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ArchitectureBoston

YEAR IN REVIEW

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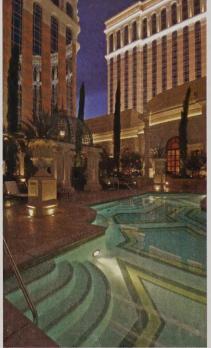
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Creative Director

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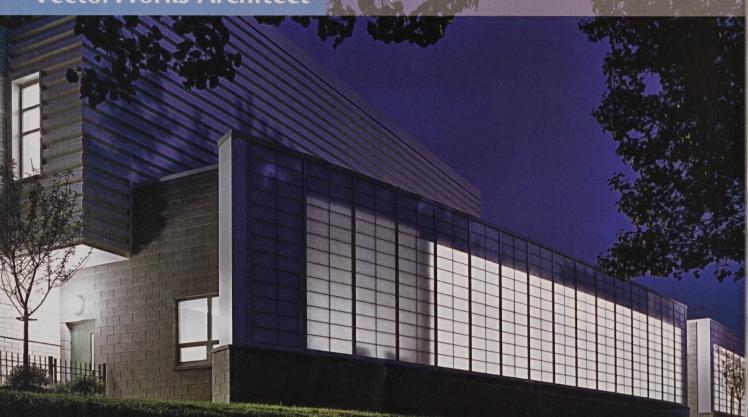
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BY ELIZABETH S. PADJEN FAIA From the Editor

Trade Signs

nother year, another round of awards. And another round of juror complaints: "Show us the context. Tell us the story."

The truths of award programs are self-evident: awards recognize innovation and excellence; awards recognize the superficial and glib. Design firms spend a lot of money on award programs — photography, graphic design, staff time — because they believe the expense is justified. Awards bring more work.

But together, the award programs featured in this "Year in Review" offer clues to larger trends that are transforming the practice of architecture. The commodification of sustainability is only the most obvious, exemplified by the meme-of-themoment: the brise-soleil — the exterior sunshading grille — a device abandoned by a past generation because of its annoying shadow patterns and propensity to collect grime and create maintenance headaches.

Perhaps the brise-soleil is on the ascendant because of what the need to create visual identity." Terrien's own house --- an elegant melding of green methods and technologies with the restoration of a Victorian house ---- was featured in the March/ April issue of ArchitectureBoston and more recently in The Boston Globe Magazine. The experience confronted him with the realities of architectural marketing and editorial decision-making: you need pictures. Absent a close-up of the controls on his geothermal system, no one would guess that this "typical" white Victorian on a side street in Rockland, Maine, is anything but typical or that it represents a sophisticated rethinking of sustainable strategies. A brise-soleil --- ridiculous as that would have been --- would have given Terrien the modern-day equivalent of a trade sign. Just as a carved-wood boot once told illiterate customers the location of a cobbler's shop, a brise-soleil or a bamboo floor announces the presence of a green designer. More significant green choices — the decision to build a smaller unfortunately have no corresponding visual identity.

The need to create visual identity has undeniable influence on the evolution of the architectural profession. Aided by technology, designers proffer images that increasingly seem to fall into two extremes: graphically beautiful images that are so abstract and so confounding that even the most sophisticated jurors complain that they cannot understand them, and images that are so photorealistic that only close scrutiny reveals that they are indeed renderings. Technology conveys plausibility (a word that always conveys at least a hint of deception).

Reputations are often made and awards sometimes given on the basis of single images. This perhaps is the great lie of the multimedia age: whatever the apparent opportunities of multisensory, multi-dimensional presentations, the sheer volume of information available means that we typically default to a twodimensional image as a way of identifying and remembering a building. Quick: think of Boston's new Institute of Contemporary Art — the winner of the 2007 Harleston Parker Medal, and the subject of several essays in this issue. Most likely, you visualized a scene that you've probably never actually witnessed — the dramatic view from the water (or perhaps Pier 4) looking back toward the great cantilever. That this view has little relationship to most people's experience of the building does not deny its importance, both as a trade sign of sorts for the ICA itself and as a likely inspiration for other future buildings.

The trap of visual identity is particularly vicious because it feeds our appetite for fashion. The brise-soleil, applied to the north wall of a strip mall, becomes mere decoration. But, as in the case of the Terrien house, our lazy dependence on visual clues can blind us to real innovation. Within the following pages are other clues to other forms of innovation. Phil Bernstein FAIA, in his essay "Now What?," outlines coming changes in the practice of architecture. Nader Tehrani describes a radically different challenge to the competitors for the 2007 Rotch Travelling Scholarship. And featured among the many familiar award programs is the first Building Enclosure Design Award.

Our lazy dependence on visual clues can blind us to real innovation.

Together, these clues hint at another kind of transformation ---of a discipline that is beginning to reinvent itself from within, that is re-examining fundamental aspects of building in ways that suggest that lasting change in the design and practice of architecture lies just ahead.

In another year, there will be another round of awards and another round of juror complaints. Representing what will no doubt be many exceptional, excellent buildings, more "signature" (a/k/a "iconic") images will fill our pages. Once again, in recognition of their contribution to the award process, ArchitectureBoston will run photographers' names with the project credits. But even these talented individuals understand that real innovation is sometimes invisible.

Elizabeth S. Padjen FAIA Editor

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Now What?

by Phillip G. Bernstein FAIA, LEED AP

Design awards recognize inventive architecture and design excellence, but sometimes the most startling revolutions are invisible. A leading industry strategist looks at the coming behind-the-scenes transformation of the architecture profession.

> he September 2007 "Architectural Billings Index," the AIA's monthly survey of architects and correlated economic activity in design and construction, was announced with an ominous press release recently. The ABI is an excellent "leading indicator" of the overall state of the construction economy, and the September numbers and accompanying analysis suggested that there's trouble ahead in the non-residential construction economy, the bread-and-butter market for architects. So, into the heady mix of questions that today's practitioner faces, we can now add the looming possibility of a market downturn. Once that inevitable part of the economic cycle hits, architects will once again turn introspective, contemplating the futures of their practices and asking, "Now what?"

> It's not an idle question. The next few years will be definitive for architects as various forces — not all economic — impel us to consider our role and responsibilities in the rapidly evolving world of the built environment.

Let's dispense with the economic arguments first. Despite the differences in scale of enterprise, all of us in the AEC (architecture/engineering/construction) industry share a common malady—low profit margins. In good times, both architects and our contractor colleagues achieve profits of approximately 15 percent; as times turn bad, those numbers move downward to below 7 percent and often worse. The processes through which we deliver design services are inefficient, as are the processes through which we deliver buildings— approximately 30 percent of construction dollars

are wasted on the project job site. The AEC industry has not enjoyed the same productivity gains driven by digital technology that have been seen elsewhere in the US economy. That's the first opportunity — improve our performance as businesses that provide value to our clients.

Designing and building have never been so complex an endeavor. Enthralled with the aesthetics of ever more complicated building geometries, we simultaneously solve for emerging sustainability standards, alternative delivery methodologies, "mass-customized" building elements, and a globalized supply chain where the price of concrete in India will affect a project bid in Waltham. We face these challenges with representational tools based on drafting, with collaboration models created before the Internet, and with risk/reward structures and attitudes developed in the 19th century and stretched thin by the lawsuits of the late 20th century.

We are facing complex challenges with representational tools based on drafting, with collaboration models created before the Internet, and with risk/reward structures developed in the 19th century and stretched thin by the lawsuits of the late 20th century. Attorney Patrick O'Connor argued in a recent paper presented to the American College of Construction Attorneys that constrained profit margins in the AEC market severely limit opportunities for innovation, since so little capital is available to reinvest in research and development. Today's globalized marketplace, where both materials and the next wave of design competitors are likely coming from China, sorely demands innovation. Times have been pretty good for the last four years or so in our business, so no better time to face these questions, right?

Rather than wait for the next recession, it's time to ask that very important question: Now what?

I'm reminded of the early 1990s, when that recession inspired an intensive investigation of project delivery and riskmanagement approaches and the architect's role. We fiddled a bit around the edges, sharpening contract models as we joined teams that included program managers, construction managers of all sorts, and even design/build teams. When things picked up later in the decade, we returned to the drawing board (now mostly transformed into the personal computer) and business as usual. But things are different this time: some fundamental transformations are upon us, catalyzed by lots of factors. Pushed hard by the demands of sustainability and spiraling construction costs, architects must now not only develop a design concept and then document "design intent" in construction documents, but also address the entire lifecycle of the building, designing to achieve pre-determined performance outcomes of sustainability, cost, and quality that apply to the building beyond its ribbon-cutting.

What's demanded is nothing less than a dramatic increase in the insight available to architects as we do our work. We need changes that move design and construction from an exercise in "lowest first cost" to one of predictable outcomes. If we can tie our destiny to our ability to achieve those outcomes, we can solve all these issues: productivity, profitability and, most important, greater perception of the value that architects deliver to the process of construction itself. I'm betting better buildings will happen as a result, too.

Those transformations might look like the following:

A move to more collaborative project delivery. The traditional AEC "three-legged stool" of owner, architect, and constructor is emblematic of the separation of design activity (performed as a "service" by architects paid to exercise their judgment) and construction (performed by constructors paid to create a product, the building). Under this arrangement, collaborative efforts in which the constructor might think about the design, and the architect might have an opinion on how to build are rendered impossible; everyone knows the architect is innocent of means and methods, and the constructor is not a licensed design professional. Yet it is precisely in the intersection of these two sensibilities where a lot of construction managers and attorneys make their livings. If we take advantage of the best thinking for every situation, with a slavish devotion to serving the interest of the client and irrespective of role within the team, our value will increase. And if the desired outcomes of the

AEC process (measured by whatever is important to the client and agreed upon by all) are paramount, then new ways of collaboration will evolve. Perhaps traditional "design/bid/build" models are replaced by teams in which shared achievement of project goals results in shared rewards. Or maybe we experiment with dramatically different delivery models, in which the key players, including the owner, sign a single agreement whose core idea is the successful completion of the project. Such an agreement might feature a predefined contingency to be divided among the parties as extra profit — if it is not used covering mistakes along the way. Some innovation is called for here.

Structural changes to the architectural workplace. Consider the following: More than 50 percent of college students today are women, and women constitute almost 40 percent of all architecture students. Yet, according to AIA statistics, only about 15 percent of the principals of US firms are women. Where is everyone going? Data on minority participation in the profession is even more depressing. In a globalized marketplace, where knowledge work is increasingly outsourced to the lowest-cost location (drafting services based in India are one example) and competition for work spans all time zones, architecture must have access to the best minds regardless of gender or ethnicity. Further, if my current generation of students is any indication, today's young talent is distinctly uninterested in the 80-hour-a-week grind that is the initiation rite for many architects entering practice. The architectural workplace, bolstered by more profitable projects delivered through innovative delivery methods, should become a place that is friendly and fulfilling - for everyone.

We need changes that move design and construction from an exercise in "lowest first cost" to one of predictable outcomes.

New practice models. Changing delivery models, driven by newly productive workplaces, will be supported by new business models for practice, manifested primarily in new contract models, compensation schemes, scopes of service, and definitions of deliverables. Contracts might become transformed from current standardform descriptions of what needs to be done (and the resulting punishments if it is not) into more aspirational descriptions of what the project should accomplish, how that accomplishment will be measured, and how the parties will be rewarded accordingly. Imagine a scenario in which construction documents consist only of information that the contractor, already on board during the design phase and with a shared interest in the project's success, deems necessary. Since these collaborative models must be based on a high degree of trust and the dissolution of organizational divisions among team members, liability within the delivery team would be eliminated, and the team would work together to deal with external sources of risk.

Intensive innovation in the use of new technologies. That this is the first mention of technology in this hypothetical future is entirely intentional, since technologies in and of themselves don't move the AEC industry to change - much. However, the next five years will see dramatic improvements in the availability of processor speeds (as Intel brings multiprocessor computers to the market), bandwidth (as ubiquitous, wireless connectivity expands the Internet), storage capacity (as disk storage is increasingly commoditized and connected to the network), and displays (as screens expand to drafting-table size and as displayresolution increases with processor capabilities). So we'll have unlimited access to computation and storage, excellent ways to see and display that information, and the ability to move information to almost anywhere in the AEC enterprise instantly. Surely increased collaboration among the parties — in lots of forms --- will be the result. Those collaborations will be facilitated not by traditional, low-resolution drawings but by high-resolution building information models that will support interactive decision-making by the entire owner/designer/ constructor team.

5 More information from new visualization and representation technologies. Those same building information models will become the basis for newly defined design deliverables. Digital models, created as early prototypes of physical construction, will provide improved decision-making, visualization, and generation of alternatives, as well as detailed quantitative and numerical analysis. Analysis tools, running in parallel with models, will report real-time implications of design decisions as they are represented in the model, providing immediate indications of future building performance. Eventually, design models will replace traditional drawings with databases that become the basis of construction administration and facilities-management processes. The AEC industry has not enjoyed the same productivity gains driven by digital technology that have been seen elsewhere in the US economy.

The growing use of digital fabrication in construction. The lessons of integrated design and delivery have been learned and refined by the manufacturing industry, and taking those ideas to heart in building may be our best opportunity to dramatically improve productivity. Computer-controlled creation of building elements will evolve in two forms: digital prototyping of concepts prior to construction to support design exploration and validation, and component fabrication of discrete building elements, derived from geometry and metadata originating from the project designer's models themselves. The move toward digital fabrication will be inexorable, driven by the desire to achieve more predictable, sustainable construction; interest in construction of more complex forms; and the replacement of "stick-built" assemblies with manufactured components as field construction skills continue to deteriorate. As the AEC industry moves toward process integration and more tightly connected design/ construction business models, the traditional risk-management barriers that have separated design from building activity will continue to fall, while the demand for higher-resolution design

data driven deeper into the construction process will increase. Over time, constructors will evolve from managers overseeing armies of semi-skilled laborers who create unique, hand-crafted artifacts to "super-assemblers" who snap together building components created in factories worldwide.

OK, lots of provocative ideas here, but again — now what? Well, now we have to decide the extent to which these ideas, all derived from a vision in which the bright lines between design and construction begin to blur, affect the way we define the role of architects. The basic economic structure of the construction industry is rife with inefficiencies that will be wrung out to the benefit of someone, as in all rational markets. The resulting changes, driven by new technologies, will provide opportunities for leadership of all kinds. It's a perfect opportunity for architects. We're trained to take complex, messy circumstances, and then imagine and synthesize unique solutions while leading a team with disparate talents and inclinations toward the common goal of better architecture in the broadest sense. In a rational market, someone is always asking, "Now what?" Architects can answer that.

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Been There

One year later, four views of the Institute of Contemporary Art

Edward Lifson

Yes, I've been there. But only twice. Once last winter as a tourist, and once now that I've moved to Boston. Since I didn't live here when it opened, I missed most of the brouhaha. Perhaps I come to it with less baggage.

The first time I visited, I put less pressure on the building. I probably thought a little less about how it might function as a museum that I would visit regularly. I wanted an exciting architectural experience — a tourist's entertainment — something that would communicate to me in broad strokes about museums and cities and art.

It offers polite views of an already polite city. And maybe that's what makes it a Boston building.

That first time, I was somewhat disappointed. Anybody who works at a museum knows it's hard to get people in; the building can help seduce them. But as you approach the ICA through the parking lots — at least until the neighborhood is developed you're met with a façade that belongs on an alley.

The large glass elevator, which could be a signature for the place, is hard to find and presents little drama. The "mediatheque" is a room of quiet contemplation, a sort of seaman's chapel. But its view down to the water — no earth or sky, no beginning or end, just "nothingness" — is so forced it makes you miss your freedom to explore. The concept is better than the experience. It's a straitjacket of a room.

I barely remember the galleries from that first visit. They are plain, serviceable enough, but the spaces seem small, particularly for viewing contemporary art. I was gratified that the gift shop seemed almost hidden and that the café was not overdone. I loved the theater, with two glass walls featuring views of the sea and sky that connect performances to the life of the city. And I loved the outside seating, under the cantilever, making nature and Boston the spectacle, open around the clock.

So now I am living here. I intend to visit the ICA often. I now need this same building to do more work for me — to work well as a museum. On my first visit as a resident, I was at once more pleased, and more disappointed.

Even with its curving contemporary form, the building still feels subdued. The wood that wraps around the building is purposely faded, like pre-washed denim. Nearly all surfaces are muted. Little inside the building sharpens my vision or my senses. Bland artificial light is cast too evenly in the galleries. Outside, the milky glass around the gallery level looks more like Target than like Cartier.

But I like the solidity of the place and its lack of arrogant geometries; the calmness of its few materials is handled well. This allows you to see art in a peaceful setting, even if it's not an exhilarating one. You can visit often and enjoy the ICA without being irritated. It offers polite views of an already polite city. And maybe that's what makes it a Boston building.

A former NPR correspondent and host of a Chicago Public Radio program on architecture and design, Edward Lifson is a Loeb Fellow at the Harvard Graduate School of Design. He blogs on architecture at www.edwardlifson.com.

Ross Miller

Are artists just big complainers? Ask local artists what they think about the ICA — as I did recently — and you'll get similar responses: great appreciation that this wonderful building exists, followed by gripes about the institution's current relationship to the local community.

Consider this context: the act of looking at artwork has been blown open by postmodernism and cultural relativism. The viewer is free to interpret meaning, independent of the original artist's intentions. Practicing artists similarly feel empowered to look through their particular lens, then to scavenge and steal from current artmaking practices for their own work. This promotes feisty independence and strong opinions about artwork and any institution that displays it. This context is further shaped locally by the fact that many artists here make an active choice to live in Boston rather than New York. That decision may also contain a commitment to create work informed by a regional understanding of place, intellectual values, political ideals, even New England individuality. Artists also want relationships, connections, and personal interactions with critical local institutions.

The question becomes whether the ICA wants to be that institution for local artists. It's a question on the mind of many artists: "The ICA has never made much effort to engage with artists living in Boston. It has a reputation for showing work that might well be ordered off the pages of *Artforum* magazine." "The ICA went to Fort Point Channel never acknowledging that it was about to be neighbor to artists who had been there for years." "Most artists in the area think they have been 'cut out' again." "The opening event for artists was great. I have had no reason to go there since." "If the ICA can't really do more than it has in the past, it will remain marginal in the lives of the artists in the city. It is possible to exhibit work being made in this area along with national and the international stars... I'd like to see that happen."

Even with this desire for more engagement, most artists praise the gift that is the ICA building: "The building is magical: being in the overhanging video room feels like being inside a three-dimensional Edward Hopper painting, careening into the sea without proper grounding. Breathtaking." "The long seaward corridor is a wonderful respite from hard looking." "The building brings attention and excitement to contemporary art in Boston." "The achievement of raising funds and building a truly noteworthy building is a major accomplishment."

So desire is here, potential exists. An exquisite building sited near New England's largest working artist community is a start. In the past, through Vita Brevis and other programs, the ICA has demonstrated its commitment to local places and artists. Understandably, much of the new ICA's first year was devoted to stewarding its benefactors. At the beginning of its second year, many are wondering if the ICA will expand its commitment to

The ICA exudes an active intelligence; it's much the coolest building around. — Deborah Weisgall local and regional artists and find new and unexpected ways to engage them. Its choices now will influence the institution it will become and the degree to which it can become a catalyst that sparks a new level of excitement about creating and collecting contemporary art in Boston.

Ross Miller is a visual artist who creates art in public spaces and is currently designing a series of outdoor classrooms with the Boston Schoolyard Initiative. Quoted comments are from conversations with a number of artists and gallery owners.

Deborah Weisgall

The ICA hunkers down at the edge of the harbor. A cube of opaque panels, translucent panels, glimmers of clear glass, it invites simile. It looks like a sleek electronic toy, or an alien's dwelling. But it turned its back on the parking lot — and on my husband and me — like a stuck-up kid who thinks he's much cooler than you are. It put us off; it put us on edge.

We couldn't figure out how to get in. The entrance off to the left lacked even the romance of a stage door, so we walked around the building to the water side, to the wide boardwalk, the bleachers rising beside the harbor, the great cantilevered roof, the glass walls.

The architecture had opened up and became eloquent and wise, surprising and poetical. A cold front was blowing over; the edge of clouds cut diagonally across the view framed by the building. A sloop out for a late sail heeled in the wind. A plane took off, a plane landed, and the airport ferry crossed the gray harbor. On the far shore, Winthrop's small hill bristling with triple-deckers appeared to be a Cubist landscape. We saw familiar Boston with new clarity, aware of changing light across the sky and water, aware of geography: exposed to setting and place, marveling at it. The ICA building has elevated its site to art.

