

A Call to Action

MY PERSPECTIVE SERIES:
REPRESENTING THE AUTHOR'S
PERSONAL PERSPECTIVE

Individuals, firms and the industry itself must step forward and claim a larger role in how the commonwealth is preserved, repaired and improved.

by Louis L. Marines

The architecture, engineering and construction (A/E/C) industry inhabits a world suffering from economic, social and ecological ills. The industry has chosen to solve these problems by continuing to do a good job, focusing on climate change/sustainability and hoping to be invited to the table to help overcome the larger problems plaguing our nation and world. While many contribute time and money to solving local, national and global problems, there is more they can — and must — do.

DEFINING THE CHALLENGES

We face great challenges in the world on differing scales: global, international, national, regional and within our chosen professions, our immediate communities, homes and families. Many are far beyond the scope of individual action: climate change, migrations of people, armed conflicts, plagues, crop failures, the appearance of new and resistant diseases and the like. Most of these are not situations we can solve as individuals.

“Between the great things we cannot do and the small things we will not do, the danger is that we shall do nothing.”

— *Adolph Monod*



“Nearly 50% of the world’s population — almost 3 billion people — live on less than \$2 a day. 840 million suffer from hunger. Ten million children die every year from easily preventable diseases. AIDS kills three million people every year and continues to spread. One billion people lack access to sanitation. One billion adults are illiterate. About one-quarter of children in poor countries do not finish primary school. Meanwhile, the richest 20% of the world’s population own 77% of the world’s wealth, while the poorest 20% own 1.4%.”¹

We speak of carbon footprints and global warming, but these abstractions hide from us what is actually a human rights issue tied to our need for energy to power our civilization. Looking at one item, the use of fossil fuels as our primary energy source, can make this connection clearer. The extraction and refining of fossil fuels cost human lives directly: miners, oil platform workers, refinery personnel and others frequently are killed on the job. Users of fossil-fuel energy are killed by toxic chemical exposure, bad air quality and wars over the control of oil, gas and coal supplies.

Tied to our use of fossil fuels is the concept that the greatest danger to the planet is that of climate change produced as we generate energy. The buildup of carbon dioxide will destroy the earth, we frequently are told. Yet there is little — perhaps nothing — we can do about it. Robert B. Laughlin, a physics professor at Stanford University, reminds us “Climate is a profoundly grander thing than energy. Energy procurement is a matter of engineering and keeping the lights on under circumstances that are likely to get more difficult as time progresses. Climate change, by contrast, is a matter of geologic time, something that the earth routinely does on its own.” Though our efforts may be able to temporarily mitigate our effects on the atmosphere for decades, as Laughlin points out, “Were the earth determined to freeze Canada again, for example, it’s difficult to imagine doing anything except selling your real estate in Canada.”²

No number of LEED-certified buildings is going to stop, slow or measurably affect the earth’s geological cycles. Humans will have no more than a temporary effect on the earth’s overall carbon dioxide cycle, which is measured in time spans of tens of millennia. On a 24-hour scale, if the earth began 24 hours ago, the entirety of human civilization has existed for only .003 seconds.³

Where our actions do have a direct and immediately recognizable effect is on other human beings and other species. This is good news for all of us working in the built and natural environments, because it means we can let go

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of responsibility for saving the entire planet and take direct action to help people at a more manageable and accessible level.

WE MUST TAKE ACTION

Admittedly, we tend to isolate the great problems we face from the human context by calling them “climate,” “economy” or “infrastructure,” or by way of statistics. “Because of the scale of the problem, individuals feel powerless to help and so the temptation is to offer a token response without any real involvement or commitment,” says Lord Brian Griffiths, former director of the Bank of England, in his book, *Fighting Poverty Through Enterprise*.

To conquer this powerlessness, we need only to change the scale. To be motivated to take action that is meaningful in the world, these actions must be meaningful to us. If our concern of the environment is, as it should be, a human rights concern, let us take action and do it in our communities where we can make a noticeable difference.

