

# Implications

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A Newsletter by Informedesign. A Web site for design and human behavior research.

## The Ethics of Housing the Poor

*Editor's note:* Housing is a global problem, spanning the need for basic shelter in developing and trauma-stricken areas to the lack of sustainable, affordable housing in the industrialized world. As a broad subject, housing has generated an immense body of research, some of which questions the role of designers in solving housing problems. This issue of *Implications* proposes, as a starting point, that designers act as inventive free agents who partner with existing organizations to provide for the very neediest. A future issue will focus on the role of designers in addressing housing problems of the industrialized world.

How responsible are we as designers to address the needs of an estimated two billion people around the world living in inadequate and unsafe housing? Very! And how prepared are we, as designers, to address a problem of such magnitude? Not very well at all. So what should we do about it? How can we, as design professionals, take more responsibility for helping those who cannot pay our fees, and be more prepared to address needs for which we have little experience? To answer that, let's begin with a story:

Richard Farson, President of the Western Behavioral Sciences Institute and a former public member of the AIA's Board of Directors, mused on the following when he stepped down from the board in 2003: "I sometimes wonder what an American architect would say if approached by the leader of China seeking his or her help for the 800 million ill-housed, struggling Chinese. 'Well, the way we believe residential architecture should be practiced is that each home should be custom designed. The architect should be an integral part of the process for each structure, from beginning to end, carefully surveying the site, designing a structure that is particularly suited for that site, working intensively with the client to understand that individual's special needs, making sure that the contractors are performing, and that the project is completed on budget. Normally it takes us about a year or so to finish such a project, and we can undertake perhaps ten a year. We don't condone selling stock plans. But we could bring a thousand architects to work with you.' The leader would shake his head, concluding that such a program, even if China could afford it, would take 800 years."

Farson ended his talk by calling on us to become "metadesigners," focused less on the design of individual projects and more on orchestrating a wide range of



The late Samuel Mockbee—designer and humanitarian.

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other disciplines to help address the problems of the built environment. Even more controversially, he argued: “architecture should be publicly supported in the same way that education and medicine are. Our professional strategies should include making a case for major public funding, to the tune of trillions of dollars over time.”

Large-scale public funding of the design profession is not likely to happen soon, but Farson’s observations show how our dominant mode of practice may no longer align with what the world needs from us. The designer/client relationship parallels the doctor/patient relationship in medicine, in which individual needs get addressed one-at-a-time by the professional. But medicine has also evolved another model—public health—to address the needs of large groups of people. Architects and interior designers have long had a relationship to public health, but rarely have we looked to public health as a model for practice. Most practitioners in the design fields work in small businesses, like physicians, rather than in industry and government, like the public health community, even though health, safety, and welfare stand as a central justification for our status as professionals. As a result, we have not built the institutions and agencies that can help us bring our knowledge to large numbers of people who need our expertise and yet who cannot, individually, pay for it.

As was evident after the flooding of New Orleans, the devastation of broad swaths of coastline along the Gulf of Mexico and the Indian Ocean, and the leveling of millions of homes in northern Pakistan, the design community lacks a clear way of addressing the large-scale threats to public health that can occur in the built environment—threats that will become an ever more pressing problem in the future, with ever more intense weather brought on by global climate change. As MIT scientist Kerry Emanuel has shown, tropical storms now last half again as long and generate winds 50% more powerful than just a

few decades ago, the result of ever-warmer tropical seas. And with rapidly increasing populations living in vulnerable areas, we could see a whole new category of the homeless, “environmental refugees,” as Oxford scientist Norman Myers calls them, with “as many as 200 million people overtaken by disruptions of monsoon systems and other rainfall regimes, by droughts of unprecedented severity and duration, and by sea-level rise and coastal flooding.”