And maybe that was why it was still so difficult to find a way inside. We headed for a door set in the glass wall of the restaurant. With lingering resentment, I was sure that it would be locked, but it wasn't. We had something to eat, admired the view some more, and headed in. We came at the big art wall from the wrong angle, so it didn't make much of an impression, but the elevator to the fourth floor gallery was worth the journey. A glass rectangle, it rose through its own mechanics while revealing views of both the





There was a time when Boston was abuzz about City Hall, too.

— Gretchen Schneider, Assoc. AlA

inside of the building and the harbor outside; in a way it seemed a short tour of the building's core idea: a play on transparency. The galleries, with their concrete floors and moveable walls, were the only places you couldn't see through to the waterfront; they had the feeling of a garage, of a staging area, a temporary shifting space that freed us to take the ICA's collection as part of the flux, too. Quite an achievement: the architecture had jolted us and made us receptive; it lifted a barrier of reticence between viewer and art, a barrier that we might not have been aware of until it was gone.

Transparency leads to immediacy, and the building constantly reminded us of the site. The water was everywhere we looked. It had a gallery of its own, lined with benches on which to sit and look out at the harbor. The computer room tapered into a long window framing the infinite patterns of waves: a screen-saver or a work of art.

We stayed all afternoon. The ICA exudes an active intelligence; it's much the coolest building around. It frames possibility and change; it's a study in scale, in presence and reticence, balancing bravado and decorum. And it has strong ideas about how we should see. Of course it would refuse to pay attention to a parking lot.

Deborah Weisgall writes about the arts for *The New York Times* and other publications. Her novel *The World Before Her* will be published by Houghton Mifflin in 2008.

Gretchen Schneider, Assoc. AIA

It's 8PM on a dark October night. The Red Sox, playing tonight, are down 3-1 in the American League playoffs and *still* the ICA is alive with people. The energy is palpable, and I actually overhear teenagers asking each other out loud: "What do you think that means?" If a museum does no more than this, it has succeeded.

It's exciting to have a building that people are excited about. Standing out there on that deck with the big gallery cantilevered over my head, I feel the building reaching out to the harbor. The gesture is wonderful and extraordinary enough that you don't need to be fluent in contemporary architectural discourse or even an architect to appreciate this building. And for the current case of Modern architecture in Boston, that's a refreshing change.

Think about it: How many Boston buildings do we have really — that acknowledge the water in a big way? The New England Aquarium was first, in the 1960s; as it put the fish in tanks (instead of nets), it established the waterfront as a public destination and place for dramatic architectural expression. Similarly the JFK Library in the 1970s, Rowes Wharf in the 1980s, and the Moakley Courthouse in the 1990s each demonstrated an increasingly civic attitude towards Boston's evolving waterfront while declaring Boston's place in the contemporary architectural scene. As part of the ICA's lineage, each of these projects expresses an architectural and urban vitality, albeit one cloaked in increasingly conservative garments. Until the ICA.

What's distressing about the ICA is how fleeting its vital moment may be. I can't help but wonder what will happen when the city grows up around this building.

On the harbor side, there's a certain contemplative magic that will be lost when, instead of peering down through the giant oculus of the "mediatheque" onto water, we instead have a direct line on big snazzy yachts in an exclusive marina. Which, if the renderings featured in the Fallon Company's website and ads are to be believed, is exactly what's on its way.

On the land side, the illuminated channel glass looks sexy, especially at night, hovering four stories above the half-empty parking lots. But as hip as it is, it's really little more than an elegant billboard. Unlike other museums in North Atlantic cities (such as Steven Holl's Kiasma in Helsinki), here the institution does not benefit from the material's properties: the translucent glass wall neither filters light into the space nor reflects interior activity out toward the city. Even as a billboard, it's already been upstaged by WGBH's new, ever-changing digital face to the Mass Pike. Regardless, it'll be hard to see once it's hidden by the tall new buildings now on their way.

As the parking lots give way to buildings, the focus will shift to the sidewalk experience, and that, sadly, is the most bleak. Soon the ICA's back side will be the front wall of a sidewalk, defining the pedestrian experience of a new neighborhood. Though the materials are finely detailed and definitely of our time, are the metal panels, opaque glass, stairway-to-nowhere, and one-way exit doors all that different from the blank face at the base of City Hall?

There was a time when Boston was abuzz about City Hall, too.

Gretchen Schneider, Assoc. AIA, is the principal of Schneider Studio in Boston.



Man About Town

Hugh Shepley FAIA, recipient, 2007 BSA Award of Honor

by Peter Kuttner FAIA

Hugh Shepley FAIA retired from Shepley Bulfinch Richardson and Abbott (SBRA) in 1990, but he seems to have more energy than ever. I run into him with a frequency that always surprises me. In the last year, our shared itinerary has found us: in a breakout session at a BSA retreat: bumping elbows at the bar before the annual Fellows dinner at the Tavern Club: at a lunch for former BSA presidents, intended to offer advice and sympathy to the incumbent; and at a reception hosted by SBRA, where he was formally presented with the BSA Award of Honor, in the company of friends, colleagues, and his family.

We recently walked together from The Architects Building up to Downtown Crossing, where Hugh was heading to catch the T, and we talked about some of our encounters. Hugh was president of the BSA 32 years ago and was already a Fellow of the American Institute of Architects at the time, but today, his observations on the profession remain uncannily relevant and he remains an exceptional member of the profession, who has played a central part in Boston's architectural growth and in the continuing collegiality of its architectural community.

at the Ex-Presidents Lunch ...

Peter Kuttner FAIA: You talked about some things that haven't changed since you were president of the BSA 32 years ago.

Hugh Shepley FAIA: Architects still need to talk to the public much more about what we do. The public doesn't really understand what we add to the building

Clockwise from top — Hugh Shepley FAIA: with photo of great-grandfather H.H. Richardson, portrait by Elsa Dorfman for

ArchitectureBoston (May/June 2006); with SBRA staff, circa 1955; on 1992 circumnavigation of Manhattan, with SBRA's New York Hospital in the background; SBRA portrait, circa 1990; with SBRA principals Jean Paul Carlhian FAIA and Paul Sun FAIA (all photos courtesy SBRA except as noted). process. We know we do more than just make the final project look good, but the public needs to better understand how we improve the entire process, from the very beginning.

Peter Kuttner FAIA: You also mentioned that architects are still underpaid.

Hugh Shepley FAIA: I once asked Joan Goody FAIA why we are underpaid, and she said, "Hugh, caregivers are always under-appreciated, and architects are perceived as 'caregivers.'" Norman Fletcher FAIA always seemed resigned to it, saying "It's the price we're all willing to pay for the privilege to shape the built environment." But I think it's because we've been giving away our responsibility to others. There are people out there called "project managers" and "construction managers" who are doing the things we used to do. We've let go of many things we can do better than anyone, and we need to let people know we can do it all.

at the Fellows Dinner ...

Peter Kuttner FAIA: You mentioned your misgivings about "celebrity architects."

Hugh Shepley FAIA: Architects do seem drawn into celebrity over time, and it's clear there's a cycle. It's been going on since Michelangelo. I have very mixed feelings about some of the results — projects like Frank Gehry's Stata Center, which leaks and looks like a train wreck. When SBRA did the Polaroid headquarters on the Charles River in Cambridge in 1938, it was the firm's first Modern building, and it was considered quite a design risk. But when my father took me to visit the project during construction, I was most struck by how much care went into the design, and how thoughtful its designers were about every aspect of the building.

Today, many projects are just striving for effect, and some of them are not well-considered.

at the SBRA Reception ...

Peter Kuttner FAIA: I met your wife Mary Waters Shepley at the party. She's been part of a long family history in architecture that goes back more than 125 years to your great-grandfather, H.H. Richardson.

Hugh Shepley FAIA: We've been married 56 years, and she's learned to be economical. She's from Baltimore, where many girls had double names, so she is known to everyone as Mary Waters. My father, who himself was a thirdgeneration architect, had warned me away from the field after his experience in the Depression. So after I graduated from Harvard, I went into construction. I took some courses at night at the BAC [Boston Architectural Center] in materials, and then took a design studio. I discovered I was pretty good. We were already married and had two boys, so it was a tough experience raising a family, working days, and going to school nights. But the BAC was a fantastic experience. I was awarded the BSA Scholarship, which then allowed us to travel in Europe for three months. After three years working and going to school, my father realized I was hooked, and hired me at the firm. My sons Tony and Pip have found success in the building industry, although they have avoided architecture. But my nephew Roger Shepley AIA practices in Boston.

Peter Kuttner FAIA: I presented a picture of you as the Obi-Wan Kenobi of the BSA, influencing new generations of BSA leaders. How do you see the BSA today?

Hugh Shepley FAIA: In the 42 years since I was first on the BSA board, it has grown enormously. Back then, the BSA

was more of a cozy club. Now it's a real advocacy organization, dealing with real issues. I love how it's taken on all kinds of interesting challenges.

Peter Kuttner FAIA: Your son Tony told us about an infamous family picture of you balanced on the edge of the Grand Canyon.

Hugh Shepley FAIA: I was 19 years old when I hit the Grand Canyon, and of course I thought I was infallible. I was an acrobat in my youth, and I was driving cross-country with two friends. I saw a ledge, and a handstand just seemed the right thing to do. But I was a better juggler. At the gym practicing acrobatics, I met three professional jugglers and apparently impressed them. One arranged an agent for me, and I became a juggler in nightclubs for two summers. When I was drafted, my juggling put me into special services. The Army had me entertaining the troops at Fort Dix in New Jersey for the rest of my service.

Peter Kuttner FAIA: Has juggling helped in your professional career?

Hugh Shepley FAIA: Not directly, but I do have mighty fast reactions.

Peter Kuttner FAIA is the president of Cambridge Seven Associates in Cambridge, Massachusetts, and represents New England on the national AIA Board of Directors.

Editor's Note: An interview with Hugh Shepley FAIA ("Looking Back, Looking Forward: Hugh Shepley FAIA talks with George Takoudes AIA") appeared in the Spring 2000 issue of *ArchitectureBoston*, available at www.architectureboston. com/archives.

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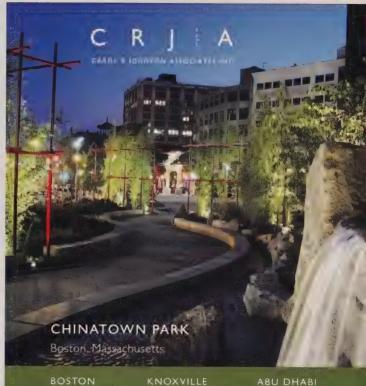
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2007 HARLESTON PARKER MEDAL

Institute of Contemporary Art, Boston

DILLER SCOFIDIO + RENFRO WITH PERRY DEAN ROGERS | PARTNERS



JURY:

Josiah Stevenson AIA Leers Weinzapfel Associates Boston Chair

Anthony Consigli Consigli Construction Co. Milford, Massachusetts President, AGC Massachusetts

> Dan Gainsboro Genesis Planners Waltham, Massachusetts

> > Randa Ghattas AIA Payette Boston

David Hacin AIA Hacin + Associates Boston

Ellen Leopold Author/journalist Cambridge, Massachusetts

> Tacey Luongo AIA Renny Corp. Boston

Ann Pendleton-Jullian Knowlton School of Architecture The Ohio State University Columbus, Ohio

Laura Solano Michael Van Valkenburgh Associates Cambridge, Massachusetts

> Frano Violich AIA Kennedy & Violich Architecture Boston

JURY COMMENTS:

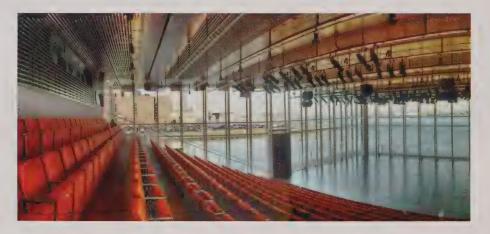
The architects and the client understood that the function and meaning of museums require re-examination if they are to remain relevant in this era. Until recently, the museum, as a building type, was a civic but introverted warehouse for viewing art. At the ICA, the architect/client team created a building that feels like a cultural and educational center, open and welcome to the public, which also serves as a showcase for modern art. The ICA determined that involving the community in new outreach programs is a way for a museum to be more viable today.

In the context of Boston, it is especially refreshing to see a new civic building that has such a close relationship to its site, in this case Boston Harbor. One approaches the ICA, soon to be surrounded by more buildings, by a side entrance that treats the public approach to the water and the building entry evenhandedly. One can enjoy the public waterfront or enter the museum, where there are occasional views of the harbor as one moves through the galleries. Each major space — the theater, the "mediatheque" room, and the harborfront gallery — reveals different controlled views of the water and of the city.

The risks taken by the designers were rewarded. No other building in greater Boston has this form or this gesture to the harbor. The gallery, clad in translucent channel glass, illuminated at night and still somewhat ephemeral during the day, is elevated above the surrounding context, suggesting even from afar that it is a destination of importance. Once there, it is an internal space, intended for the visitor's exclusive focus on the art. Occasionally, one can leave the gallery for a glimpse of the water in the mediatheque room or a view of the city on the top floor.

A museum of this stature and location requires a certain level of finish and quality of materials. With their relatively limited budget, the architects needed to be inventive in their use of materials while maintaining an overall economy. Evidence of this economical approach is apparent in the polished concrete floors of many rooms, simple drywall-clad galleries, and the mechanical systems in their most cost-effective location on the roof. The architects chose to direct their energies to the creation of a large room-size glass elevator that takes visitors up to the galleries, an enclosure system that can slide completely out of the way to open the restaurant out to the boardwalk, and a theater that has a curtainwall on two sides but that can be fully darkened as needed for performances. The descending steps of the theater continue outside the building, becoming a teak seating area facing the harbor and the outdoor performance space.

The decision to recommend the ICA for this award was a polarizing one for the committee. The dissenting voices found the building to be an unnecessarily showy effort that happened to benefit from a beautiful site. The galleries, which were purposely understated to avoid competition with the art, were perceived by some jurors as lost opportunities. Nevertheless, the building's powerful relationship to the water and its inventive economy of means give it a special quality.



Editor's note: The full text of jury comments may be found at www.architects.org/awards.



2007 HARLESTON PARKER MEDAL

Institute of Contemporary Art Boston

Client:

Institute of Contemporary Art Boston

Architect:

Diller Scofidio + Renfro New York City www.dsrny.com

Project team:

Elizabeth Diller, Ricardo Scofidio AIA, Charles Renfro AIA (principals); Flavio Stigliano RA (project leader); Deane Simpson, Jesse Saylor, Eric Höweler AIA

Associate architect:

Perry Dean Rogers | Partners Boston www.perrydean.com

Project team:

Martha Pilgreen AIA (principal-in-charge); Gregory C. Burchard RA, Mike Waters RA (project managers); Henry Scollard RA (project designer)

Consultants:

Arup (structural/mechanical/electrical/ plumbing/lighting); Fisher Dachs (theater); Jaffe Holden Acoustics (acoustical); Seamus Henchy Associates (project management)

Photographers:

Iwan Baan (page 24); Diller Scofidio + Renfro (page 25 and page 27 bottom left); Nic LeHoux (this page and page 27 top, bottom right, and center left); Christian Richters; Peter Vanderwarker









2007 ROTCH TRAVELLING SCHOLARSHIP

Inside Out Constructing a new architecture

by Nader Tehrani

JURY

Nader Tehrani Office dA Boston Chair

Felipe Correa Harvard Graduate School of Design

Gabriel Feld AIA Rhode Island School of Design

Andrew Hargens AICP Massachusetts Port Authority Boston

Sheila Kennedy AIA Kennedy & Violich Architecture Boston

> Ingeborg Rocker Harvard Graduate School of Design

> > First Prize (\$35,000) Mason Pritchett

> > > Alternate Robert Genova AIA

Honorable mention by jury Ramsey Bakhoum he two parts of the 2007 Rotch Competition were both organized around the South Boston harborfront, offering studies and visions for this urban district from a more speculative vantage-point than can be offered from the real-estate market and political pressures of the current development. The preliminary competition, written by Sheila Kennedy AIA, attempted to draw out urban strategies for the transformation of the waterfront based on research in sustainability and new technologies. The final competition, written by Nader Tehrani, focused on construction as the arena of research.

If architectural education in recent decades has looked outside its boundaries — toward philosophy, critical theory, media, and various other disciplines — this competition in contrast sought to look deep with the discipline of architecture itself, re-examining assumptions about building practice, in order to advance and expand the field from within. The competition brief featured the waterfront and its piers including a ferry station and various related programmatic functions (hotel, restaurant, terminal), but the jurors understood that their purpose this year was to recognize ideas that transcended the simple resolution of site and program.

The challenge was to develop a strategy that would optimize a proposed method of construction — such as prefabrication, CNC manufacturing, modular elements — with the goal of minimizing on-site fabrication, increasing speed of delivery, and reducing the number of trades in the field. This required adopting a material palette and developing a unit of fabrication integrating structural, environmental, and performance criteria in a coherent system. Designers needed to demonstrate a thorough control of the strategy as it was manifested at different scales and different conditions; jurors placed great emphasis on the success with which organic relationships were established between surface and space, interior and exterior, as well as structure and skin.

The entries addressed these problems with a broad array of strategies, but the two finalists prompted the most debate. Robert Genova AIA offered an impeccably drawn and detailed set of boards, concentrating on materials and assemblies. Mason Pritchett offered an equally compelling set of images, whose details and articulation may have fallen short of his competitor, but he also advanced an argument about mass-production and customization that challenged the very means and methods in which architecture is conceived. If Genova's visions displayed the power of architectural materiality, his scheme also fell prey to material as fetish. Pritchett held back from the kind of zealous inquisition of materials research that the competition *seemed* to provoke and instead offered a more critical response to the deeper questions about material and fabrication processes.

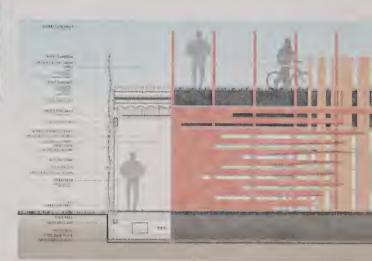
Nader Tehrani is a principal of Office dA in Boston and was chair of this year's final-competition jury.

The Rotch Travelling Scholarship was established in 1883 to advance architectural education through foreign study and travel. Rotch Scholars today are selected through an annual two-stage competition. For more information and more detailed jury comments and competition images, go to www.rotchscholarship.org.





Above and left: first-prize scheme by Mason Pritchett.



Right and below: "alternate" scheme by Robert Genova AIA.





Light 00 by Bosca Arredi: 3 glass sliding composition. Recessed overhead 2-track beam.



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JOHN M. CLANCY AWARD FOR SOCIALLY RESPONSIBLE HOUSING

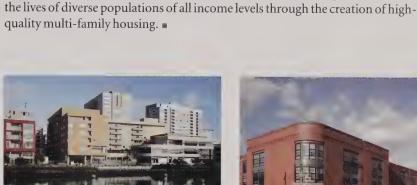
JURY: **Sherry Ahrentzen PhD** Stardust Center for Affordable Housing and the Family Arizona State University Phoenix, Arizona

> **Blair Kamin** Chicago Tribune

David Parish Federal Home Loan Bank of Boston

> **Geoff Wooding AIA** Goody Clancy Boston

Editor's note: Information about the award and the full text of jury comments may be found at www.johnclancyaward.org.



his biennial award was established in 2004 to honor John M. Clancy FAIA,

whose career was distinguished by his commitment to socially responsible

architecture. It recognizes those who are presently making a difference in

HONOR AWARD FOR DESIGN EXCELLENCE **Mission Creek Community** San Francisco Hardison Komatsu Ivelich & Tucker Oakland, California



HONOR AWARD FOR DESIGN EXCELLENCE **6** North Apartments St. Louis, Missouri **Trivers Associates** St. Louis, Missouri



AWARD FOR DESIGN Trolley Square Cambridge, Massachusetts **Mostue & Associates** Somerville, Massachusetts



AWARD FOR DESIGN **Paradise Pond Apartments** Affordable and Transitional Housing Northampton, Massachusetts **PFRA + LDa Architects** (joint-venture partnership) Northampton, Massachusetts



AWARD FOR DESIGN Othello Station Seattle, Washington WRT-Solomon E.T.C. San Francisco

Photos (clockwise from top left): Alan Karchmer; Sam Fentress; Solomon/WRT/Tim Griffith; Peter Frothingham; Mostue & Associates/Joel Howe.