The human experiment of living in large urban centers is about 5,000 years old, less than the blink of an eye in the 6 million year tenure of hominids, and we may yet decide that it is not an effective strategy. Wendell Berry, the farmer, writer and economic critic from Kentucky, tells us in his May 2010 book *What Matters?: Economics for a Renewed Commonwealth* that, “Decades of cheap labor, cheap energy and cheap food (all more expensive than has been imagined) have allowed our society to incorporate itself in a material structure that will have to be seen as top-heavy. We have flooded the country, the roadsides and landfills with shoddy consumer goods. We have too many houses that are too big, too many public buildings that are gigantic, too much useless space enclosed in walls that are too high and under roofs that are too wide. We replaced an until-then-adequate system of railroads with an interstate highway system, expensive to build, disruptive of neighborhoods and local travel, increasingly expensive to maintain and use. We replaced an until-then-adequate system of local schools with consolidated schools, letting the old buildings tumble down, replacing them with bigger ones, breaking the old ties between neighborhoods and schools and making education highly dependent on the fossil fuels. Every rural school now runs a fleet of buses for the underaged and provides a large parking lot for those older than 16 who need a car to go to school. Education has been oversold, overbuilt, over-electrified and overpriced. Colleges have grown into universities. Universities have become research institutions

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full of under-taught students and highly accredited professionals who are overpaid by the public to job-train the young and invent cures and solutions for corporations to market for too much money to the public. And we have balanced this vast superstructure, immensely expensive to use and maintain, upon the frail stem of the land economy that we conventionally abuse and ignore.”

In our enthusiasm for the large centralized schools Berry mentions, we removed children from their neighborhoods and were then surprised when they formed gangs to replace their missing community; ignored an ever-changing roster of teachers who were strangers to them and their families; and learned nothing

from a dull curriculum, dictated by executives at textbook publishing companies whose purpose is to sell new books at the most profit, not to teach young people how to think.

This same impulse for centralization and gigantism affects the safety and quality of our food supply, the ability of health care systems to serve people, the amount of energy we must produce to move everything long distances, the resilience of our financial system and the connection of our elected representatives to the welfare of our republic. We have let our communities get away from us.

Action is needed, and we need hope to fuel that action. Václav Havel, first president of the Czech Republic, has told us, “Hope is a state of mind, not of the world. Hope in this deep and powerful sense is not the same

as joy that things are going well, or willingness to invest in enterprises that are obviously heading for success, but rather an ability to work for something because it is good.” He also says, “The only lost cause is the one we give up on before we enter the struggle.”

As architects, engineers and builders, we entered these careers not only from a desire to earn a living and for the intellectual challenge of designing and building, but also to improve the world around us. We want to make our communities more viable, to create places where people want to live, work and recreate, and where they can do so safely, healthily, peacefully. Caught up as we are in the details of running firms, managing projects and raising families, it seems difficult and even overwhelming to find ways to take on this higher calling. But take it on we must if we are to live with ourselves.

Albert Schweitzer once said that there are three ways of changing the world: the first is through example; the second is through example; and the third — well, you’ve guessed it — through example.

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Writer and political activist, George Monbiot, calls us to task when he says, “All those with agency — the ability to direct the course of their own lives — are confronted by a choice. We can use that agency to secure for ourselves a safe and comfortable existence. We can use our life, that one unrepeatable product of four billion years of serendipity and evolution, to earn a little more, to save a little more, to win the approval of our bosses and the envy of our neighbours. We can, quite rationally, subordinate our desire for liberty to our desire for security. Or we can use our agency to change the world, and, in changing it, to change ourselves. We will die and be forgotten with no less certainty than those who sought to fend off death by enhancing their material presence on the Earth, but before we die we will live through the extremes of feeling which comfort would deny us.”⁴ What, exactly is it, then, that we as individuals and professionals can do?

WHAT IS BEING DONE BY OTHERS

Action is not difficult to initiate, and results that ripple out through communities can be seen quickly. It is in our own interest to leverage our considerable talents and take action in our communities, both as infrastructure fixes that improve the social and economic conditions, and by bringing the design thinking, facilitation and collaboration skills of architects and engineers to serve our neighbors. These efforts not only improve and enhance our communities, but also tend to bring rewards and unforeseen benefits to the individuals and firms who engage in them.

