This troubled, 100-acre mall became a drain on tax revenue, and a source of blight and frustration for the local community. As stores closed, neighbors had no place to shop, and jobs were lost. We demolished most of the mall, created a new street grid with a mix of units combining urban-style housing, retail, office space, and a central park with an ice-skating rink. By taking down the retail/residential barriers around the mall, we braided the existing neighborhoods right into the town center, and now you will find a vital, thriving, and highly desirable community.

Americans are well attuned to the Main Street model, but Main Street declined as small and rural communities lost population, businesses went to outlet malls, and towns lost stores, jobs, and taxes. Recentering the town on a main street can help to solve this problem. Beyond the alternatives of sprawl and urban renewal, the future lies in a new trend: suburban renewal."



The future will look a lot like the past

Witold Rybczynski writes about architecture for *The New York Times*, *The Atlantic*, and *Slate*. He wrote the critically acclaimed *Home: A Short History of an Idea (Penguin, 1987)* and, most recently, *Makeshift Metropolis: Ideas About Cities (Scribner, 2010)*.

"I do think that things change, attitudes change, public opinion changes, but not in response to economic upheavals like the recent recession. Take the gas crisis of 1973. It affected more people in a personal way than today's housing bust. Not to belittle the pain many are suffering, but in 1973, everyone waited in line at the gas pump. In response, Japanese cars found their niche, and building standards began to focus on efficiency. Then the economy picked up, and we quickly moved to bigger homes and SUVs.

Difficult times don't turn you into a penny-pincher; they have the opposite effect in the long term. The end of the recession will likely lead to euphoric celebration, just like what occurred after the Great Depression. Look at the boom years of the '50s. So I don't see big changes in the appearance or function of homes in the future. We may see emerging trends in interior design. We will also see major changes in neighborhood design in the metropolitan areas. New Urbanism has made a big impact on city planners.

Will houses be smaller? The average house sold now is smaller than it was two years ago, but only first-timers are buying houses, and they have always bought small. When the economy turns around, the boomerang kids that moved back home will move back out—to apartments. In a tough economy, parents will not provide down payments, but soon they will be able to provide lease deposits. Expect a big upsurge in multifamily."

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