IN THE PURSUIT OF HOUSING DESIGN AWARDS

JURY:

Jeff Stein AIA Boston Architectural College Boston

Eric Höweler AIA Höweler + Yoon Architecture Boston

> Jane Hassan ASID McDougal Architects Boston

Kristin Simonson AIA CBT/Childs Bertman Tseckares Boston

Editor's note: The full text of jury comments may be found at www.architects.org/awards.

JURY COMMENTS:

The overall quality of submissions was high, displaying thoughtfulness and creativity. We noted that most of the submissions, representing wide national participation, were produced with technical savvy, relying little on manual rendering, though we were surprised that no one showed work that apparently incorporated BIM. We also noted that most submissions were stylistically Modern. Both observations suggested to us that schools continue to place high emphasis on technical skill acquisition and contemporary design over the vernacular or traditional design. There also seemed little emphasis paid to exploration of the human lifecycle's relationship to housing, with scant acknowledgement of the contextual needs for school, work, play, or food production. Occasionally a submission showed interesting hybrid programming that reflected playfulness but offered only moderate insights into housing. One juror wondered whether this emotional oversight reflected the program's generational skew, with submissions coming for the most part from young designers who may be personally inexperienced with adapting to loss.

We were surprised there wasn't more exploration into specific sustainable materials and systems though we agreed that the program's emphasis on multifamily and replicable design required all submissions to consider sustainability at its most fundamental level.

Many of the submissions offered lovely designs for spaces that appeared seductive, inviting and livable. The best of these offered fresh ideas about how architecture might interact with its immediate environment. We were pleased to discover both beauty and humor in abundance.



Honor Award: South Boston Housing.

HONOR AWARDS

Entrepreneurial Housing Seth Riseman, Assoc. AIA Boston

South Boston Housing Dara Huang Harvard Graduate School of Design Cambridge, Massachusetts

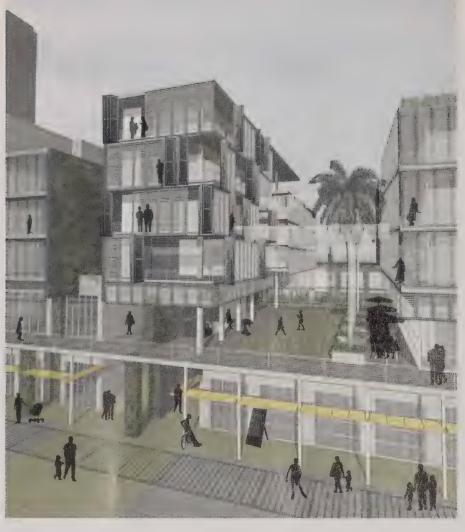
AWARDS

Dwelling in Sert's Shadow Matthew Young University of Virginia Charlottesville, Virginia

(Re)Building Blocks Allison Dryer and James Pressly University of Virginia Charlottesville, Virginia

Perforated Housing Jared Ramsdel Wentworth Institute of Technology Boston

Artists Lofts: Ithaca, New York Gary He Cornell University Ithaca, New York



Honor Award: Entrepreneurial Housing.

CITATIONS

In-Transition: Temporary Housing

in South Boston Peter Niles Harvard Graduate School of Design Cambridge, Massachusetts

Industrial Rectangles

Matthew Snyder Harvard Graduate School of Design Cambridge, Massachusetts

Modular 3

Dan Rockhill Studio 804 Lawrence, Kansas

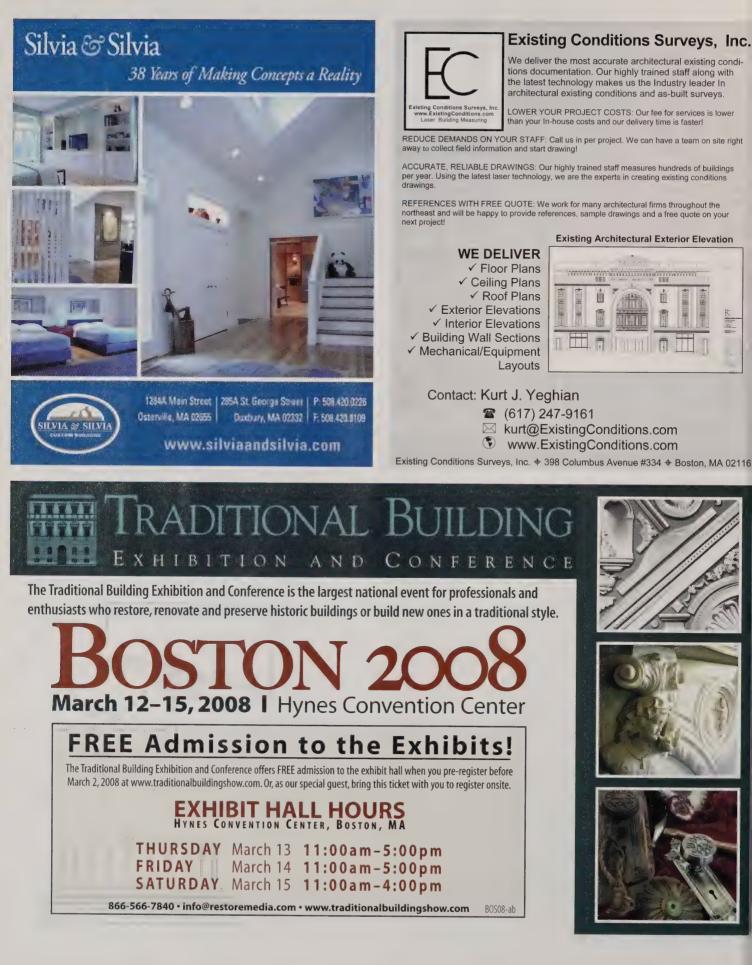
Christine's House

Amy Green Bullington and Stephen Long Auburn University Rural Studio Auburn, Alabama

CITATIONS FOR TECHNOLOGY

The Architecture of Thermally Active Surfaces/The Benning Box: Westcreek, Colorado Kiel Moe Cambridge, Massachusetts

Synapse House Marcus Martinez Houston, Texas



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HONOR AWARDS FOR DESIGN EXCELLENCE





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JURY

Marlon Blackwell AIA Marlon Blackwell/Architect University of Arkansas School of Architecture Fayetteville, Arkansas

> Ronnette Riley FAIA Ronnette Riley Architect New York City

R.K. Stewart FAIA Gensler San Francisco National AIA President

Editor's note: The full text of jury comments, including responses to individual projects and advice on preparing submissions, may be found at www.architects.org/awards.

JURY COMMENTS

Predominant among this year's submissions were medical and educational institutions, both K-12 and college or university projects. We saw fewer restoration/preservation and arts-related projects than we expected; many of the arts projects were performance centers tied to campuses. Also missing or underrepresented were interior, restaurant, retail, and multi-housing projects. Unlike prior juries, we found few overt references to sustainability as a top design- or solution-driver.

In general, the project quality was high, though at times handsome craft outstripped ideas. We agreed that the overall conservative level of risk-taking signaled both a low representation by young designers and the program-driven nature of the mostly institutional projects we examined. Very few low-budget projects were represented in the mix. These might have brought us closer to a greater number of younger people and others offering edgier solutions.

As we spent the greater part of our day examining this work, the theme that kept rising was competence: these projects were all sound and resolute. Though we found no new style trends upon which to remark, it was obvious to us that almost all of this work had been designed with clear intent by people who were up to the task of realizing it. Rather than faint praise, what we mean to offer by that observation is the idea that even relatively safe design can be both eloquent and seductive, particularly when successfully meeting a client's programmatic needs.

We wish to offer a tip for future program entrants: context persuades us most. Responsible juries cannot judge projects appropriately without understanding context. Give us site plans, clear elevations and sectional drawings, and good photographs as well as visual and verbal descriptions of the building's neighborhood or larger environment.

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- **49 William Rawn Associates** Sophia Gordon Hall Tufts University Somerville and Medford, Massachusetts
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- 50 Steffian Bradley Architects with Guangzhou Design Institute of Light-Textile Industry and Architecture Guangzhou Children's Activity Center Guangzhou, China



HONOR AWARD

Renovations to Grant/Fulton Hall Brown University Providence, Rhode Island

Client: Brown University

Architect:

Brian Healy Architects Boston www.brianhealyarchitects.com

Project team:

Brian Healy AIA (principal); Gerry Gutierrez RA (project manager); Elizabeth Kostojohn AIA (project architect); Paxton Sheldahl; Ania Matteson; Tala Klink

Contractor:

E.W. Burman

Consultants:

Richmond So Engineers (structural); Collaborative Engineers (mechanical/ electrical/plumbing/fire protection); Lam Partners (lighting); Kirkegaard Associates (acoustical/AV); Campbell-McCabe (architectural hardware)

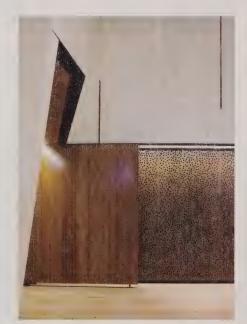
Photographers:

John Horner (above); Silvia Illia (right)

Designer's statement:

Grant Recital Hall was placed within the masonry shell of a small existing carriage house. With just 135 seats, it is an intimate venue for the presentation of chamber music, electronic music, and small jazz combos. The progression through the spaces, along with improved sightlines, promotes interaction between performers and audience. The recital hall is also supported by a new entry, lobby and reception area, and musicians' room.

(See also cover.)



HONOR AWARDS FOR DESIGN EXCELLENCE

HONOR AWARD

Getty Villa Los Angeles

Client: J. Paul Getty Trust

Design architect:

Machado and Silvetti Associates Boston

Project team:

Jorge Silvetti (principal-in-charge): Rodolfo Machado, Assoc, AIA (consulting principal): Tim Love AIA (project director 1994-2002); Conrad Ello (project director 2002-2006 and associate-incharge of new construction); Mimi Love (associate-in-charge of renovations): Bradley Johnson (iob captain and field team leader); Dario Albanese; George Arnold; Hani Asfour; Stephen Atkinson; Jennifer Beningfield; Brett Bentson; Modesto Bigas-Valedon: Nathan Bishop: Greg Canaras; Brian Cavanaugh AIA; Philip Chen AIA; Pamela Choi; John Clegg: Maria De Las Mercedes Cornejo: Andrew Cruse AIA: Christian Dagg: Signe Dinsdale: Douglas Dolezal, Assoc, AIA: Maksim Drivin: Timothy Dumbleton: Markus Elkatsha; Rami el Samahy; Joshua Fenollosa; Jeremy Ficca; Aaron Follett; Juan Frigerio; Christopher Genter; Steven Gerrard AIA: Kristen Giannattasio: James Gresalfi: Christopher Grimley: Andrew Hamblin; Natasha Harper; Steve Hoard; Sarah Holmes; Devin Hong; Derek Johnson; Miks Karklins; Ben Karty; Christopher Keane; Seiee Kim; Peter Kleiner AIA; Andrew Ku; Michael LeBlanc AIA; Stephen Lee; Joe Liechty; Matthew Littell; Peter Lofgren AIA; Samantha Lukacs AIA: Sebastian Martellotto: Bruce Miller; Mimi Moncier; Kayoko Ohtsuki; Matthew Oudens AIA; Mark Pasnik; Nick Papaefthimiou; Carie Penebad; Justin Pijak; Monica Ponce de Leon; Steven Poon AIA; Jonathan Ramsey; Gary Rohrbacher; Susanne Schindler; Elena Serio; Jay Smith; Nader Tehrani; Ted Touloukian AIA; Ricardo Vargas; Rodrigo Vidal; Russell Walker; Augustus Wendell; Ethan Yungerman

Executive architect: SPF:a

Culver City, California www.spfa.com

Project team:

Zoltan Pali (principal); Jeffrey Stenfors (principal); Judit Fekete (principal); Don Barbaree; Joann Costello; David Dorn; Bea Egato; Michelle Ewers; Joe Fedorowich; Wendi Gilbert; Nora Gordon; Jacquie Hernandez; Bronia Hernikova; Alec Johnson; Blaise Kim; Karl Lee; Frank Lopez; Siddhartha Majumdar; Jun Nagase; Giancarlo Renella; Lori Selna; Dan Seng; Shweta Sinha; Dan Spanton; Greg Smith; Greg Stutheit; Damon Surfas; Jeffrey Temple; Drew Wilson

Contractor:

Morley Builders



Consultants:

Nabih Youssef and Associates (structural); Arup (mechanical/plumbing); Kocher Schirra Goharizi (electrical); PSOMAS (civil); Denis L. Kurutz Associates with KornRandolph (landscape); Lam Partners (lighting); Laschober and Sovich (food service); Fisher Dachs (theater)

Photographer:

Facundo de Zuviria

Designer's statement:

The Getty Villa is a center for the study and conservation of classical art. This project includes remodeling the existing museum; transforming Mr. Getty's ranch house into a research facility; and constructing new buildings, public areas, and gardens. The various elements are conceived as an integral part of the new outdoor spaces, with the original villa serving as the centerpiece.



HONOR AWARD

Earth Sciences Building and Museum of Natural History Amherst College Amherst, Massachusetts

Client: Amherst College

Architect:

Payette Boston

Construction manager: Daniel O'Connell's Sons

Consultants:

BVH Integrated Services (mechanical/ electrical); Simpson Gumpertz & Heger (structural)

Photographer: Warren Jagger

Designer's statement:

This building is sited at a prominent location that initiates the re-definition of a major campus space. The new facility enhances the identity and visibility of both the geology department and the museum. It includes state-of-the-art teaching labs for both introductory geology courses as well as advanced instruction in the geological sciences.







HONOR AWARD Westport Meadow House Westport, Massachusetts

Client: Douglas Reed and William Makris

Architect:

Maryann Thompson Architects Cambridge, Massachusetts www.maryannthompson.com

Project team:

Maryann Thompson AIA (principal-incharge); Thomas Murdough (project manager)

Contractor: Kendrick Snyder Builders



Consultants:

Richmond So Engineers (structural); Reed Hilderbrand Associates (landscape); Thad Hayes (interiors)

Photographer: Chuck Choi

Designer's statement:

Hovering just above the ground and oriented along the gentle slope of a 44-acre meadow, this house echoes the layered and horizontal nature of the site. An "organizing wall" skewers the scheme, acting as a veil that defers one's passage between meadow and river. The wall's skin renders ambiguous the boundary between inside and out, throwing the rooms that line the east and west facades to the outdoors.





HONOR AWARD

MiniLuxe Newton Centre, Massachusetts

Client: The Cueball Group

Architect:

Elizabeth Whittaker/Architecture Boston www.elizabethwhittakerarch.com

Associate architect:

Hacin + Associates Boston www.hacin.com

Project team:

Elizabeth Whittaker, Assoc. AlA (principal); Silvia Illia (project leader); Paul Voulgaris; Andrew Richardson

Contractor:

John Hamel

Photographer: John Horner

Designer's statement:

This nail salon offers typical services, as well as a space for an after-hours lounge and private-party venue. The hybrid programming was the inspiration for the large graphic wall panels that operate as an inexpensive branding mechanism. The wall panels are backlit at night to transform the space into the after-hours lounge.

HONOR AWARDS FOR DESIGN EXCELLENCE

AWARD

The New Britain Museum of American Art New Britain, Connecticut

Client:

The New Britain Museum of American Art

Architect:

Ann Beha Architects Boston www.annbeha.com

Project team:

Ann M. Beha FAIA (principal-in-charge); Steven Gerrard AIA (project architect)



AWARD

Folio Boston Boston

Client: Suffolk Company

Architect:

CBT/Childs Bertman Tseckares Boston www.cbtarchitects.com

Construction manager: John Moriarty & Associates

Consultants:

McNamara/Salvia (structural); SEi Companies (mechanical/electrical/ plumbing); Pressley Associates (landscape) Photographer: Anton GrassI/Esto

Designer's statement:

Combining luxury condominiums and upscale retail space, this building establishes a residential presence in Boston's dense financial district. The project embraces an 1807 Charles Bulfinch structure and borrows the brick-and-glass vocabularies of adjacent buildings, varying massing and materials, to engage with its neighbors. Articulated window sills energize the façade and activate a play of shadow and light throughout the day. Contractor: Downes Construction Company

Consultants:

Altieri Sebor Wieber (mechanical/ electrical/plumbing/fire protection); LeMessurier Consultants (structural); Close, Jensen & Miller (civil); Richard Burck Associates (landscape); Sladen Feinstein (lighting); Acentech (acoustical); Clifford La Fontaine (exhibits); Clarence Welti PE (geotechnical); Wil-Spec (specifications)

Photographer:

Peter Vanderwarker

Designer's statement:

This new museum gallery wing is connected to the historic Landers House, home to the museum since 1937. The new Chase Building is scaled for its residential setting and provides new galleries for exhibitions, visitor services, and a new auditorium. The museum also offers views to the adjacent Olmsteddesigned park and incorporates outdoor terraces as seasonal gathering areas.





AWARD Outside-in Loft

Boston

Client: Sam and Leslie Davol

Architect: Höweler + Yoon Architecture Boston www.hyarchitecture.com

Project team: J. Meejin Yoon; Eric Höweler AIA; Carl Solander

Contractor: Benjamin Construction

Consultants: Sarkis Zerounian (structural); Ibrahim Engineers (mechanical)

Photographer: Höweler + Yoon Architecture



Designer's statement:

Two existing mirror-image loft apartments on the top floor of a Chinatown building were combined into a single living space. An eight-foot-square courtyard was introduced in the place of the former bathroom. By giving up a piece of the apartment to the exterior, the courtyard invites the outside in, introducing natural light, as well as rain, snow, and a small garden, into the center of the apartment.

AWARD

National Institute of Education Nanyang Technological University Republic of Singapore

Client:

National Institute for Education Nanyang Technological University

Architect:

Kallmann McKinnell & Wood Architects Boston www.kmwarch.com

Project team: N. Michael McKinnell FAIA, RIBA; Bruce Wood AIA, ASLA, CSI, LEED AP

Contractor: Evan Lim & Co.

Consultants:

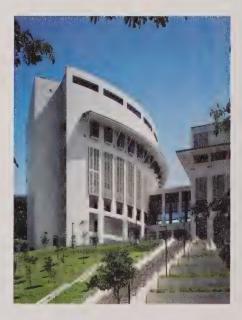
CPG Corporation (cost/structural/civil/ site survey/mechanical/electrical/ plumbing/fire protection/code/hardware/ lighting/specifications); National Institute for Education, Nanyang Technological University (signage)

Photographer:

Richard Bryant

Designer's statement:

An eleven-building campus within a larger Singapore university, the NIE is organized around a central open space defined by individual schools, a library, and administration, each a variation of a climate-based vocabulary. A pedestrian environment results from a dense organization, a three-level section, and shaded arcades.



HONOR AWARDS FOR DESIGN EXCELLENCE

AWARD

Hassayampa Academic Village, Phase 1 Arizona State University Tempe, Arizona

Client: Arizona State University

Architect:

Machado and Silvetti Associates + Gould Evans Boston (MSA) and Phoenix (GE)

Contractor: Core Construction

Consultants:

Evans, Kuhn & Associates (civil); Cosentini Associates (mechanical/electrical/ plumbing/HVAC/fire protection); Paragon Structural Design (structural); Michael Boucher Landscape Architecture (landscape); Lam Partners (lighting)

Photographer:

Anton Grassl/Esto

Designer's statement:

Hassayampa Academic Village interlaces living space with classroom, computing, dining, and retail components. A series of four-story courtyard buildings sharing a public gallery space with a sevenstory tower, each building comprises 40-student communities that gain a shared identity through the color of their respective courtyards.





AWARD

Biomedical Sciences Tower III University of Pittsburgh School of Medicine Pittsburgh

Client:

University of Pittsburgh School of Medicine

Architect:

Payette Boston

Construction manager: Mascaro/Hunt (joint venture)

Consultants:

Bard, Rao + Athanas (mechanical/ electrical); Simpson Gumpertz & Heger (structural)

Photographer:

Warren Jagger

Designer's statement:

The new Biomedical Sciences Tower serves as a new front door to the research community. Connected to the university's existing bioscience building on the sixth floor via a bridge, the new building has two main lobbies and entrances, a two-story sky-lobby accessed by the bridge, and a prominent corner entry on Fifth Avenue.