Christopher Leinberger of the Brookings Institution, in the June 2010 issue of *The Atlantic*, says, “About a third of all the jobs lost in the recession have been in construction, real estate finance, architecture or building services. Housing prices, meanwhile, have fallen 28%, adjusted for inflation, since their peak in 2006 — that’s more than they fell during the Great Depression.” He goes on to

point out that the places where housing has lost the most value are in the most distant suburbs, which are the least walkable and most disconnected areas of housing. Nationally, we face a massive oversupply and weak demand for these areas, and as energy prices rise and commutes become more expensive and less convenient, demand for these areas will drop further. Places that have best retained their value are walkable, bikeable neighborhoods, often connected by rail to urban centers. Leinberger goes on to say that “... spaces of the kind that people want today feature mixed-use zoning

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and lots of stores and parks within walking distance. But most of all, they feature good public transit options, usually rail lines.” This connection among liveability, property value and transportation systems is key. “In the early 20th century, every town of more than 5,000 people was served by streetcars, even though real household income was one-third what it is today ... real estate developers not

only built the systems, but paid rent for the rights-of-way.” Leinberger says that transit lines have been shown to increase the value of both property and businesses they serve. Who will bring these issues to the forefront in your community? Who is better qualified than you are to explain to your town, city or metro leaders the economic advantages of enhancing economic viability by adding streetcar lines?

In Los Angeles, Mike Alvidrez, executive director of Skid Row Housing Trust (SRHT), now manages 1,500 homes for homeless Los Angelenos. In her *Financial Times* article of August 20, 2010, “Architecture of transformation,” Catherine Moye explains that a homeless person living on the street in L.A. costs the city \$2,897 per month (due to police, jail and court costs, as it is illegal to sleep on the street and the homeless are often arrested), whereas keeping that homeless person in supportive housing costs \$1,707 per month, including building costs, rent subsidy and social services. Due to the shoddy conditions at most conventional

shelters and the lack of medical and therapeutic help, most homeless would rather stay outdoors, even in dangerous weather.

Architecture firm Koning Eizenberg worked with the SRHT to create the Abbey Apartments, now housing 113 people. Next door stand the Rainbow Apartments, another SRHT project, designed by Michael Maltzan Architecture. Both facilities are designed to create community; offer the medical, mental health and occupational services that are known to best help the homeless; and are helping people make the transition away from homelessness. The same article reports on similar efforts in England that have resulted in helping 9,000 people off the streets since 1998. The Supporting People program, which provides housing support for England’s homeless and vulnerable

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people, estimates the financial benefit from the program has been £3.41 billion per year, compared to a £1.6 billion capital investment and running costs since 2003. As in Los Angeles, architects have been key to the success of this effort, which relies heavily on design to create the transformative atmosphere necessary for people to engage in personal change.

THERE IS MORE

Designers Pavlina Ilieva and Keo Pao Lian look to the world’s slums and favelas (shantytowns) to learn why they work: They are high-density, walkable, mingle residences and shopkeeping side-by-side, and are almost entirely made of post-recycled material, much of which is “the stuff no one else will take.”⁵

Darrin Nohrdahl, a city designer, describes in his book *Public Produce: The New Urban Agriculture* how Americans became disconnected from the industrial food production system and the high value of returning to local, home and urban gardening. He believes cities should expand the use of public spaces to produce food locally — not as a demonstration or hobby, but as a major food supply. Crops grown and eaten inside city limits are less likely to carry the diseases found in industrial food processing plants and require much less energy to bring to the table. Backyard victory gardens in 1944, about 20 million of them, were estimated to produce 8 million tons of food.