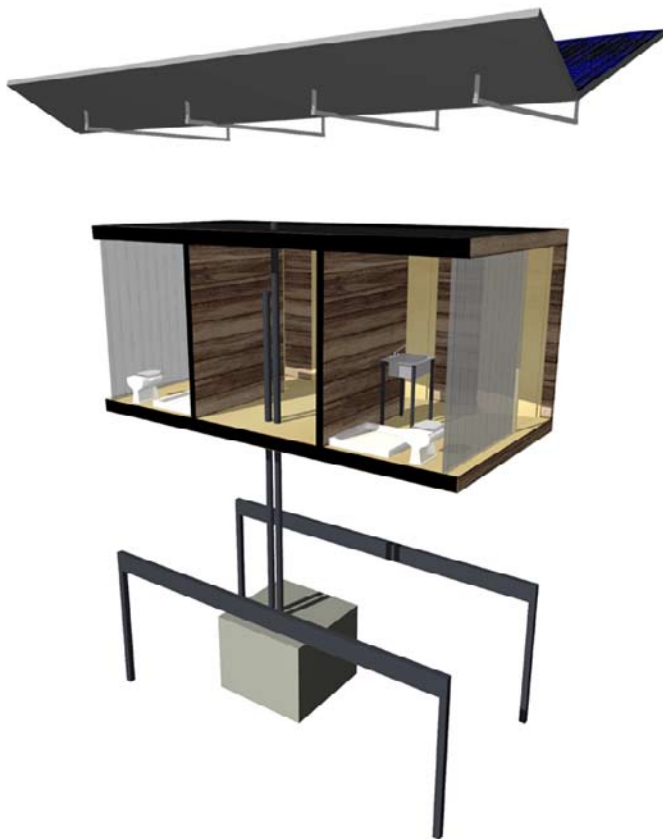


The Clean Hub could provide access to electricity, potable water, and sanitation in slums or temporary settlements.

How should we respond to such a sobering prospect, affecting developed, developing, and undeveloped countries alike? It may be, at least in the short term, that designers can work best as independent, creative entrepreneurs in partnership with the public and non-profit entities dedicated to helping the growing number of people rendered homeless or placeless because of environmental or economic dislocation. Some designers have begun to do just that. They have addressed different aspects of the sustainability-and-equity problem: the infrastructure needs of slum dwellers, the shelter needs of the homeless, the material needs of those with few resources, and the habitation needs of those on the move—in ways that recall that of social contract ethics.

## Design and the Social Contract

One aspect of social contract ethics involves the responsibility for the common good, such as the provision of public infrastructure, often lacking and insufficient in most impoverished communities. The United Nations' Millennium Development Goals call for significantly improving the lives of at least 100 million of the world's 2 billion slum dwellers by 2020, focusing on access to safe drinking water and sanitation. With those goals in mind, architect John Gavin Dwyer and his firm, Shelter Architecture, have designed a self-contained structure able to provide global slum-dwellers what they often need the most: access to electricity, clean water, and toilet and bathing facilities.



Shelter Architecture designed the Clean Hub to include photovoltaic panels, a water collection and purification system, and self-composting toilets.

Called the “Clean Hub,” the 10- by 20-foot unit has a V-shape metal roof that collects rainwater, an adjustable array of 16 photovoltaic panels able to generate up to 2,640 watts of electricity, a reverse-osmosis water system that cleans water stored in a below-ground reservoir, showers and sinks whose grey water gets recycled back to the reservoir, and waterless, self-composting toilets. The building itself has impact-resistant stress-skin walls and has secure entry doors, and is supported by a steel-tube and concrete-pier foundation that can adjust to sloped terrain and poor soil. The Clean Hub's expected 30-year life makes it most suitable for the many semi-permanent slums around the world that lack basic infrastructure.

Helping those who have lost their housing during hurricanes and earthquakes involves another aspect of the social contract: the public responsibility to aid individuals in need. Cameron Sinclair and Kate Stohr's organization Architecture for Humanity has shown how much designers have to contribute in the wake of these disasters. When Hurricane Ivan destroyed 85% of Grenada's housing in 2004, and Hurricane Emily did further damage in 2005, Architecture for Humanity participated in a team that include Architectonica, Ferrara Design, and Grenada Relief, Recovery and Reconstruction (GR3), producing seventy prototype transitional housing units. Called “Global Village Shelters” and designed by Daniel and Mia Ferrara of Ferrara Design, the temporary houses are made from recycled corrugated cardboard impregnated to be fire retardant and laminated for water resistance.

Architecture for Humanity has also addressed the needs of people suffering from war or disease. In the organization's 1999 competition for housing for returning wartime refugees in Kosovo, architects such as Shigeru Ban designed an insulated and waterproof paper log house and Sean Godsell developed his “Future Shack,” using a standard shipping container and an unfolding roof to provide shade. In 2003, Architecture for Humanity sponsored a design competition for

a mobile HIV/AIDS clinic for Africa, with KHRAS Architects designing the first place entry, with a metal-framed, self-contained, lockable structure that also incorporates local materials.