AWARD Vicki Lee's Bakery

Belmont, Massachusetts

Client: Vicki Lee Boyajian

Architect: Elizabeth Whittaker/Architecture Boston www.elizabethwhittakerarch.com

Project team: Elizabeth Whittaker, Assoc. AIA (principal); Paul Voulgaris; Silvia Illia; Andrew Richardson

Contractor: The Testa Company

Consultant:

Hankin Construction (structural)

Photographer:

Chuck Choi

Designer's statement:

The program consists of a bakery with a retail shop incorporated into the space. Product display was a critical component of the design. The product display operates as a zoning mechanism for the space. The product shelf/boxes disengage from the side wall and become a boundary screen/wall to provide borrowed light and a division between café and bakery.







CITATION John Adams Courthouse Boston

Client:

Division of Capital Asset Management Commonwealth of Massachusetts



Architect: CBT/Childs Bertman Tseckares Boston www.cbtarchitects.com

Contractors: NER Construction Management Suffolk Construction

Consultants:

Weidlinger Associates (structural); SAR Engineering (mechanical/electrical/ plumbing); Bryant Associates (civil); Gillham, Gander & Chin Associates (architect consultants); Preservation Technology Associates (preservation); Ducibella Venter & Santore (security); Cavanaugh Tocci Associates (acoustical); Schweppe Lighting Design (lighting); Berg Howland Associates (lighting); Lerch Bates & Associates (vertical transportation); John Fogg Associates (specifications); Rolf Jensen & Associates (code); Jon Roll & Associates (graphic design)

Photographer: Jonathan Hillyer

Designer's statement:

This restoration adapts Boston's historic, neoclassical Supreme Judicial Courthouse to meet contemporary judicial needs. Elaborate 19th-century architectural features and spaces have been returned to their original grandeur; extensive renovations and the insertion of an additional 50,000 square feet have reintegrated the state's Appellate Courts and Social Law Library, both removed from the building in the 1930s.



CITATION Wilkes Passage Lofts Boston

Client: Wilkes Passage Associates

Designer:

Dolezal Architecture and Interior Design Boston

Architect of record: Whitney Atwood Norcross Associates Boston

Contractor: Suffolk Construction Company

Consultants:

McNamara/Salvia (structural); VAV International (mechanical); Verne G. Norman Associates (electrical)

Photographer: Paul Warchol

Designer's statement:

Wilkes Passage contains 155 condominium units, retail space, and underground parking for 400 cars. Urbanistically, the project transforms scale to mediate between the various edge conditions of the historic South End neighborhood. Architecturally, the building manipulates contemporary construction techniques to create rhetorical value and meaning. Interior spaces are open and flexible.

CITATION Low Rez/Hi Fi Washington, DC

Client: The Stillman Group

Architect: Höweler + Yoon Architecture Boston www.hyarchitecture.com

Project team: J. Meejin Yoon; Eric Höweler AIA; Carl Solander; Lisa Smith Architect of record: Studios Architecture Washington, DC

Consultants: Parallel Development (electrical and fabrication); Erik Carlson (sound composer)

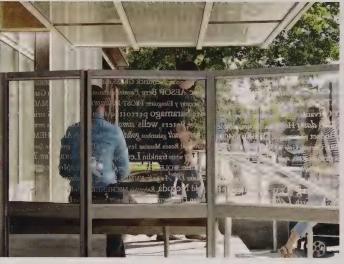
Photographer: Alan Karchmer

Designer's statement:

Low Rez/Hi Fi is an interactive public space project that activates the sidewalk by transforming light and sound into an interactive medium. The project consists of a series of full-scale custom LED nets in glass vitrines and a grid of touchsensitive sound poles. Low Rez/Hi Fi invites the public to engage a new kind of public space — one that is dense with information and real-time interaction.







CITATION Coolidge Corner Library Brookline, Massachusetts

Client: The Public Library of Brookline

Architect: Jonathan Levi Architects Boston www.leviarc.com

Contractor: GVW Inc.

Consultants:

A & A Windows (window contractor); Michael E. Waterman PE (structural); Smith & Wessel Associates (environmental)

Photographer:

Jonathan Levi Architects

Designer's statement:

The busiest library in the state by squarefoot area, Coolidge Corner Library required a new façade to reflect its community importance. A combination of a children's library window bay, canopy glass, and colonnade signage increases the building's visibility. Sandblasted glass text records a sampling of the book titles and authors awaiting library patrons.

CITATION

Broadway Research Building Johns Hopkins University School of Medicine Baltimore, Maryland

Client: Johns Hopkins University School of Medicine

Architect:

Payette Boston

Construction manager: Turner Construction Company

Consultants:

Bard, Rao + Athanas (mechanical/ electrical); Delon Hampton & Associates (structural); Keith Wagner Landscape Architects (landscape)

Photographers:

Peter Mauss/Esto (right); Warren Jagger

Designer's statement:

This building provides a new identity and major entrance to the top-ranked School of Medicine and houses biomedical research laboratories, administrative headquarters, continuing-education space, and a connecting pavilion where the entire school can gather. The site occupies the northwest corner of a city block within the School of Medicine's urban campus.



HONOR AWARDS FOR DESIGN EXCELLENCE

CITATION

Life Sciences Building West Virginia University Morgantown, West Virginia

Client: West Virginia University

Architect: Payette Boston

Construction manager: Dick Corporation

Consultants:

Bard, Rao + Athanas (mechanical/ electrical); Lim Consultants (structural); MSES Consultants (civil); CostPro (cost)

Photographer: Warren Jagger



Designer's statement:

The Life Sciences Building contains interdisciplinary science research and undergraduate classrooms for the sciences. The largest building on campus, it serves more than 4,000 people during peak hours. The exterior's brick, copper, and glass respect the traditions of the local academic architecture while projecting an image of state-of-the-art science.



CITATION

Façade Replacement University of Massachusetts Medical School Worcester, Massachusetts

Client:

University of Massachusetts Medical School

Architect:

Payette Boston



Construction manager: Bovis Lend Lease

Consultants:

Engineered Solutions (mechanical); R.W. Sullivan Engineering (electrical/plumbing); Simpson Gumpertz & Heger (structural)

Photographer:

Warren Jagger

Designer's statement:

The façade replacement enhanced the campus and the image of both the Medical School and Memorial Hospital with a high-quality, energy-efficient, aesthetically pleasing façade that represents the highest level of hospital care and research. The architect developed a window cladding strategy that incorporated a unitized curtainwall system, eliminating the need to relocate building occupants.

CITATION

Sophia Gordon Hall Tufts University Somerville and Medford, Massachusetts

Client:

Tufts University

Architect:

William Rawn Associates Boston www.rawnarch.com

Project team:

William L. Rawn FAIA, Douglas C. Johnston AIA (principals for design); Randy Wilmot AIA (project manager); Mark Oldham LEED AP; Euiseok Jeong AIA; Elijah Porter; Dan Chen; Paul Governor; Julie Kaufman; Bruce Danzer AIA

Construction manager: Linbeck

Consultants:

Michael Van Valkenburgh Associates (landscape); LeMessurier Consultants (structural); Cosentini Associates (mechanical/electrical/plumbing/fire protection); Tufts Climate Initiative (graphics and website); Atelier 10 (formerly The Retec Group) (sustainability and LEED application); BSC Group (civil); McPhail Associates (geotechnical); Solar Design Associates (solar); Cyr Sign & Banner (signage); Applied Energy Engineering & Commissioning (energy modeling); Collaborative Lighting (lighting)

Photographer:

Robert Benson

Designer's statement:

Tufts University's first "green" residence hall is the first new building realized in coordination with the campus master plan. Located on a major new path connecting the upper and lower campuses, the building houses 126 upper-class students in single bedrooms within four- and sixperson apartments.

CITATION

Charles Chu Asian Art Reading Room and Gallery at the Shain Library Connecticut College New London, Connecticut Client: Connecticut College







(See also pages 57 and 79.)

Architect:

Schwartz/Silver Architects Boston

Contractor: Carlin Construction Company

Consultants:

TMP Consulting Engineers (mechanical/ electrical/plumbing); Berg-Howland Associates (lighting); Connecticut Metalworks (cabinet fabricator)

Photographer:

Peter Vanderwarker

Designer's statement:

The Charles Chu Asian Art Reading Room at Connecticut College's Shain Library creates a distinctive place for study among the college's extensive Chinese scroll collection. Bronze scroll cabinets are arranged to create intimate seating areas that complement the 1973 library's openplan style, framing luminous views of the campus grounds beyond.

HONOR AWARDS FOR DESIGN EXCELLENCE

CITATION

Guangzhou Children's Activity Center Guangzhou, China

Client: City of Guangzhou

Architect: **Steffian Bradley Architects** Boston www.steffian.com

Project team:

Don Deng AIA (principal-in-charge, architecture); Linda Haggerty AAHID (principal-in-charge, interior design); Joseph Sirkovich AIA, Zheng Wang AIA (project architects); Enrique Rojas IALD, IES (lighting); Feng Xu AIA; Larry Lin AIA; Jie Wang

Local architect: **Guangzhou Design Institute of Light-Textile Industry and Architecture** Guangzhou, China

Contractor:

Guangzhou No. 3 Architectural and Construction Firm

Photographers:

Marc Gerritsen Photography (below right); Chen Si (below left)



Designer's statement:

From public courtvards to state-of-the-art theaters and classrooms, the Guangzhou Children's Activity Center is a hub of education and entertainment. This 460.000-square-foot facility supports extracurricular arts courses for primaryand secondary-school students. Its tripartite design symbolizes the integration of art, learning, and technology.



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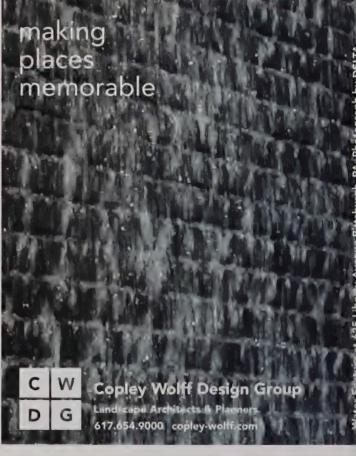


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HIGHER EDUCATION DESIGN AWARDS

JURY:

Margaret Carney AIA Case Western Reserve University Cleveland, Ohio

> George Green AIA JMZ Architects and Planners Glens Falls, New York

Celia Kent

Harvard University Faculty of Arts and Sciences Physical Resources Cambridge, Massachusetts

Deborah Poodry, Assoc. AIA Poodry Consulting Group Beverly Farms, Massachusetts

Kenneth Schwartz FAIA University of Virginia School of Architecture Schwartz-Kinnard Architects Charlottesville, Virginia

Editor's note: The full text of jury comments, including responses to individual projects and advice on preparing submissions, may be found at www.architects.org/awards.

JURY COMMENTS:

In general, the work we examined represented a high level of design. We were pleased to discover a pervasive new strength among the projects, with very clear attention given in most instances to articulating the basics of sustainable design, though we saw few projects that pushed beyond LEED standards. We drew a comparison between this trend toward adoption and the building industry's recent response to demand for basic ADA compliance, and we lauded the profession for making socially responsive design strategies *de rigueur*.

We discovered a high level of concern for context in the work that we examined and in general, the projects appeared to reflect design in which both the architect and the client cared about how buildings integrated into existing conditions. Most of the projects were infill. Especially in large projects with complex programs, architects showed rigorous competence in delivering their work, taking care to render details that illuminated contextual constraints imposed by site, schedule, and budget.

We encountered more than a few buildings that called to us with beautiful façades but disappointed our expectations when the initial eloquence withered throughout the rest of the plan. We suspected that the prevalence of this mis-step may be partly due to the quest for effortless site integration but wished, nevertheless, for better-loved interiors and landscapes.

There was tremendous unevenness in the presentations themselves and, in some instances, the photography did little to explain or complete the text; we were surprised to discover the number of presentations that failed to present adequate site plans.

HONOR AWARDS

- 53 ARC/Architectural Resources Cambridge New Research Building Harvard Medical School Boston
- 54 Ellenzweig New Research Buildings Woods Hole Oceanographic Institution Woods Hole, Massachusetts
- 55 KieranTimberlake Associates Pierson and Davenport Colleges Yale University New Haven, Connecticut
- 56 William Rawn Associates Alice Paul Residence Hall Swarthmore College Swarthmore, Pennsylvania
- 57 William Rawn Associates Sophia Gordon Hall Tufts University Somerville and Medford, Massachusetts
- 58 William Rawn Associates Studzinski Recital Hall Bowdoin College Brunswick, Maine

AWARDS

- 59 Einhorn Yaffee Prescott Unified Science Center Hamilton College Clinton, New York
- 59 Charles Rose Architects Carl and Ruth Shapiro Campus Center Brandeis University Waltham, Massachusetts

CITATIONS

- 60 DiMella Shaffer Student Residence Hall Westfield State College Westfield, Massachusetts
- 60 Perry Dean Rogers I Partners Barone Campus Center Fairfield University Fairfield, Connecticut
- 61 Sasaki Associates Koeppel Community Sports Center Trinity College Hartford, Connecticut



HONOR AWARD

New Research Building Harvard Medical School Boston

Client: Harvard Medical School

Architect: ARC/Architectural Resources Cambridge Cambridge, Massachusetts

www.arcusa.com

Project team:

Arthur Cohen AIA (principal-in-charge); Robert H. Quigley AIA (project manager); Been Zen Wang AIA (design principal); Jeffreys M. Johnson AIA, LEED AP (project architect)

Contractor: William A. Berry & Son

Consultants:

LeMessurier Consultants (structural); Bard, Rao + Athanas (mechanical/ electrical/plumbing/fire protection); Acentech (acoustical); VHB/Vanasse Hangen Brustlin (civil); Pressley Associates (landscape); McPhail Associates (geotechnical)

Photographer: Jeff Goldberg/Esto



Designer's statement:

The largest expansion of the Harvard Medical School campus since its founding, the New Research Building features clustered flexible open labs, two-story "sky lobbies," and conference facilities that encourage interaction between basic scientific and clinical research teams, accelerating the flow of information from bench to bedside.

HIGHER EDUCATION DESIGN AWARDS





HONOR AWARD

New Research Buildings Woods Hole Oceanographic Institution Woods Hole, Massachusetts

Client: Woods Hole Oceanographic Institution

Architect/laboratory planner: Ellenzweig Cambridge, Massachusetts

Cambridge, Massachusetts www.ellenzweig.com **Contractor:** Bond Brothers

Consultants:

LeMessurier Consultants (structural); Bard, Rao + Athanas (mechanical/electrical/ plumbing); Stephen Stimson Associates (landscape); Holmes and McGrath (civil); McPhail Associates (geotechnical); Lam Partners (lighting); Mohar Design (interiors); Nelson Communications (communications); Acentech (acoustical); Rowan Williams Davies & Irwin (air quality)

Photographers:

Anton Grassl (this page); Alex S. MacLean, Landslides Aerial Photography; Tom Kleindinst and Brian Dowley, Woods Hole Oceanographic Institution

Designer's statement:

The project consisted of the simultaneous design of three distinct components the Watson Biogeochemistry Research Building, the Marine Research Building, and an expansion of the central energy plant on the institution's Quissett Campus.

HONOR AWARD

Pierson and Davenport Colleges Yale University New Haven, Connecticut

Client: Yale University

Architect: KieranTimberlake Associates Philadelphia www.kierantimberlake.com

Contractor: Pierson College Linbeck Kennedy & Rossi

Davenport College Daniel O'Connell's Sons

Consultants:

CVM Engineers (structural); BVH Integrated Services (mechanical/electrical/ plumbing/fire protection); Towers/Golde (landscape); Ricca Newmark Design (food service); Tigue Lighting (lighting); International Consultants (cost); Marguerite Rodgers Ltd. (interiors)

Photographer: Barry Halkin



Designer's statement:

The central aesthetic and programmatic agenda for this project is the pairing of newly inserted contemporary spaces. including dining, cafés, common areas, a library, and black-box theater, with fully restored historic spaces, all juxtaposed in a lively conversation between a revered and restored past and an equally compelling present.



HIGHER EDUCATION DESIGN AWARDS

HONOR AWARD

Alice Paul Residence Hall Swarthmore College Swarthmore, Pennsylvania

Client: Swarthmore College

Architect:

William Rawn Associates Boston www.rawnarch.com

Project team:

William L. Rawn FAIA (principal for design); Clifford V. Gayley AIA (associate principal for design); Kevin Bergeron AIA (project manager/project architect); Peter Reiss; Rob Wear RA

Construction manager: W.S. Cumby & Son

Consultants:

LeMessurier Engineers (structural); Cosentini Associates (mechanical/ electrical/plumbing); Gilmore & Associates (civil); Ripman Lighting (lighting); Olin Partnership (landscape)

Photographer:

Robert Benson

Designer's statement:

Anchoring the southern end of Parrish Lawn, Swarthmore College's most iconic open space, this 75-bed residence hall complex defines a new three-sided space and marks the point where the campus fronts onto the center of town.







HONOR AWARD

Sophia Gordon Hall Tufts University Somerville and Medford, Massachusetts

Client: Tufts University

Architect:

William Rawn Associates Boston www.rawnarch.com

Project team:

William L. Rawn FAIA (principal for design); Douglas C. Johnston AIA (principal for design); Randy Wilmot AIA (project manager); Bruce Danzer AIA (interiors); Mark Oldham LEED AP; Euiseok Jeong AIA; Elijah Porter; Dan Chen; Paul Governor; Julie Kaufman



Construction manager: Linbeck

Consultants:

Michael Van Valkenburgh Associates (landscape); LeMessurier Consultants (structural); Cosentini Associates (mechanical/electrical/plumbing/fire protection); Tufts Climate Initiative (graphics and website); Atelier 10 (formerly The Retec Group) (sustainability and LEED); BSC Group (civil); McPhail Associates (geotechnical); Solar Design Associates (solar design); Cyr Sign & Banner (signage); Applied Energy Engineering & Commissioning (energy modeling); Collaborative Lighting (lighting)

Photographer: Robert Benson

Designer's statement:

Sophia Gordon Hall, Tufts University's first "green" residence hall, is the first new building realized in coordination with the campus master plan. The building is located on an important campus path connecting the upper and lower campus, between historic faculty housing and a major campus thoroughfare, and houses 126 upper-class students in single bedrooms within four- and six-person apartments.

(See also pages 49 and 79.)



HONOR AWARD Studzinski Recital Hall Bowdoin College Brunswick, Maine

Client: Bowdoin College

Architect: William Rawn Associates Boston www.rawnarch.com

Project team:

William L. Rawn FAIA (principal for design); Clifford V. Gayley AIA (project executive); Kevin Bergeron AIA (project manager/ project architect 2005–2007); Rupinder Singh AIA (project architect 2005–2006); Matthew Stymiest (project architect 2005); Bruce Danzer AIA (interiors); Victor Liu; Rob Wear RA; Paul Governor; Rachel Gealy **Contractor:** H.P. Cummings Construction

Consultants:

LeMessurier Consultants (structural); TMP Consulting Engineers (mechanical/ electrical/plumbing); Carol R. Johnson Associates (landscape); Harriman Associates (civil); Horton Lees Brogden (lighting); Kirkegaard Associates (acoustical); Theatre Projects Consultants (theater)

Photographer:

Robert Benson

Designer's statement:

Transforming a historic McKim, Mead, and White swimming pool into a new 282seat recital hall, this project involved a radical renovation of the interior and a "light touch" restoration of the building's exterior. The hall is a warm, inviting space filled with natural light and birch woodwork.

AWARD

Unified Science Center Hamilton College Clinton, New York

Client: Hamilton College

Architect: Einhorn Yaffee Prescott Boston www.eypae.com

Project team:

Cahal Stephens AIA, FRIAI, LEED AP (peer review); Charles Kirby AIA, LEED AP (project executive); Paul King AIA (design principal); Lance Ferson AIA, LEED AP (senior designer); Leila Kamal AIA (project director); Tyson Curcio (job captain); Andy Hebert PE, LEED AP (mechanical engineer)

Construction manager: Barr & Barr



Consultants:

Buro Happold Engineers (sustainability); RJA Group (code); Selbert Perkins (environmental graphics); Arup (smoke exhaust); Acentech (acoustical/AV); J. Kenneth Fraser and Associates (civil); Halvorson Design Partnership (landscape); Horton Lees Brogden (lighting)

Photographers:

Michael Moran (above); Woodruff Brown Architectural Photography

Designer's statement:

Forming the head of a campus quadrangle, the 190,000-square-foot science center cradles a three-story glazed atrium between the wings of an existing 1923 building. Highly articulated massing reduces the scale of a T-shaped addition relative to the existing campus fabric. Uses include interdisciplinary laboratories, classrooms, and faculty offices.