The Weatherhead School of Management at Case Western Reserve in Cleveland has a “Managing by Design” program that interweaves design disciplines throughout the curriculum and requires all students to take a yearlong course in the subject. The school is trying to foster creative thinking by embracing design practices and it is not alone. The Rotman School of Management at



the University of Toronto also integrates design disciplines into the curriculum, and Stanford’s Hasso Plattner Institute of Design brings students together to work on innovative projects in law, business, education, medicine and engineering.

Edward Glaeser and William Kerr reported in the *Harvard Business Review* of July/Aug 2010 that the more small businesses a city has, the more jobs it creates. “Cities relying on only a few large firms for employment experienced slower subsequent job growth than cities with an abundance of small firms.”

Babson College has launched the Babson Entrepreneurship Ecosystem Project (BEEP) to help governments determine if they have the needed elements in place to foster entrepreneurship. The system helps assess for the crucial elements, so governments know where to focus their efforts.

Daniel A. Hatch, the Chicago chapter president and national board member of Architects/Designers/Planners for Social Responsibility, writes in the June 25, 2010, issue of *Design Intelligence* about how to bring design skills to bear on the challenges faced by communities. “The definition of sustainability and the focus of our work must include people as well as the environment,” he says. “We must expand our design process to include the overwhelming majority of the population — 98% — who cannot afford our services.” He makes a compelling case that designers can take direct action to address social inequalities through architecture and design, and that “As a profession we have the potential and the opportunity to make the world more environmentally and socially stable.”

In the same issue of *Design Intelligence*, **Nick Peckham of Peckham and Wright** describes his firm’s experience that grew from donating services to a local school to help replace a classroom lost in a fire. The project became the Eco School House,

a collaboration between design and construction leaders and the school district. Through an outpouring of community support, 100% of the labor and services were pro bono, with donations of design, materials and construction services from 40 organizations. The building has become a teaching tool for students to see, touch and learn about the building's environmental and sustainable components, and uses only 46% of the energy required by other classrooms. The school has reaped a long list of benefits from the project, including reduced absenteeism and reduced nurses' visits for courses held in the Eco School House, indicating that the sustainable materials used have a positive relationship to student health. Peckham and Wright has also

continued to receive benefits from its pro bono work on this project. During the recession the firm continued to receive contracts and had strong financial success, which Peckham attributes to public awareness of its role in the Eco School House.

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WHAT MUST I DO?

Wendell Berry has suggestions for where and how to begin. He believes that we should revisit our education and start fresh by asking ourselves the following questions about our own home community:

- What has happened here? By “here” I mean wherever you live and work.
- What should have happened here?
- What is here now? What is left of the original natural endowment?
What has been lost? What has been added?
- What is the nature, or genius, of this place?
- What will nature permit us to do here without permanent damage or loss?
- What will nature help us to do here?
- What can we do to mend the damages we have done?
- What are the limits: Of the nature of this place? Of our intelligence and ability?

“This conversation,” Berry asserts, “would collapse the rigidly departmented structure of our present academic and professional system into a vital, wakeful society of local communities elegantly adapted to local ecosystems.”

These are the provocative questions we need to ask our neighbors and ourselves. As the designers and builders of communities, we are in a position to convene town halls in neighborhoods or the entire community, inviting the

elderly and the young, immigrants and the disadvantaged, corporate and government officials, educators and others. We can draw on the skills of architects, engineers and builders to ask questions, facilitate discussions, listen and coordinate and foster collaboration. This need is larger than any one project.

The architecture, engineering and construction industry directly shapes the world inhabited by the rest of humanity — yet its unique skills are not being fully leveraged for the betterment of its communities. Individuals, firms and the industry itself must step forward and claim a larger role in how the commonwealth is preserved, repaired and improved. ■

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¹ Lord Brian Griffiths, *Fighting Poverty Through Enterprise*, Transformational Business Network, London, 2007.

² "What the Earth Knows," *The American Scholar*, Summer 2010.

³ <http://cassian.memphis.edu/history/jmblythe/Global%20Fos/UniversalClock.htm>

⁴ "Why We Conform," *Resurgence*, Nov/Dec 2003.

⁵ "Learning from Informal Cities, Building for Communities," *The Futurist*, Sept/Oct 2010.