A third aspect of social contract ethics involves our relationship with nature. Some designers have begun to look at this question through the use of low-cost, sustainable materials and systems. Richard Kroeker and students at Dalhousie and Minnesota have worked with aboriginal and native communities to adopt indigenous approaches to construction using pliable wood materials in various woven and tied configurations drawn from what is immediately available on or near a site. He has also begun to look at materials in the modern waste stream, such as unused telephone books held in compression to form bearing walls. Another designer working in this area is Wes Janz, whose students at Ball State, along with Azin Valy and Suzan Wines of I-Beam Design, have developed ways to use the 1.9 million wood pallets destined for landfills in the U.S. for housing, drawing from the widespread use of pallets in squatter housing from around the world. These examples revise the ancient idea that we build with what we have at hand, and that we empower people to build for themselves.



Students at Ball State University inhabit designs from wood pallets.



A chapel designed and built with Samuel Mockbee's students in the Rural Studio at Auburn University.

## Ethics and Advocacy

All of these efforts suggest a new kind of practice for architects, based on advocacy, activism, and attention to what the rest of the world wastes. Three of the dominant ethical traditions in the West all align with these efforts, and give us a framework with which we can develop different approaches to the housing problems of billions of people.

Virtue ethics, with its focus on character traits such as a prudence and justice, demand that we look to the well-being of others and that we live modestly and with humility. The work of the late Samuel Mockbee exemplifies this architecturally. His Rural Studio for Auburn University students has created a number of houses and public buildings for some of the most needy people in one of the poorest counties in the United States. Using recycled materials—such as used tires for walls, reused windshields for windows, and discarded license plates for cladding—the Rural Studio has designed and built some of the most powerful projects of the late 20<sup>th</sup> century, showing how what Mockbee called the “old-fashioned virtue” of giving to others can be the basis for the creation of community.



Deontological ethics, with its concern for doing what is right regardless of consequences, reinforces our responsibility toward other species and future generations, and our obligation to act with them always in mind. Such an ethic underlies most utopian thinking, and that tradition remains as a way of showing what a new social contract might look like. Michael Sorkin has taken such an approach, exploring, in a number of urban designs, new forms of sustainable communities. For example, his Penangs Peaks project—a mixed-use community of housing, offices, and various public and commercial facilities—will be self-sufficient in terms of water and waste management. The project envisions a series of foliage-clad towers arranged around a large park, showing how large numbers of people can live in urban settings with a minimal impact on the local environment.

Finally, utilitarianism, with its goal of maximizing the happiness of as many as possible, demands that we include all other beings in its account of the greatest good for the greatest number, with attention to the process and consequences of all that we do. Socially active architects, such as Thomas Dutton, demonstrates that in his work in Cincinnati's Over-the-Rhine district, with the Over-the-Rhine Housing Network, represents a more participatory approach.

He and his Miami University students have designed and renovated a number of living and commercial spaces, including a laundromat, two single-family townhouses and a number of apartments, for budgets in the \$5,000 to \$10,000 range. Dutton's students have also explored a kind of guerilla urbanism, using utility trucks to bring information related to poverty to well-to-do parts of town, and using public parks for temporary exhibitions on social justice issues.

For a design community that currently has a direct effect on a tiny minority of what gets built, it may seem like too big a stretch to imagine our having a real impact on the global housing crisis. But these examples demonstrate that there are myriad ways to begin to do so, and that it only takes one person or a few people to act, something that all of our ethical traditions reinforce. As Margaret Mead put it, "Never doubt that a small group of committed people can change the world. Indeed, it is the only thing that ever has."

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## Additional Resources:

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## About the Author:

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## Related Research Summaries

InformeDesign has many Research Summaries about housing, socially responsible design, and other, pertinent, related topics. This knowledge will be valuable to you as you consider your next design solution and is worth sharing with your clients and collaborators.

“The Effect of Property Appearance on Crime”  
—Journal of Environmental Psychology

“Race, Poverty, and Traffic Pollution”  
—Journal of Urban Affairs

“Urban Segregation and Decay Are Self Perpetuating”—Housing, Theory and Society

“Designing for Summer Heat in India”  
—Traditional Dwellings and Settlements Review

“Material Preferences in Migrant Settlements”  
—Architecture & Comportement/Architecture & Behavior

“Flexible Zoning Policies and Urban Development International”—Journal of Sustainable Development and World Ecology

## Photos Courtesy of:

- Bruno Franck, University of Minnesota (p. 1; chapel, p. 4)
- Shelter Architecture (pp. 2-3)
- Wes Janz, Ball State University (pallet project, p. 4)
- Ben Luebke, Ball State University (p.5)



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