AWARD

Carl and Ruth Shapiro Campus Center Brandeis University Waltham, Massachusetts

Client: Brandeis University

Architect:

Charles Rose Architects

Somerville, Massachusetts www.charlesrosearchitects.com

Construction manager: William A. Berry & Son

Consultants:

R.W. Sullivan Engineering (code); Stephen Stimson Associates (landscape); Nitsch Engineering (civil); Arup (structural/ mechanical/electrical/plumbing/fire protection); Alan P. Symonds (theater); Light This! (lighting); Acentech (acoustical/ AV); Lund Associates (specifications); Daedalus Projects (cost); Haynes-Roberts (interiors); Whitney Veigas (signage)

Client's consultants:

Digital Geographic Technologies (survey); GEI Consultants (geotechnical); CGL Securities (security); Custom Solutions (IT); Barnes and Noble College Bookstores; Mary Wilczynski (specifications)

Photographers:

Chuck Choi (below); John Linden

Designer's statement:

This 65,000-square-foot campus center defines a new expansive central green space for the campus. It includes a library, bookstore, café, auditoriums, a threestory atrium, and a variety of offices and function rooms. The building is clad in limestone and copper.



HIGHER EDUCATION DESIGN AWARDS

CITATION

Student Residence Hall Westfield State College Westfield, Massachusetts

Clients:

Massachusetts State College Building Authority Westfield State College

Architect:

DiMella Shaffer Boston www.dimellashaffer.com

Project team:

Edward Hodges AIA (principal-in-charge); Steve Keyser (project manager); Scott Plante AIA, LEED AP (project architect); Kathy LaDuca NCIDQ (interior designer); Quichao Guo; Sarah O'Keefe; Chris Vlachos; Chris Johns; Adriana Levitt; Christina O'Sullivan AIA; Melissa Martinho; David Taylor, Assoc. AIA; Steve Fournier

CITATION

Barone Campus Center Fairfield University Fairfield, Connecticut

Client: Fairfield University

Architect:

Perry Dean Rogers | Partners Boston www.perrydean.com

Project team:

Peter Ringenbach AIA (principal); Ned Collier AIA (project designer); Randy Pease (project manager)

General contractor: Gilbane General contractor: Suffolk Construction

Consultants:

Lim Consultants (structural); Richard D. Kimball Company (mechanical/ electrical/plumbing); McPhail Associates (geotechnical); Nitsch Engineering (civil); Wagner McCann Studio (landscape); Cavanaugh Tocci (acoustical); R.W. Sullivan (code); Berg Howland (lighting); Daedalus Projects (cost) Photographer: Tim Wilkes

Designer's statement:

The program featured a 410-bed apartmentstyle residence hall that would extend the campus to the east and bring Davis Hall, a late 1960s residence facility, into a better physical dialogue with the rest of the campus. To address this, the architect created an iconographic central building entrance, which features a sloped-roof and glass-walled main study lounge stack.

Consultants:

BVH Engineers (structural/civil/ mechanical/electrical/plumbing/fire protection); Acentech (acoustical); Kalin Associates (specifications); Rolf Jensen & Associates (code); Origin Lighting Design (lighting); Campbell-McCabe (architectural hardware); Birchfield Jacobs Foodsystems (food service)

Photographer: Richard Mandelkorn

Designer's statement:

Under its grass roof, the addition provides a central student meeting place, housing a multi-purpose space, student organization and student government offices, a commuter student lounge, meeting rooms, the campus radio station, student mailboxes, and the mail room. The existing building was renovated to house all university food services.







CITATION

Koeppel Community Sports Center Trinity College Hartford, Connecticut

Client: Trinity College

Architect: Sasaki Associates Watertown, Massachusetts www.sasaki.com

Project team:

David Dymecki AIA; Pablo Savid-Buteler; Nancy Freedman AIA; John Hollywood PE; Alistair McIntosh ASLA, RIBA; Magnus Nilsson; Ed Calamari; Cyril Chong; Jason Loiselle PE; Carol Moyles

General contractor: O & G Industries

Consultants:

PHB Catalyst Group (project manager); Foley Buhl Roberts & Associates (structural); Cosentini Associates (mechanical); MacLaughlin Management Group (ice consultant); Cavanaugh Tocci Associates (acoustical); Schweppe Lighting Design (lighting); Steve McHugh (specifications); Vermeulens (cost); Haley & Aldrich (geotechnical); URS Corporation (survey)

Photographer: Robert Benson

Designer's statement

The home of Trinity College's varsity ice-hockey program, the new Koeppel Community Sports Center is also an example of Trinity's support of the surrounding neighborhood. On winter weekends, community children gather at the Koeppel to play hockey and other sports. In its first season, the center hosted 1,000 children per week.



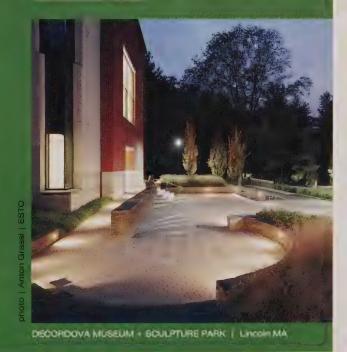
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K-12 EDUCATIONAL FACILITIES DESIGN



HONOR AWARDS

- 63 Rogers Marvel Architects Stephen Gaynor School and Ballet Hispanico New York City
- 64 Maryann Thompson Architects The Atrium School Watertown, Massachusetts

AWARDS

- 65 Flansburgh Architects Auburn High School Auburn, Massachusetts
- 65 Newport Collaborative Architects Center for Marine and Nautical Sciences Tabor Academy Marion, Massachusetts
- 66 Platt Byard Dovell White Architects The Reece School New York City

JURY

Umberto Dindo AIA Dindo Architect New York City

Stuart Lesser AIA Joslin, Lesser + Associates Cambridge, Massachusetts

Jennifer Marsh AIA Mowery Marsh Architects Hoboken, New Jersey

> Jennifer Pinck Pinck & Co. Boston

Editor's note: The full text of jury comments, including responses to individual projects and advice on preparing submissions, may be found at www.architects.org/awards.

JURY COMMENTS

The work we viewed this year included both public and private projects that were all competent examples of educational facility design. We found similarities in finish and materials that may indicate that architects and builders have reached an interpretive plateau in the quest to provide well-designed places for teachers and children. This plateau may reflect a relative stasis in current educational theory, where ideas about how to teach — alongside cost and the need for efficiencies expressed by hard, easy-to-clean surfaces requiring minimal maintenance drive design.

We were pleased to see universal design and sustainable systems and materials referenced throughout the body of work, though we found few post-occupancy mechanisms in place for measuring their effectiveness. We appreciated the provisions made for plentiful natural light and thoughtful site orientation, and were pleased to find that many buildings provided an atrium.

One juror noted the tremendous challenges involved in making huge, sometimes inelegant, spaces feel intimate enough to support programs for children. We were intrigued by the peculiar absence in the submitted portfolios of photographs featuring children or adults. There was a shortage of photographs depicting fun "child-spaces" too, and we wondered why the designers chose to illustrate the facilities with barren rooms that looked sterile.

Together with past juries, we wanted better narratives to help us understand the context for these schools, the problems that each design team was asked to solve, the constraints under which they worked and how they strove to enliven their communities. Also lacking in many cases were conceptual diagrams that could have been useful in quickly understanding underlying design influences, theories, and strategies. We agreed that every building tells a story that is as much a part of its identity as the structure itself and hope that future designers become as adept at telling those tales as they do at commissioning beautiful photographs and renderings.

CITATION FOR INTERIOR COURTYARD DESIGN

66 Davis Brody Bond Aedas John C. Daniels School New Haven, Connecticut

CITATION FOR URBAN DESIGN/ICONIC CONTRIBUTION TO STREETSCAPE

67 Gran Kriegel Architects + Planners Bronx Lighthouse Charter School Bronx, New York

CITATION FOR SITE INNOVATION

67 Imai Keller Moore Architects Robert Almy Jr. Academic Center Brimmer and May School Chestnut Hill, Massachusetts

CITATION FOR FURNISHINGS/ MILLWORK

68 Tsao & McKown Architects Public School 19 Library Queens, New York Public School 46 Library Bronx, New York

HONOR AWARD Stephen Gaynor School and Ballet Hispanico New York City

Clients: Stephen Gaynor School and Ballet Hispanico

Architect:

Rogers Marvel Architects New York City www.rogersmarvel.com

Project team:

Rob Rogers AIA (principal); Jonathan Marvel AIA (principal); Thaddeus Briner RA (project architect); Lissa So

General contractor: Turner Construction Company

Consultants:

Seamus Henchy & Associates (project manager); Severud Associates (structural); Flack and Kurtz (mechanical/electrical/ plumbing); Axis Group Limited (curtainwall); Van Deusen & Associates (elevator); Robert A. Hansen Associates (acoustical)

Photographer: David Sundberg/Esto



Designer's statement:

This 12-story tower is occupied by both the Stephen Gaynor School and Ballet Hispanico. The Gaynor School, for children with learning differences, occupies the first seven floors. The Ballet occupies three new dance studios on the top floors. These institutions have separate building entrances, allowing them to overlap schedules.





HONOR AWARD The Atrium School Watertown, Massachusetts

Client: The Atrium School

Architect: Maryann Thompson Architects Cambridge, Massachusetts www.maryannthompson.com

Project team: Maryann Thompson AIA (principal-incharge); Bill Pevear AIA (project architect)

Contractor: Bowdoin Construction Corporation

Consultants:

Landworks Studio (landscape); Richmond So Engineers (structural); Wozny/Barbar Associates (mechanical/ electrical/plumbing/fire protection); Gala Simon Associates (civil); The Green Engineer (green engineering); Schirmer Engineering (code)

Photographer: Anton GrassI/Esto



Designer's statement:

This project called for the adaptive reuse of a brick warehouse, on a limited site in a mixed industrial/residential neighborhood, into a functional schoolhouse for The Atrium School's expanding program. The transformation required rethinking the building's orientation relative to site and creating a playful interior sequence that breaks down the long and narrow building volume.

AWARD Auburn High School Auburn, Massachusetts

Client: Town of Auburn

Architect: Flansburgh Architects Boston www.faiarchitects.com

Project team: Duncan McClelland AIA (principal-incharge); Jorge Cruz AIA (project manager); Robert Peirce AIA (project architect)

Owner's project manager: URS Corporation

Contractor: Fontaine Brothers

Consultants:

Nitsch Engineering (civil); Boston Building Consultants (structural); Tavares Design Associates (food service/furniture and equipment); TMP Consulting Engineers (mechanical/electrical/plumbing/fire protection); Edvance (technology)

Photographer: Robert Benson

Designer's statement:

The new Auburn High School provides students with a bright, technologically rich learning environment. In addition to the client's academic requirements, the project had a strong community focus. The design of the new school reflects this by incorporating multiple spaces that can be accessed independently for public use.







AWARD

Center for Marine and Nautical Sciences Tabor Academy Marion, Massachusetts

Client: Tabor Academy

Architect: Newport Collaborative Architects Newport, Rhode Island www.ncarchitects.com



Project team:

Glenn R. Gardiner AIA (principal architect); Jason Grover (project manager)

Consultants:

J. Madison (mechanical/electrical/ plumbing); TEC Tibbetts Engineering (civil); Robert A. Cattley PE, RLS (structural)

Contractor: Suffolk Construction

Photographer: Aaron Usher III

Designer's statement:

The Center for Marine and Nautical Sciences at Tabor Academy features a "wetlab" where sea water is circulated into the laboratory for study, and back out to the surrounding wetlands. Above the lab are two levels where bright, spacious classrooms and teacher offices overlook scenic Sippican Harbor.

K-12 EDUCATIONAL FACILITIES DESIGN

AWARD

The Reece School New York City

Client: The Reece School

Architect:

Platt Byard Dovell White Architects New York City www.pbdw.com

Project team:

Ray H. Dovell AIA (administrative partner); Charles A. Platt FAIA (principal); Elissa C. Icso AIA (project manager); Matthew Mueller AIA; Steven Dodds

Owner's representative: Freeman/Frazier & Associates

Contractor: The Stegla Group

Consultants:

Anastos Engineering (structural); Simon Rodkin (mechanical/electrical/plumbing); Shen Milsom Wilke (acoustical); Cosentini Lighting Design (lighting); H Plus (graphic design); GTA Engineering Services (geotechnical)

Photographer: Jonathan Wallen

Designer's statement:

The glass façade of this school for children with special needs captures southern sun to bring patches of unexpected color into the classrooms. Fit onto the small site are classrooms, offices, a gym, and an outdoor recreational terrace. Adding clarity and color to the decoration of the adjoining tenements, the school has accelerated the revival of its urban neighborhood.







CITATION FOR INTERIOR COURTYARD DESIGN John C. Daniels School New Haven, Connecticut

Client: New Haven Public Schools

Architect: Davis Brody Bond Aedas New York City www.davisbrodyaedas.com

Project team:

Christopher K. Grabé AIA, LEED AP (partner-in-charge); J. Max Bond, Jr. FAIA (partner); Nnadozie Okeke LEED AP (project architect); Jennifer Marsh; John Prospero; Bennie Johnson; Donna Pinto; Bruce Dole; Steven Lee; Richard McKay; Abbie Lee Majors; Susana Acacio; Mark Collins; Ying Li

Construction manager: Giordano Construction **Consultants:**

URS Greiner Woodward Clyde (structural/ mechanical/plumbing/electrical); BL Companies (civil/landscape); O'Dea, Lynch, Abbattista (energy modeling); Steven Winter Associates (building systems/environmental); McFarland Kistler Associates (food service); Earth Design Associates (geotechnical); Thomas A. Torrenti PC (structural peer review); Izzo Consulting and Training (security); Mathieu Hopkins (interiors)

Photographer: Paul Warchol

Designer's statement:

This pre-K-8 school provides a secure yet child-friendly environment in the midst of an urban setting. The 650-student school comprises two main levels surrounding a courtyard featuring an amphitheater, reading areas, rubberized play spaces, and landscaped areas. Social connections between students are fostered by the courtyard's visual transparency.



CITATION FOR URBAN DESIGN/ICONIC CONTRIBUTION TO STREETSCAPE Bronx Lighthouse Charter School Bronx, New York

Client: Civic Builders Architect: Gran Kriegel Architects + Planners New York City www.grankriegel.com

Project team: Warren W. Gran FAIA (principal); Monica Lopez (project manager); Manit Panyavaracharti

Contractor: S. Digiacomo & Son

Consultants:

DVL Consulting Engineers (mechanical/ electrical/plumbing); Robert Silman Associates (structural); Michael Wein PE (civil); Harry Skolodz & Associates (food service)

Photographer: Roy Wright

Designer's statement:

This new K-12 school includes the gut renovation of an existing two-story garage and a new four-story addition. The irregular site is unified by the diagonal "Main Street" which ties together the existing and new buildings. The diagonal, an obvious presence in the shape of the site, also reflects the nearby "El," which cuts diagonally through the neighborhood.

CITATION FOR SITE INNOVATION Robert Almy Jr. Academic Center

Brimmer and May School Chestnut Hill, Massachusetts

Client: Brimmer and May School

Architect: Imai Keller Moore Architects Watertown, Massachusetts

Project team:

Gail P. Woodhouse (principal-in-charge); Karen Moore (consulting principal); Christine Dunn; Jean Wang

Construction manager: Richard White Sons

Owner's project manager: Skanska USA Building

Consultants:

LeMessurier Consultants (structural); Haley & Aldrich (geotechnical); Geller DeVellis (civil/sports/landscape); TMP Consulting Engineers (mechanical/ electrical/plumbing/fire protection)

Sculptor: Janice Corkin Rudolf

Photographers:

Edward Jacoby (right); Chris Johnson; Gail P. Woodhouse

Designer's statement:

With no open land available for expansion, this K-12 school needed a creative solution. The new middle- and upperschool library and classroom addition was placed entirely below grade, allowing the rebuilt grass athletic field to extend over the new academic center. An open-to-air courtyard brings daylight/views to each new space and provides a new campus gathering space.



K-12 EDUCATIONAL FACILITIES DESIGN

CITATION FOR FURNISHINGS/ MILLWORK Public School 19 Library Queens, New York

Public School 46 Library Bronx, New York

Client: The Robin Hood Foundation in collaboration with the New York City Department of Education

Architect: Tsao & McKown Architects New York City

Construction manager: F.J. Sciame Construction Co.

Contractor: Eastco Buildings Services

Consultants:

Lynn Pauley and Raghava Kalanaraman (artists); William Armstrong Lighting Design (lighting); International Woodwork (millwork); Pentagram (graphic design)

Photographers: Jeff Goldberg/Esto (top); Peter Mauss/Esto (bottom)

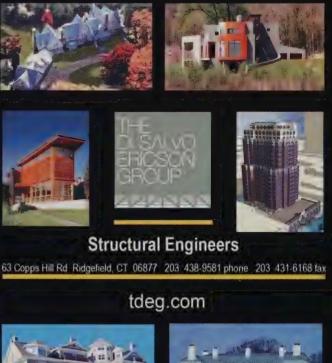
Designer's statement:

The design of these primary school libraries, developed as prototypes in partnership with the Robin Hood Foundation, uses durable and economical materials to create flexible, interactive spaces. By making construction methods explicit and through reconfigurable spaces and furniture, student education is extended to the rich use of their environment.











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URBAN DESIGN AWARDS





WILLO VON MOLTKE AWARD FOR URBAN DESIGN

71 Koetter Kim & Associates Chunchon Transformed: Chunchon G5, Culture and Tourism District Geunhwa-dong and Jungo-dong Areas of Chunchon, Gangwon Province, South Korea

AWARD FOR URBAN DESIGN

72 Antonio Di Mambro + Associates Strategic Plan for the Municipality of Cayey Cayey, Puerto Rico

CITATION FOR URBAN DESIGN

72 John Thompson Partners Arrowstreet Urridaholt Master Plan Gardabaer, Iceland

JURY:

Hubert Murray AIA, RIBA Hubert Murray Architect + Planner Cambridge, Massachusetts BSA President

Dennis Pieprz, Assoc. AIA Sasaki Associates Watertown, Massachusetts

> James S. Russell AIA Bloomberg New York City

> > Mark Strauss FAIA FxFowle Architects New York City

JURY COMMENTS:

This year's projects represented site plans around the globe and the overall quality was high. We agreed that one or two designers had been unable to resist the temptation to present beautiful buildings in the guise of urban design projects, but we appreciated the opportunity that this afforded us to come to consensus on what good urban design is. We did agree that buildings, no matter how gorgeous, only inhabit urban design, and that it is the relationship among the buildings, the empty space, the "public" space, that ultimately defines urban design.

We also agreed that submissions for urban design projects must rely heavily on contextual analysis and story-telling. We wanted to understand the problem that each plan meant to solve before considering whether it had contributed to change in a socially important and achievable way. We imagined that many designers did know their own starting points and kept records that analyzed existing conditions and land use and spelled out their design strategies. However, we suspected that many had worked too closely to their projects to realize that jurors are not privy to a project's undocumented past. We thought, too, that a test for successful urban design might be found in how well an executed plan embraces multiple architectural typologies.

Editor's note: The full text of jury comments, including responses to individual projects and advice on preparing submissions, may be found at www.architects.org/awards.



WILLO VON MOLTKE AWARD FOR URBAN DESIGN Chunchon Transformed: Chunchon G5,

Culture and Tourism District

Geunhwa-dong and Jungo-dong Areas of Chunchon, Gangwon Province, South Korea

Client:

Gangwondo Development Corporation

Architect:

Koetter Kim & Associates Boston www.koetterkim.com

Project team:

Fred Koetter FAIA (principal-in-charge); Susie Kim AIA (principal); Giles Moore RIBA (project manager); Joon Sang Park (designer); Nicholas Kotsatos (model maker)



Consultants:

John Reed Architecture (associated architect); Field Operations (landscape); Professor James Axely (ecology/sustainability); T. Kelly Wilson (architectural illustrator); Eric Schuldenfrei Animation: Art + Architecture (3D computer rendering) (top)

Designer's statement:

The 560-acre site includes the US Army Camp Page site and the adjacent waterfront and island. The project creates a mixed-use, environmentally appropriate expansion of the city that maximizes the potential of the lake and islands to create a cultural, ecological tourist/leisure complex.



AWARD FOR URBAN DESIGN

Strategic Plan for the Municipality of Cayey Cayey, Puerto Rico

Client:

Municipality of Cayey, Puerto Rico

Master planner/urban designer: Antonio Di Mambro + Associates Boston

Designer's statement:

The 40-year strategic plan repositions Cayey as a center of education, culture, and ecotourism in the Caribbean region. Key initiatives include 11 new housing zones (3,000+ units), new service and tourist clusters, a university center, consolidation of existing urban fabric, protection zones for natural assets, inner core redevelopment, and rural cluster stabilization.

CITATION FOR URBAN DESIGN

Urridaholt Master Plan Gardabaer, Iceland

Client: Thekkingarhusid, Iceland

Owner: Urridaholt, Iceland

Master planner — residential and mixed-use areas: John Thompson Partners London

Master planner — business street: Arrowstreet Somerville, Massachusetts

Consultants:

Alta ehf. (project management/site development/permitting/environmental/ context analysis); Landslag ehf. (landscape); Alan Baxter and Associates (traffic/movement); COWI AS (sustainable drainage systems); FutureCityArts (visioning and public art)

Architect/design phase one:

ARKÍS ehf. Reykjavik, Iceland

Architect/design phase one:

Tekton ehf. Reykjavik, Iceland

Planners/design phase one:

John Thompson Partners London

Consultants:

Fjölhönnun Consulting Engineers (roads/ traffic/infrastructure/noise assessment); Línuhönnun Consulting Engineers (geological); Icelandic Meteorological Office (climate)



Designer's statement:

The sustainable master plan for Urridaholt creates a mixed-use community of retail, office, and residential on a spectacular hilltop site outside of Reykjavik. The plan preserves the essential characteristics of the landscape, including a unique lake formed by a tongue of lava. A walkable community, with pedestrian-friendly streets and sustainable drainage systems, will protect the environmental quality of Lake Urridavatn's watershed.

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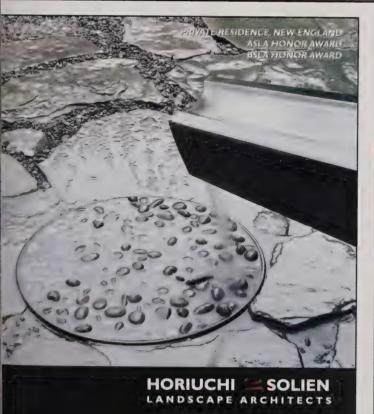
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SUSTAINABLE DESIGN AWARDS



JURY:

Dan Arons AIA, LEED Architerra Boston Co-Chair, BSA Committee on the Environment

Ken Fisher AIA Gensler Boston Co-Chair, BSA Committee on the Environment

Chris Garvin AIA, LEED Cook + Fox New York City

> Cynthia Greene US Environmental Protection Agency Boston

Rosemary Monahan PhD US Environmental Protection Agency Boston

Editor's note: The full text of jury comments, including responses to individual projects and advice on preparing submissions, may be found at www.architects.org/awards.

JURY COMMENTS:

In 2007, the number of submissions increased nearly twofold, and it is now clear from this year's entries that high design has broken into the sustainable marketplace. Beautiful, renewable materials are finally available and easily attainable.

Several projects among the submissions responded to the basics of integrated sustainable design so well that one essential missing element could loom large. Site choice itself at times provided obstacles too challenging for design teams to overcome. In one instance, a large suburban project that offered innovative blackwater treatment and energy-efficient systems was not cited because no apparent creativity had been applied to the management of transportation issues. One juror noted that even a small gesture, such as designated parking for carpools, had been omitted.

Our overall response to the submissions was favorable, though the narratives themselves often failed to explain why a good design didn't take moderately expressed sustainable measures further. We thought that a clearly articulated statement explaining the decision-making model for each project might prove illuminating. Given the nature of this awards program, better and more data were desired throughout, especially baseline information and proof of concept models. Graphics also were generally less compelling than those associated with other awards programs, and this seemed to undermine attempts to emphasize the aesthetic nature of sustainable design projects. We wondered how well any of these buildings would perform over the long haul, and wondered about the viability of creating maintenance manuals to accompany them. We hoped that future sustainable buildings might be designed with monitoring systems to measure operating performance so that design expectations can be confirmed.

We agree with previous juries in this program that we all need to keep striving toward the reality that beautiful work is sustainable work. We also agree that our profession needs to continue to move beyond LEED metrics, to shape the sustainability dialogue with clients and to continue to lobby our engineer colleagues about the urgency of transforming our built environment into a sustainable one.

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- 75 Bruner/Cott & Associates University Operations Services Blackstone Office Renovation Harvard University Cambridge, Massachusetts
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- 77 Machado and Silvetti Associates Provincetown Art Association and Museum Provincetown, Massachusetts
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- 78 Moore Ruble Yudell Santa Monica Public Library Santa Monica, California
- **79 William Rawn Associates** Sophia Gordon Hall Tufts University Somerville and Medford, Massachusetts



HONOR AWARD

University Operations Services Blackstone Office Renovation Harvard University Cambridge, Massachusetts

Client:

Harvard University (Harvard Real Estate Services; Harvard University Operations Services)

Architect:

Bruner/Cott & Associates Cambridge, Massachusetts www.brunercott.com

Design team:

Leland D. Cott FAIA, LEED AP (principalin-charge); Henry Moss AIA, LEED AP (consulting principal); Laurie Soave AIA (project manager); Erica Downs LEED AP (sustainability program manager/LEED administrator); Rob Peirce AIA, LEED AP; Greg Russell

Contractor:

Consigli Construction Co.

Consultants:

Landworks Studio (landscape); Souza, True + Partners (structural); Arup (mechanical/electrical/plumbing); Energysmiths (energy); Kalin Associates (specifications); Siemens Building Technologies (HVAC controls); Green International (civil); Haley & Aldrich (geotechnical); Thompson & Lichtner (building envelope); Walker Parking Consultants (traffic); Institutional Recycling Network (recycling)

Photographer:

Richard Mandelkorn

Designer's statement:

Originally built as part of a coal-fired electricity plant in the 1890s and converted m 2006 into the first consolidated headquarters for Harvard's University Operations Services, the Blackstone Office Renovation embraces the doctrines of green design by re-purposing three historic structures into a single state-of the-art, 42,000-square-foot LEED-certified Platinum facility.



SUSTAINABLE DESIGN AWARDS

HONOR AWARD

Middle School Addition and Renovation Sidwell Friends School Washington, DC

Client: Sidwell Friends School

Architect:

KieranTimberlake Associates Philadelphia www.kierantimberlake.com

Project team:

Stephen Kieran FAIA, James Timberlake FAIA (design partners); Amy Floresta AIA (associate-in-charge); Richard Hodge AIA (project architect)

Contractor: Hitt Contracting

Hitt Contracting

Consultants:

CVM Engineers (structural); Bruce Brooks & Associates (mechanical/electrical/ plumbing/fire protection); Andropogon Associates (landscape); VIKA (civil); Natural Systems International (wetland); GreenShape (sustainability); Integrative Design Collaborative (sustainability)

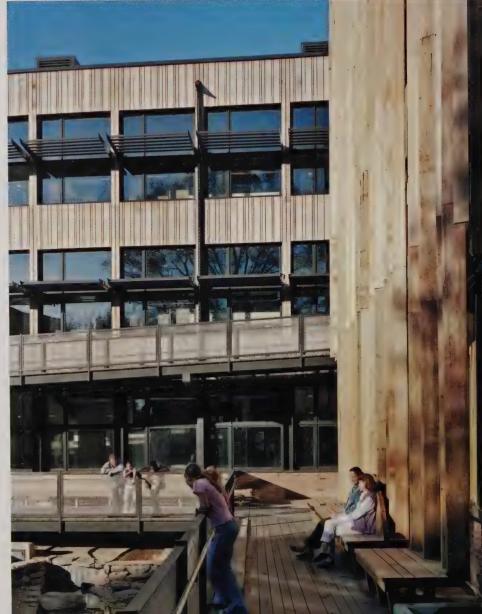
Photographers:

Peter Aaron/Esto (top); Barry Halkin (bottom)

Designer's statement:

This LEED-certified Platinum building incorporates a network of environmental initiatives including a constructed wetland to process graywater, planted roofs, solar chimneys, photovoltaic panels, and sunscreens fabricated from reclaimed wood. Driven by an environmental ethic, the project exemplifies a long-term vision that makes tangible the school's founding Quaker principles of sufficiency, stewardship, and simplicity.





AWARD

Provincetown Art Association and Museum Provincetown, Massachusetts

Client: Provincetown Art Association and Museum

Architect:

Machado and Silvetti Associates Boston

Project team:

Jorge Silvetti (principal-in-charge); Rodolfo Machado, Assoc. AIA (consulting principal); Andrew Cruse AIA, LEED AP, Michael LeBlanc AIA (associates-incharge); Kelly Smith; Derek Johnson; John Clegg; Chris Grimley

Contractor (renovation): Paul J. Rogan Co.

Contractor (new construction): Acella Construction

AWARD

South Lake Union Discovery Center Seattle, Washington

Client: Vulcan, Inc.

Architect:

The Miller I Hull Partnership Seattle, Washington www.millerhull.com

Consultants:

Richmond So Engineers (structural); The Collaborative Engineers (mechanical/ electrical/plumbing/fire protection); DMI (energy); Collective Wisdom (specifications); Bennett & O'Reilly (civil); Michael Boucher (landscape); Peter Coxe Associates (lighting); Solar Design Associates (PV consultant); Arrowstreet Graphic Design (signage); Daedalus Projects (client's project manager/ estimator)

Photographer: Anton Grassi

anton Grassi

Designer's statement:

The renovation and expansion of the Provincetown Art Association and Museum has dramatically improved the museum's ability to store and display art. It also creates a new architectural identity for the institution within Provincetown's unique urban context. The building received a Silver LEED rating and is the first art museum to do so.

Project team:

David Miller FAIA (design partner); Bill Franklin AIA (project manager/architect); Ruth Coates AIA; Doug Mikko, Assoc. AIA

Contractor: GLY Construction





Consultants:

Magnusson Klemencic Associates (structural/civil); University Mechanical (mechanical); Cochran Electric (electrical); MICE North America (exhibit); Brumbaugh & Associates (landscape)

Photographer: Lara Swimmer

Designer's statement:

This 11,100-square-foot "pavilion in the park" exhibits the urban design plans for future development of Seattle's South Lake Union neighborhood. To facilitate future transportation, reassembly, and reuse in a new location, the structure is designed to separate into sections. In keeping with the client's commitment to sustainable design practices, the project incorporates several environmental strategies.



SUSTAINABLE DESIGN AWARDS

CITATION

Atwater Commons Middlebury College Middlebury, Vermont

Client: Middlebury College

Architect: KieranTimberlake Associates Philadelphia www.kierantimberlake.com

Project team:

James Timberlake FAIA, Stephen Kieran FAIA (design partners); Richard Maimon AIA (associate-in-charge); Jason Smith AIA (project architect)

Contractor: Lee Kennedy Co.



Consultants:

CVM Engineers (structural); Lundquist Killeen Potvin and Bender (mechanical/ electrical/plumbing/fire protection); Andropogon Associates (landscape); Phelps Engineering (civil); Geodesign (geotechnical); Ricca Newmark Design (food service); Elevated Landscape Technologies (green roof horticulture); Tigue Lighting (lighting); Wilson Consulting (specifications); Becker & Frondorf (cost); Code Consultants (code)

Photographers:

Barry Halkin; Walter Striedieck (above)

Designer's statement:

The project reflects the college's strict environmental agenda with careful attention to site strategy, water runoff, and material selection. The residence halls are naturally ventilated, incorporating through-floor suite plans, transom windows, and ceiling fans in all rooms. The dining hall incorporates a planted roof, providing excellent insulation, protection of the roofing membrane, and reduction of impervious surfaces on campus.

CITATION

Santa Monica Public Library Santa Monica, California

Client:

The City of Santa Monica, California

Architect:

Moore Ruble Yudell Santa Monica, California www.moorerubleyudell.com

Project team: John Ruble FAIA (partner-in-charge); Buzz Yudell FAIA (collaborating partner); Krista Becker AIA, LEED AP (principal-incharge/project manager); Haekwan Park (assistant project manager); Tina Beebe, Kaoru Orime, Yana Khudyakova (colors and materials)

Contractor: Morley Construction Co.

Consultants:

Syska Hennessy Group (mechanical/ electrical/plumbing); Pamela Burton & Co. (landscape)

Photographer: John Edward Linden

Designer's statement:

The client requested a model **21st-century** library that would become a "living room" for the city and a neighborhood destination. The new Santa Monica Main Library offers two-story reading rooms, a 200-seat auditorium, multipurpose rooms, a museum, and a secure enclosed garden court containing a casual café with wireless connectivity.





CITATION Sophia Gordon Hall Tufts University Somerville and Medford, Massachusetts

Client: Tufts University

Architect:

William Rawn Associates Boston www.rawnarch.com

Project team:

William L. Rawn FAIA, Douglas C. Johnston AIA (principals for design); Randy Wilmot AIA (project manager); Bruce Danzer AIA (interiors); Mark Oldham LEED AP (designer); Euiseok Jeong AIA; Elijah Porter; Dan Chen; Paul Governor; Julie Kaufman

Construction Manager:

Consultants:

Michael Van Valkenburgh Associates (landscape); LeMessurier Consultants (structural); Cosentini Associates (mechanical/electrical/plumbing/fire protection); Tufts Climate Initiative (graphics and website); Atelier 10 (formerly The Retec Group) (sustainability and LEED application); BSC Group (civil); McPhail Associates (geotechnical); Solar Design Associates (solar design); Cyr Sign & Banner (signage); Applied Energy Engineering & Commissioning (energy modeling); Collaborative Lighting (lighting)

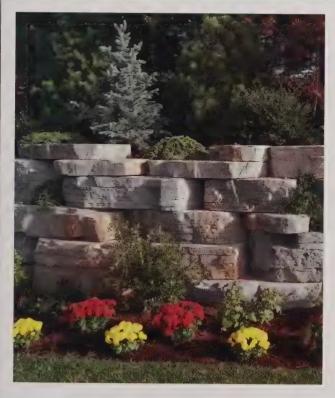
Photographer: Robert Benson

Designer's statement:

Designed to meet LEED Silver certification requirements, Tufts' first "green" residence hall houses 126 students in four- and six-person apartments and includes a 145-seat multi-purpose space. The hall integrates numerous sustainable technologies. including photovoltaic and solar thermal panels, real-time data display of energy savings, a green education program, and substantial recycled material content.

(See also pages 49 and 57.)

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BUILDING ENCLOSURE DESIGN AWARD

JURY:

Wagdy Anis FAIA, LEED AP Shepley Bulfinch Richardson and Abbott Boston

David Altenhofen AIA, CSI Hillier Philadelphia

Chris Benedict RA Chris Benedict Architect New York City

Mark Lawton PE Morrison Hershfield Group Vancouver, British Columbia

Daniel Lemieux AIA Wiss, Janney, Elstner Associates Fairfax, Virginia

Desmond McAuley AIA CBT/Childs Bertman Tseckares Boston

> Paul Stoller Atelier Ten New York City

Keith Yancey AIA, PE, IALD, LC Lam Partners Cambridge, Massachusetts

Editor's note: The full text of jury comments, including responses to individual projects and advice on preparing submissions, may be found at www.architects.org/awards.

JURY COMMENTS:

Judging award submissions is always difficult, but the first year of a new awards program, especially one that is the first of its kind, is even more so. The inaugural year of this award, sponsored by the BSA's Building Enclosure Council, presented an interesting tension among our expectations as jurors, the published award criteria, and the submitted projects. We struggled with appropriate ways of evaluating innovation and best practices in buildings designed some five years ago while ideas of high-performance buildings have changed considerably in that time.

For architects to recognize a building with an award, it must include the poetic, the spark of inspiration and art that separates mere construction from architecture. While understanding that this is not purely a design award, we agreed that we would look for the tectonics in the submissions. In the best case, we hoped the buildings submitted would demonstrate a thoughtful and intelligent integration balancing the control of heat, air, and moisture against controlled daylighting and energy efficiency with beauty and sensitivity.

In the end, one project was clearly recognized by the jury as responding to all criteria. The design was both beautiful and wonderfully suited to the control of light, heat, and water. In fact, the control of natural light was so successfully integrated into the building design that no part could be removed without dramatically affecting the remainder. Two other projects proved interesting but insufficient evidence was submitted to enable us to honor these projects, which we encourage their authors to submit to the program next year with more complete documentation.

Creating a building-enclosure design awards program is a major breakthrough within the architectural community. We believe the aesthetics of design are frequently considered much more closely than the science of architecture, sometimes to the exclusion of any realistic level of building performance. We hope that this program is the beginning of great architecture that comes not from formalistic gestures, but from the artistic expression of the qualities of materials, their joining, and their application to provide high-performance enclosures.



HONOR AWARD

60 Oxford Street Cambridge, Massachusetts

Client: The President and Fellows of Harvard University Harvard Planning and Real Estate Architect (core and shell): Perry Dean Rogers | Partners Boston www.perrydean.com

Project team:

Martha Pilgreen AIA, Ned Collier AIA (principals); Richard Jones AIA, LEED AP (project manager); Julie Hess; Hank Scollard; Eric Stark; Jeffrey Fishbein; Jessica Anderson

Architect (tenant fit-out): Einhorn Yaffee Prescott Boston www.eypaedesign.com

Pre-construction services/ construction management: Lee Kennedy Company

Consultants:

Arup California (façade); LeMessurier Consultants (structural); Michael Van Valkenburgh Associates (landscape); Bryant Associates (civil); Facility Dynamics (independent building commissioning); Gale Associates (waterproofing); Haley & Aldrich (geotechnical); Rolf Jensen & Associates (code); Kugler/Tillotson Design (lighting); Cavanaugh Tocci (acoustical/vibration control); Kalin Associates (specifications); Campbell-McCabe (architectural hardware); Communications Design Associates (AV); MacSystems (security)

Photographers:

Richard Mandelkorn; Michael Moran (this page); Richard Jones

Designer's statement:

Located on a dense urban site at the northern-most edge of Harvard's campus, this project addresses both the institutional-scale buildings of the university and the adjacent residential 19th-century Agassiz neighborhood. The building houses academic offices and lab spaces. Sustainable design is central to the project, notably solar control devices. a roof garden, and raised floor systems.

UNBUILT ARCHITECTURE AWARDS





JURY: Henry Moss AIA Bruner/Cott & Associates Cambridge, Massachusetts Chair

Hansy Better Barraza Studio Luz Boston

Theodore Galante AIA Galante Architecture Studio Cambridge, Massachusetts

Dorothée Imbert Harvard Graduate School of Design Cambridge, Massachusetts

Johannes Knoops, Assoc. AIA New York City

Leith Sharp Greening the Crimson Harvard University Cambridge, Massachusetts

Elizabeth Whittaker, Assoc. AIA Elizabeth Whittaker/Architecture Boston

> David Zenk AIA Gund Partnership Cambridge, Massachusetts

Editor's note: The full text of jury comments, including responses to individual projects and advice on preparing submissions, may be found at www.architects.org/awards.

JURY COMMENTS:

This year's visionaries brought new emphasis to infrastructure design, combined with indecisiveness about the architectural consequences. Many submissions lack the framework of a specific site with contextual constraints and a real program — streets sweep through living rooms, a theater teeters on the brow of a high dam, stormwater flows through "hydrological pixels and riparian bands," wind turbines stalk monorails down the median strips of highways.

Many designers shared a commitment to an increasingly sustainable design outcome, although the somewhat superficial environmental content of most schemes suggests that true innovation now resides in the nuanced design decisions of real specifications in built projects. Some of the project selections were not unanimous among the jurors. A submission may have been selected for its strength as an influential idea rather than as a well-conceived design solution.

Among this year's offerings, there were few single-family houses, few difficult urban sites, and few complicating historic structures. Often, aesthetic interests prevailed over ethical and social concerns, with numerous exercises in luxurious high-rise formalism.

The best designs exhibit a willingness to explore interactive exchanges among site, structure, and occupancy with a hint of unexpected architectural results. These projects offer glimpses of the expressive potential of infrastructure designs incorporating the variations of more natural systems, but we agreed that the profession is still taking baby steps.

MERIT AWARDS

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- 85 BCH Design Studio The Dam Theater
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- 86 Khoury Levit Fong Stratford Market Square
- 87 University of Arkansas Community Design Center Campus Hydroscapes



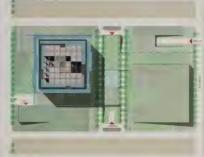
MERIT AWARD ARB Bank Headquarters Riyadh, Saudi Arabia

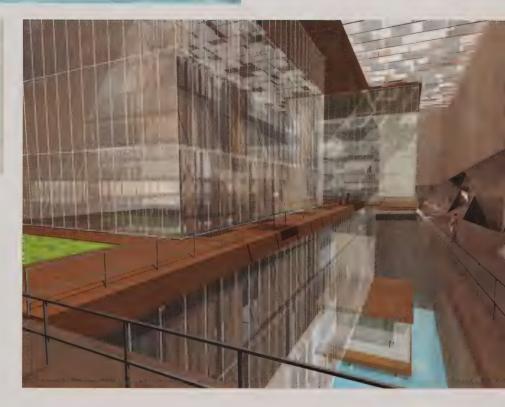
Designer:

Skidmore, Owings & Merrill New York City

Designer's statement:

ARB Bank Headquarters is conceived as a series of earth-forms within an active farmland that will change with the seasons. Cultivating the land amid the desert landscape creates a strong sense of place and identity for ARB Bank, which was established by farmers. The centerpiece of the project is a cistern, from which rises a 60-meter-tall rammed earth box in which office space, amenities, and parking are located.





MERIT AWARD

Gwangbok Street Renovation Busan City, South Korea

Designers:

Sung Goo Yang, Hyungdu Bae, and Sangwook Park Cambridge, Massachusetts

Designer's statement:

The objective of this project is to re-create the Gwangbok Street area of Busan City as an attractive urban core to catalyze the revitalization of the center of Jung-gu, where the population has been diminishing and the function as a city center has been weakened. The concept of "biurring the demarcation between street and architecture" transforms Gwangbok Street into a symbol of the city.







84 ab ArchitectureBoston



CITATION WindTrain (Massachusetts)

Designer:

Arrowstreet Cambridge, Massachusetts

Designer's statement:

The WindTrain concept was born from the imperative to reduce our regional impact on global warming. WindTrain offsets CO₂ production by power plants and vehicles by providing over 1,000 MW of power generation capacity through wind turbines located along Routes 128 and 93, and by connecting all the existing commuter rail links from Boston with a mass transit loop.



CITATION The Dam Theater

Designer: BCH Design Studio Fayetteville, Arkansas

Designer's statement:

The Dam Theater balances on an existing dam at the edge of a lake with views to the landscape. A recreational landscape floats on the water and serves as a park for boaters. The park acts as a biological water treatment system, for potable water production and wastewater treatment. The lobby and theater extend over a river valley and frame a scenic view for the audience.



UNBUILT ARCHITECTURE AWARDS

CITATION

Chi-Chi Earthquake Memorial Taiwan

Designer: Martina Decker New York City

Designer's statement:

This memorial features fragmented images of a city, strewn across several panes of glass. As one advances toward the center of the monument, one witnesses the progressive alignment of the displaced image fragments. Upon reaching the epicenter, an intact urban panorama emerges as a portrait of a reconstructed, cohesive city.









CITATION Stratford Market Square

Designer: Khoury Levit Fong Toronto

Designer's statement:

Market Square is reclaimed for pedestrian/public occupation with a variety of infrastructural amenities including water features, fiber-optic lighting, embedded transducers, and a bus stop with a protective canopy. The canopy, a prominent architectural element, is integral to a tensegrity structure that is deployed above the square to form a virtual roof.





Designer's statement:

Campus Hydroscapes is a recombinant model for integrating riparian systems with urban systems. It is a watershedbased land-use proposal that incorporates ecological services into urban environment related to transit, recreation, housing, and campus aesthetics. These watermanagement solutions offer self-correcting ecological services as a low-maintenance alternative to expensive, monolithic command-and-control engineering solutions. They reinvigorate the potential of the campus as an integrated environment serving as a model for the city.



CITATION

Campus Hydroscapes: Watershed as a Planning Platform for Improvements in the University of Arkansas Athletic Valley

Designer:

University of Arkansas Community Design Center Fayetteville, Arkansas



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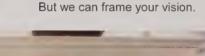
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Thomas Jefferson Award for **Public Architecture** David Dixon FAIA

Institute Honor Awards for Regional and Urban Design

Boston's Newest Smart Growth Corridor, A Collaborative Vision for the Fairmount/Indigo Line Goody Clancy Boston

The Carneros Inn William Rawn Associates Boston

Institute Honors for Collaborative Achievement Harvard Design Magazine

Each year, the BSA also identifies architects, colleagues, and institutions deserving special recognition for their contribution to the architectural community and to the enrichment of the built and natural environments. In 2007, the BSA conferred these honors: **BSA Award of Honor Hugh Shepley FAIA** (see page 20)

Commonwealth Award Norman Leventhal, Hon. BSA

Honorary BSA Jill Medvedow, Hon. BSA

AIA/ALA Library Building Awards

David Bishop Skillman Library Lafavette College Ann Beha Architects Boston

Fleet Library Rhode Island School of Design Office dA **Boston**

AIA Housing Committee Awards/ Special Housing Patrolia Loft **Ruhl Walker Architects**

Council of Architectural Component Executives: Executive of the Year Nancy Jenner

Elevated to AIA College of Fellows Wagdy Anis FAIA, LEED AP Lawrence A. Chan FAIA Randy Jones FAIA, AICP

Women in Design Award of Excellence lill Medvedow, Hon, BSA Elise Woodward AIA, LEED AP

BSA Fellows Award for Excellence in Teaching Leslie Brown AIA



Left to right: Hugh Shepley FAIA; Norman Leventhal, Hon. BSA; Jill Medvedow, Hon. BSA; **Elise Woodward AIA. LEED AP: Leslie Brown AIA.**





Left to right: David Dixon FAIA: Nancy Jenner; Wagdy Anis FAIA, LEED AP; Lawrence A. Chan FAIA; Randy Jones FAIA, AICP.







Clockwise from top left: Patrolia Loft; photo by Greg Premru. The Fairmount/Indigo Line. The Carneros Inn; photo by Mark Hundley. David Bishop Skillman Library; photo by Steven Wolfe. Fleet Library; photo by John Horner.





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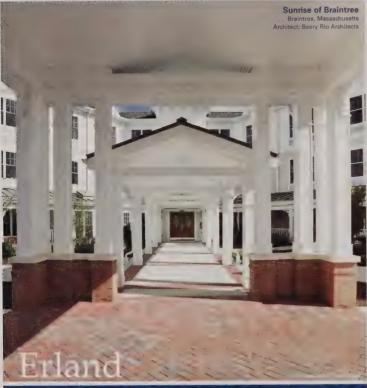
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25 YEARS AGO... THE 1982 HARLESTON PARKER MEDAL

The Academy of Arts and Sciences

Kallmann McKinnell & Wood



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1982 HARLESTON PARKER JURY:

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The winner of the 2007 Harleston Parker Medal is the Institute of Contemporary Art, by Diller Scofidio + Renfro, with Perry Dean Rogers | Partners. See page 24. he Harleston Parker Medal, Boston's most prestigious architecture award, was established in 1921 to recognize "the most beautiful piece of architecture, building, monument, or structure within the limits of the City of Boston or of the Metropolitan Parks District."

Twenty-five years ago, the Parker Medal jury chose to honor the Academy of Arts and Sciences in Cambridge, Massachusetts, commenting:

[The Academy's] building, in the words of Dr. Edwin Land, past president of the Academy, should provide "a place where creative and talented minds will share ideas." On entering the building and experiencing the interior spaces, one is constantly reminded of one of the Vitruvian axioms of architecture—delight..... The Academy of Arts and Sciences is one of those rare buildings in which the architects, engineers, consultants, and contractors have not only responded to their client's need for space but have collaborated to affect the spirit of the user as well. It is a building of intense delight.

The jury's comments also describe the building as "sumptuous and gracious" and note that it creates "an ambiance of elegance and taste." Its bucolic setting and domesticity are a marked and, as *Boston Globe* architecture critic Robert Campbell FAIA has reported, deliberate contrast to the architects' previous commission, Boston City Hall. "The first thing the Academy's leaders did," Campbell wrote in 1992, "was take the architects out to dinner, at which they propounded a single rule: no exposed concrete, inside or out." City Hall brought Kallmann McKinnell & Wood international recognition, but the American Academy ensured the firm's enduring growth and influence.



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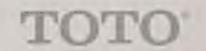
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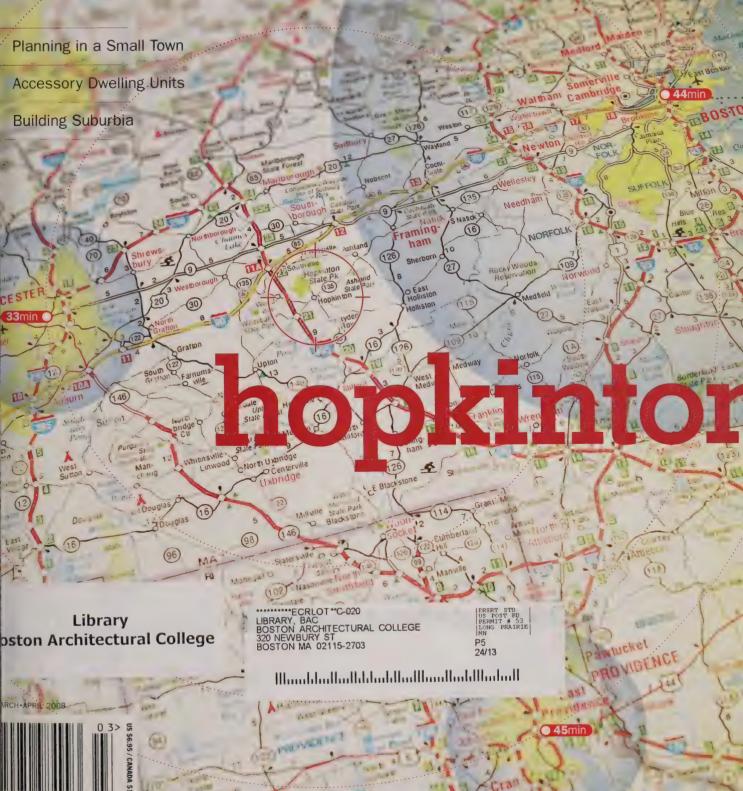


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Cover image adapted from map, © AAA, used with permission. Dashed red circles indicate drive times from Hopkinton; blue spheres indicate relative city populations.

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BY ELIZABETH S. PADIEN FAIA From the Editor

Why Hopkinton?

small town in the middle of nowhere. The kind of place where the local paper fills its pages with the police log, which includes items such as vandalized mailboxes, unleashed dogs running in traffic, violations of the winter parking ban, a report of "four males in their twenties [who] neglected to clean up after a large picnic at the barbeque area by the upper left parking lot of the State Park." The kind of place where vigilant citizens call the police with sightings of a fox and wild turkeys. The kind of place where suspicious red-colored snow turns out to be from a deer struck by a car, where the sound of multiple gunshots turns out to be from the Sportsman Club's skeet shooting. The kind of place where, one January day in 2006, Neil Entwistle allegedly shot his young wife and baby daughter.

In short, a small town like so many in America. Why on earth would ArchitectureBoston devote a whole issue to it?

The answer lies in its history. Throughout much of its municipal life, Hopkinton has been exemplary in its ordinariness. Its rural character was never shaped by gentlemen farmers; its downtown remained resolutely a downtown and not a twee village of shoppes. Even the international celebrity of the Boston Marathon, which has had its starting line in Hopkinton since 1924, has had little effect on the fortunes of the town. All of that was destined to change the day a transportation planner pointed a finger at a map and traced the route of the Massachusetts Turnpike through the town as part of the postwar Interstate Highway System. That change became inevitable in 1968, when Exit 11A opened, linking the Pike and Route 495, the Boston circumferential connecting New Hampshire to Cape Cod.

With that, Hopkinton became a watchtower along the asphalt moat protecting Boston and its suburbs from the western frontier. As John Mullin, director of the Center for Economic Development at the University of Massachusetts at Amherst, told The Boston Globe in 1998, "I think a Bostonian would rather go north or south than east to west. There is a sense that anything west of Route 495 needs a passport and currency control."

The last decade has proved that more Bostonians have developed a greater sense of adventure, necessitated largely by the high cost of housing in the city and inner suburbs, as well as jobs that are frequently found in office parks along Routes 128 and 495, or in the increasingly vigorous cities of Providence and Worcester, Two-career households, in which jobs are rarely found in the same community, have also required geographic creativity. In short, more people pick a hometown on the basis of a driving radius: a town within 45 minutes of their jobs.

This has meant some stunning changes for the little town of Hopkinton, which has seen its population double (to almost 15,000) since 1980; a 2002 study showed that more than half the population had arrived in the previous five years. Many of the newcomers are wealthier than previous residents, bringing upscale tastes and a corresponding demand for services and conveniences. A town that was accustomed to small-scale, single-family house construction is now in the sights of developers who toss around numbers like 900 and even 1,500 housing units — in a town with approximately 4,500 housing units currently.

Hopkinton is exemplary in its ordinariness: the changes and stresses it faces are familiar to thousands of small communities across the country.

Once again, though for different reasons, Hopkinton is exemplary in its ordinariness: the changes and stresses it faces are familiar to thousands of small communities across the country. As Dolores Hayden notes (see page 42), more Americans live in suburbs than in inner cities and rural areas combined. And yet our schools of architecture rarely pay much attention to suburbia — even though their faculties and students are frequently themselves children of the 'burbs. Despite a popular culture that celebrates the city - admittedly a good thing the fact remains that we are a country of suburbs.

And that is why ArchitectureBoston has devoted an issue to this one small town. In many ways, it is Everytown.

Elizabeth S. Padjen FAIA Editor

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Letters Letters Letters

James Hadley nailed it precisely in his essay "Selling the Vision" (November/ December 2007) when he compared the excesses of the aggressive styling frenzy currently loose in our profession with those of the auto industry's tail-fin era. As a longtime "pre-visualizer," I have no problem with the vision part, but rather with the substance — the product being sold.

One of the pleasures of living and practicing in New England is that it is often slightly behind the bleeding edge of styledu-jour gimmickry, avoiding the eventual embarrassment of folly occasionally endured by, say, the other coast. The cultural pendulum is always in motion whether in skirt lengths, necktie widths, or politics — and by the time it begins to swing back from inevitable excess, those who have shown some restraint and patience may seem a bit wiser.

Hadley mentions Philip Johnson ("posing as...a visionary") and Lord Norman Foster's work where "the building form is an integral part of achieving the goal...of the enhancement of the dayto-day lives of the building occupants." Johnson and Foster were my critic and classmate, respectively, at Yale in the '60s and their widely differing attitudes were fully apparent even then.

I believe, optimistically, that the architectural pendulum is nearing its apogee of stylistic excess and we will soon begin to see thoughtful, responsible, sustainable work from offices like Foster's become the "hottest new design."

Paul Stevenson Oles FAIA Santa Fe, New Mexico

Last time I went to City Hall, I brought my eight-year-old daughter with me. As we approached the building, she said, "Do we have to go in there, Mommy? It looks like a jail." I could have given her a litany of reasons why the building is significant; instead, I replied, "You're right." When I remove my architect's glasses, I see these less-than-admirable qualities: the solid three-story brick wall along Congress

Street kills one side of a great public plaza at the Holocaust Memorial; the garbage bins and loading dock are directly across from Faneuil Hall: all those exterior stairs make the upper plaza difficult to access; the gray concrete exterior cantilevers over everything like a WWII military bunker (I've always expected to see the noses of cannons sticking out the top floor); the entrance is... where? And the plaza is so blank and oversized it makes even 10.000person protests seem insignificant. These are expensive design flaws to fix, if the building is to remain at all. We need to get beyond venerating (or vilifying) the architecture, admit its deficiencies, and think creatively about finding some cash.

One idea I've floated is to propose a new mixed-use project between City Hall and Cambridge Street, on the site of the current plaza. The city could use the proceeds from that land sale to improve the current building and create a new ramped, tree-filled plaza between the Government Center T and Faneuil Hall. Just imagine! We'd lose some concrete paved area, but there would still be plenty of space for protest gatherings. More important, what we'd gain is an enlivened city center and a respectful (even dramatic) adaptation of an imperfect City Hall. I know there have been many plans in the past that have bit the dust, but our precious center deserves one more try. Are we ready yet?

> *Tamara M. Roy AIA, LEED AP* Cambridge, Massachusetts

It's hard to think of many buildings that could fill an entire magazine, let alone two issues in three years. As much as I enjoyed the intoxicating brew of ideas for Boston City Hall (September/October 2007), I fear it will only deepen the dilemma the building poses. The building embodies both the exhilarating power of grand design ideas and their practical limitations. Were it only a monument or an artifact, a Modernist Lincoln Memorial or Parthenon, City Hall's virtues would be paramount. But the idea that you can fix its

failures as a place to work or pay a parking ticket with another set of big ideas — a sleeve! vitrines! an eroded base! - risks just compounding the problem. The building could benefit from a strategic intervention or two, but mostly it just needs a methodical retrofit which respects its power as monumental sculpture and quietly transforms it into usable space. This involves mechanical engineering, lighting, acoustics, and wayfinding more than new design. The article titled "Mending Modernism" starts to capture this approach. It would be great to devote an entire issue of EngineeringBoston (if only there was such a thing) to the building, and to use the big ideas for the plaza, an empty vessel waiting to be filled.

> *Matthew Kiefer* Goulston & Storrs Boston

Fascinating issue on City Hall — did you think it was unbalanced by save-thebunker boosterism? Kinda sounded like art experts ordering Federal Building workers in New York to navigate through Serra's Tilted Arc and damn well like it.

At any rate, a fully fair evaluation of the architectural quality of City Hall --- which you are under no compulsion to give would include the alternate designs at the time (was it something in the water?) as well as the buildings demolished to make way. And I did notice that no one advanced the notion that, if architecture really can ennoble people, an elegant neo-Classical building — if such a thing can really be built now — might ennoble people a tad more than "a document of its time," a favorite argument on the preservation side. The building really does have more in common with a subway station raised above ground than a seat of democracy.

"ArchitectureBoston" — why don't we have one of those in New York? Maybe I'll move.

Christopher Gray Office for Metropolitan History New York City **Robert Campbell's review,** "Working with City Hall" in *The Boston Globe* of September 23 certainly helps me focus on one critical concern raised by the September/October 2007 issue of *ArchitectureBoston*. That concern has to do with a pervasive amnesia when discussing the care and feeding of recent Modern architecture and how to create more Modern architecture in the future.

Before one gets weepy about the current harried status of Boston City Hall, I would ask everyone to shed a tear for and, better yet, study what was there before — Scollay Square and the West End, which still exist in living memory. It was not that long ago that urban renewal, our self-applied version of London's Blitz, led to their demise. Perhaps now, with global warming, Boston will actually become Siena with the Campo that I.M. Pei envisioned in his Government Center Plan — I hope not.

The architectural improvements suggested by the talented young designers seem very much like the various makeover shows on television. How can we possibly hope to accomplish anything of substance or lasting value without a philosophical concept of a seat of government for a "city on a hill"? The next step is not sexing up an award-winning building that inspired look-alikes in several other corners of the world. It requires the government of Boston to explore how services will be conceived and delivered and what facilities are needed where; to plan the next-stage evolution of Government Center and City Hall Plaza in conjunction with planning the radial development of Boston from the core of the Shawmut Peninsula to the harbor and the rivers and crossing the Rose Kennedy Greenway; to rethink the development plan of the Seaport District; and to press on with the Washington Street Corridor. The City has a role (and perhaps even a presence) in each.

John L. Wilson FAIA Boston

The architects who presented their redesign concepts for Boston City Hall had a chance to re-imagine and re-invent the concept of open space as civic space. All Bostonians deserve this same opportunity, in the form of a temporary, participatory design project known as Civic Gardens for City Hall Plaza.

Civic Gardens for City Hall Plaza is a public-art and civic-engagement project that can include all residents of Boston in the conceptual and literal re-design of City Hall Plaza. It would consist of a collection of movable garden planters containing a variety of landscape elements such as lawn, trees, and hedges. The participatory element would consist of a plan of the Plaza that residents of Boston could download or find at their library or community center and submit with their designs for how the planters should be set up across City Hall Plaza. Each month, for a period of two years, another design would be selected from among all submissions citywide and the Plaza would be reconfigured.

The goal of Civic Gardens for City Hall Plaza is to democratize the opportunity that so few of us have in this day and age to influence how the city is built and designed. In many ways, this would engage the entire city in coming up with the best ideas for how to reuse or redevelop City Hall Plaza, as well as how to design City Hall if and when it actually is moved.

A group of civic-minded designers and artists is willing to take the lead to coordinate this effort to bring both City Hall to the people, and the ideas and inspiration of the people to City Hall interested readers may reach me at liu_jeremy@yahoo.com.

Jamaica Plain, Massachusetts

We want to hear from you. Letters may be e-mailed to epadjen@architects.org or sent to *ArchitectureBoston*, 52 Broad Street, Boston, MA 02109. Letters may be edited for clarity and length, and must include your name, address, and daytime telephone number. Length should not exceed 300 words.

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t's difficult to improve upon the view of the Washington Monument and other icons comprising the DC skyline, but the newest landmark, the Mandarin Oriental Hotel, adds a dramatic entry to the capitol at the 14th Street Bridge.

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Mandarin Oriental Hotel

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11

Washington, DC Architect: Brennan Beer Gorman Monk Architects General Contractor: Armada Hoffler Construction Roofing Contractor: Progressive Services, Inc. Color: Hemlock Green Profile: Redi-Roof Batten Panel



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I Ephemera



Studebaker Avanti Model, 1963. Collection Hagley Museum and Library.

Raymond Loewy: Designs for a Consumer Culture

National Heritage Museum, Lexington, Massachusetts October 13, 2007–March 28, 2008

Paris-born American industrial designer

Raymond Loewy (1893–1986) put his hand to the (re-)design and (re-)"branding" of more consumer goods and products than most of us realize. This delightfully rich, compactly organized exhibition presents the breadth and depth of his influence, not only on the emerging field of industrial design, but also on the visual backdrop of 20th-century popular culture.

Exuberant childhood sketches of boats, trains, and automobiles presaged a multi-faceted career. Starting with the photograph of the young designer in his soapbox-derby racer, one can trace 40 years of auto styling and design that began in the '30s and included work for clients such as Hupp Motor Company, Chrysler, and Studebaker (including the Avanti). Several short videos show an ever-dapper Loewy "pitching" features of his Frigidaire kitchen appliances, presenting interiors of Air France's Concorde, and hanging out with his gigantic Pennsylvania Railroad S-1 Locomotive at the 1939 New York World's Fair. Here is the charismatic charmer who persuaded the s(n)ooty old

Pennsy to streamline an entire rolling stock inside and out.

He seems everywhere. No, he didn't design the Coke bottle, but he did restyle the logo, supersize the plastic bottles, and design the now-ubiquitous aluminum can. The bright red streamlined Coca Cola fountain dispensers, as well as the now-collectable red Coke machines and ice chests, are all his. Surprises: he designed all three "themed" Savarin restaurants in Eero Saarinen's TWA Terminal, including seating. Less well known: he designed the interiors and exterior graphics of Air Force One for JFK, the 1963 JFK Memorial Postage Stamp, the US Postal Service eagle logo, and the interiors for SkyLab. Most prolific work: corporate logos including Lucky Strike, International Harvester, Exxon, Shell, TWA, United, and Nabisco. He could be found in houses throughout the land, including packaging for Aunt Jemima's Corn Muffin Mix and Jello. Toasters, radios, and plates, oh my! See for yourself. Be amazed.

Jeremy Scott Wood AIA is an architect at Elkus/Manfredi Architects in Boston.

Third Ward, TX

Directed by Andrew Garrison, 2007 Produced by Nancy Bless, Andrew Garrison, and Noland Walker (screenings and sales: info@thirdwardtx.com)

It began as an art project. In 1993, artist Rick Lowe rallied residents of Houston's Third Ward to create paintings on the boarded-up façades of dilapidated row houses. In this African-American enclave — long resigned to poverty and abandonment — participants used art to "turn nothing into something," eventually transforming their neighborhood.

Third Ward, TX tells the story of Project Row Houses, Lowe's campaign to buy and renovate these buildings. Art weaves through them all in different ways, including nationally recognized, semiannual art installations. PRH has since expanded to become a community-building force — literally. PRH now has three major parts — exhibition, education, and transitional housing — with ambitions to also develop affordable housing. This fascinating film goes beyond the narrative to pose key questions about community, gentrification, and change.

We often hear about "civic engagement." Here it is. Exactly the opposite of superstars who land and cast a vision, the success of Project Row Houses is all about listening.

Gretchen Schneider, Assoc. AIA, is the principal of Schneider Studio in Boston.





Bademli House. Architect: Hashim Sarkis. Image by Cynthia Gunadi and Cheyne Owen.

Hashim Sarkis Conversations on Architecture

The Boston Society of Architects November 29, 2007

Hashim Sarkis, the Aga Khan Professor of Landscape Architecture and Urbanism in Muslim Societies at the Harvard Graduate School of Design, had a problem. "This house is troubling me," he said to the gathering of friends and colleagues. "I think it is starting to fall apart." There was silence around the table as two dozen pairs of eyes turned from the slide on the screen to meet the speaker's warm but challenging gaze. He continued: "What do you suggest I do?"

In the first part of the evening, Sarkis had introduced us to the concepts that shape

geometry and graphics; geography and topography - and spoke of an architecture that draws meaning from its landscape without merging with it. Sarkis used several projects to demonstrate his points: an elementary school adjacent to an olive grove; housing for the families of fishermen displaced from the historic port of Tyre; a school in Tripoli for child-laborers and their mothers; a hot-air balloon landing site; a 400-meter-long "wall" building in Dubai; and a library whose wavy surface expresses both the library's interior ramp and its sea/travel focus. Each one of these projects is a story of a social situation, characters, plot, and a landscape.

By the time Sarkis asked us what he should do with "this house" (shown above),

we had become to some extent literate in his language, and the conversation took off. His vision was of a summer house that follows a path down through an olive grove to the Aegean Sea - distributing as it goes a guest house, dining pavilion, living areas, bedrooms — all beneath the path, now a raised sea-viewing roof. The lure of merging with this seductive landscape was clear, and Sarkis worried that the house had conceded so much to its site that it might disintegrate. Suggestions poured forth; Sarkis listened, responding with interest and drawing the discussion to greater complexity --- but clearly confident that the concept for this house was never really in danger.

Brigid Williams AIA is a principal of Hickox Williams Architects in Boston.



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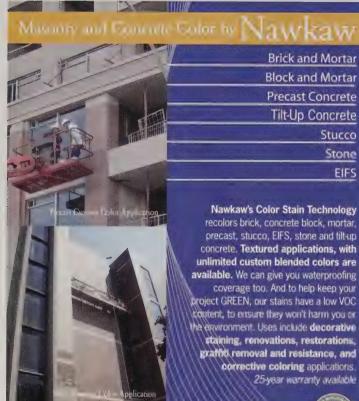
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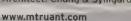
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BY JOAN WICKERSHAM | The Lurker

Nds Wrk

The ad: Open House, 1st Ad, Cambridge, 12-2. End of cul-de-sac, 1839 Greek Revival hse. 12 rooms, over 16,000 sf of land, on Natl Reg of Hist Places, mrble fps, fl to ceil wind w/orig shutters in lib & eleg sq LR, gar, great potential, location, privacy! \$1,795,000.

11:52 Lindsay Allison of Hammond Real Estate sets up an "Open House" sign at the entrance to the cul-de-sac. She drives down the street to the house and pulls into the driveway, which is framed by a peeling white fence, scraggly lilac bushes, and flowerbeds choked with wild asters. The house itself is a majestic jumble of architectural styles. The original Greek Revival section, with its tall first-floor windows, is topped by a third-story dormer with modern casement windows and a vaguely Federal diamond-patterned railing. The original front door is hidden behind a vestibule that has a suburban 1920s look, as does the kitchen ell. And at the back of the house is an asymmetrical tower that screams "architect" and "1970s."

11:54 Lindsay walks quickly through the house, turning on all the lights. In the weeks preceding this weekend's debut on the market, Lindsay and her business partner, Lisa May, have "staged" the house to make it more appealing. The living-room carpet has been replaced with an old Persian rug; mirrors, cachepots, pillows, and throws have been artfully dispersed around the first floor; and upstairs, the beds are made up with antique pillowcases and quilts from Lindsay's collection. The house has also undergone a building inspection, to help prospective buyers know what they're getting into and to help the brokers calculate and justify the asking price.

12:04 The first customer, a woman in a black coat, shows up, takes a listing sheet

from the front-hall table, and begins walking through the rooms.

12:06 A family with two children arrives. They have been looking for a house for three years, and they know Lindsay: there are handshakes, kisses, and immediate questions about whether the interior moldings are original.

12:07 "What a charming house," says the woman in black, leaving.

12:08 Standing in the doorway of the high, beautifully proportioned living room, Lindsay tells the family that the house is on the National Register of Historic Places. "The original part dates from 1839. The owners lived here for 50 years; this is an estate sale, which we're handling for the bank. The grandson is living in an apartment in the basement —

The customer interrupts: "But he'll be out by the time the house changes hands?"

"Oh, yes. He'll be out. But we're asking people not to go into the apartment during the open house. If you're serious and come back, then of course we'd arrange to show it to you. And also, you'll see a door on the third floor that leads out across the roof to that funky stair tower — we ask that you not go out there, because the railing isn't in great shape."

12:17 Another couple shows up, and introduce themselves as neighbors. They go through the house, and then come back downstairs and chat with Lindsay. She asks



A Photo by Joan Wickersham.

them if the street, which is private, gets plowed by the city in the winter. "We don't know yet," says the man. "We just moved here." Like many of the other large houses on the street, theirs was recently renovated.

Lindsay gives them her card. "We're going to try to make sure that people don't park where they shouldn't while the house is on the market, but will you please call me if you notice any problems?"

12:28 Lindsay is in the kitchen, talking to a man who remarks on how low the ceiling is. "My husband is an architect," she says, "and he thinks that you could raise the floor on the second story — that funny place where it steps down in the back hallway — and end up with eight-foot ceilings on both the first and second stories."

12:33 A man says he'd like to walk around outside, and Lisa starts to open a door that leads from the dining room to the garden. Lindsay interrupts her conversation with a customer — "it's an estate sale, the grandson is living in the basement" — to call out, "Oh, Lisa, be careful, that door falls off the hinges sometimes."

"I've just discovered that." Lisa goes to make a sign.

12:40 A man walks through the warren of rooms on the second floor, muttering

aloud to himself as he tries to decipher the layout. "Bedroom, bedroom, bath."

12:43 The man has gone up to the third floor; his sighs are audible in the hallway below.

12:46 A broker from another agency leads her customer into the study at the top of the stairs, where the shelves are still filled with books: old sets of Emerson and Mark Twain, several editions of Walt Whitman, criticism of Whitman in French, Borges, Neruda, Garcia Lorca, and a diet book by Elizabeth Taylor. "Lots of sun," says the broker.

12:55 Lisa stands with a customer near one of the living room's tall windows, and mentions that the shutters and the frames are original. "We had the Cambridge Historical Commission in to look, and they called our attention to this slender, pointed profile —" she runs a fingertip down one of the muntins "— which is typical of Greek Revival houses." 1:00 A man in a suede jacket walks quickly through the basement. A worn gold-andblack Chinese rug, a maple headboard, and a stack of record albums (*Jim Nabors Sings "Love Me With All Your Heart,"* and *Polka Music is Here to Stay* by Eddie Blazonczyk and the Versatones, with a smiling bearded face, presumably Eddie's, carved beneath the presidential likenesses on Mount Rushmore). A little pile of termite dust on the floor, which Lindsay left to remind her to point out the damage to buyers.

1:04 "What's the deal in terms of demolition?" the man in the suede jacket asks Lindsay.

Lindsay explains that the important factor is the City of Cambridge. "I'm speaking personally, not officially, but I'd think it would have a lot to do with which part you'd like to tear down and what you plan to replace it with. If you wanted to replace that funky '70s stair tower, for instance, with something that's sensitively designed, I doubt they'd give you a hard time." **1:11** A husband and wife get into a small argument in the kitchen. "Maybe this was original," she suggests. "A lean-to kitchen."

He shakes his head. "They never would have had ceilings this low."

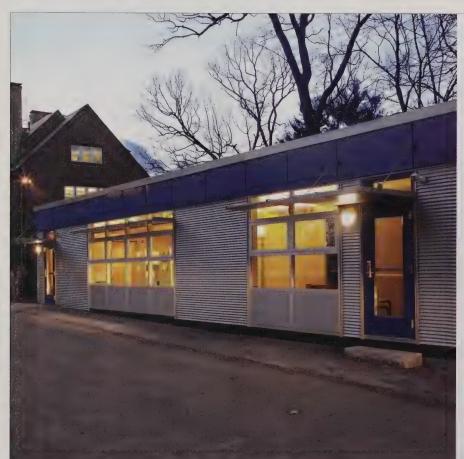
"Sure they would have. They had smaller people back then."

1:14 In the front hall, two small children sit on the bottom step waiting for their parents who have gone upstairs.

1:17 Upstairs, a man and woman walk quickly and dubiously through the rooms, and then pause at the foot of the staircase leading to the third floor. "This house is weird," he whispers. "I'm not going up there."

"Me neither. I'm done."

1:20 In another study, where light falls gently on the empty bookshelves, a very young couple looks curiously at a section of quirky old cabinetry: a couple of low shelves with drawers attached and a pencil sharpener mounted on top. "This



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could make a good bathroom," she says. He shrugs.

1:25 A woman comes in alone. Lindsay greets her. "The house was built in 1839, and it's on the National Register of Historic Places ..." The woman listens to the introductory speech, then asks for floor plans and walks quickly through the house.

1:30 Having finished her tour, the woman is asking Lindsay about pricing. "We did a building inspection, and then backed it out based on what we thought the house would be worth finished," Lindsay says.

"I would definitely like a copy of that report — can you send it to me?"

"Absolutely," Lindsay says. She offers to fax it. "It's about 50 pages long — if I e-mailed it, it would probably crash your computer." She asks if the woman is a developer.

"No. Just a private looker."

1:35 Two couples show up at the same time. One of the wives is pregnant. A

husband squints at the house and then murmurs to the other man, "Wouldn't be a bad idea for a contractor to stand out in front passing out cards."

1:37 In the kitchen a woman asks, "Why is the ceiling so low?"

1:44 A woman introduces herself to Lindsay and they begin chatting. The woman mentions that she's going through a divorce.

"I'm sorry," Lindsay says.

The woman laughs. "Don't be." She is looking at houses not to buy, but to get a sense of the value of her own house, which will figure in the divorce settlement. Lindsay gives her the name of an appraiser.

1:50 More neighbors: an older couple. They knew the family who lived here, and they want to see the house one more time before it undergoes whatever renovations await it. They walk slowly and silently through the kitchen and into the dining room, where the man peers at the sign Lisa has posted on the tricky door. He gently works the door back and forth. "I bet I could fix that."

"You'd need a screwdriver," Lisa says.

"I know where they used to keep one." The man heads into the laundry room, opens a drawer, and comes up with a screwdriver.

1:57 "He's a real inertia person," the divorcing woman is telling Lindsay of her soon-to-be-ex-husband. "I think he'd be less of a jerk about buying me out of the house if he could find a place of his own. Maybe you could help? He'd be looking for three bedrooms, on two levels..."

2:15 Lisa stays behind to close up, while Lindsay puts the signs into the back of her car and heads off to another open house, a two-family in Watertown. \$849,000. Needs some work.

Joan Wickersham's new book. *The Suicide Index*, will be published by Harcourt this summer.

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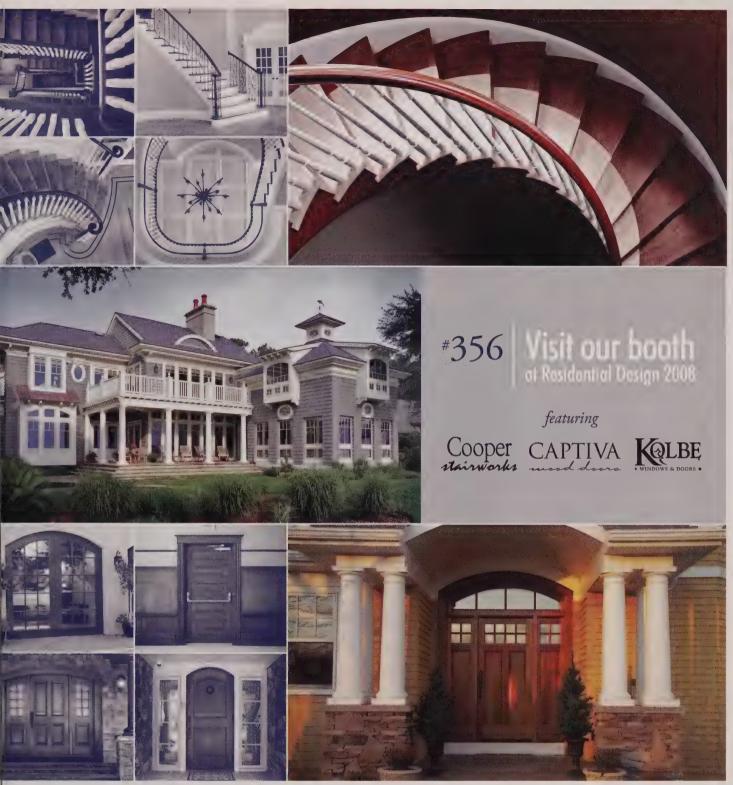


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It All Starts Here: The Politics of Planning in a Small Town

PARTICIPANTS

RJ Dourney is the president of Hearthstone Associates, the New England franchisee of Let's Dish! and Cosi. He is vice chair of the Hopkinton Planning Board.

Rick Holmes is the editor of the editorial page of the *MetroWest Daily News*.

Chuck Joseph is a principal of Re/Max Executive Realty in Hopkinton and five other MetroWest towns. A former history teacher in Hopkinton, he has served on a number of town committees.

Muriel Kramer is the chair of the Hopkinton Board of Selectmen. She has also served as the chair of the Master Plan Update Committee and a member of the Land Use Study Committee.

Elaine Lazarus is the planning director of Hopkinton.

Frederick Merrill AICP is a principal of Sasaki Associates in Watertown, Massachusetts, and directed the East Hopkinton Master Plan.

Elizabeth Padjen FAIA is the editor of *ArchitectureBoston*.





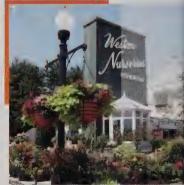
Finley Perry is president of FH Perry Builder in Hopkinton. Most recently the chair of the town's Land Use Study Committee, he has also served on the Conservation Commission and Board of Assessors. He is a director of the National Association of Home Builders and past president of Home Builders of Massachusetts.

Christina (Tina) Rosan PhD is a post-doctoral fellow in the department of urban studies and planning at MIT, and co-author with Lawrence Susskind of *Land Use Planning in the Doldrums: Growth Management in Massachusetts' I-495 Region* (Rappaport Institute for Greater Boston, September 2007).









Photos by Ken Richardson (1, 2, and 6); HopNews.com (3, 4, and 5); courtesy, Weston Nurseries (7). **Elizabeth Padjen:** The architect James Barker, now president of Clemson University and the former director of the Center for Small Town Research at Mississippi State, once observed that many American small towns have what he called "covenants" short tag lines that represent a town's self-image, like "Turnip Capital of the World." Very often these covenants have no relationship to the present reality of the town. For example, Danvers, Massachusetts, calls itself "Oniontown"; it was apparently the world's largest producer of the "Danvers Onion" in the 19th century, but now it's known more for its regional shopping centers and strip malls than for its farms. Does Hopkinton have its own covenant? And is there a disconnect between the idea of Hopkinton and its reality?

Finley Perry: The official tag line is "It all starts here," because of the Boston Marathon. But the reality is that almost nothing starts there.

Muriel Kramer: Small town with rural character — that's how people see the town and what they value. Hopkinton doesn't necessarily see itself very clearly as the growing community it really is.

Elizabeth Padjen: Chuck, you're in real estate, so you talk to people who are looking for houses in town. What attracts them?

Chuck Joseph: That image of a small town with rural character and great schools. But we didn't always have great schools, and the correlation between the increase in the quality of the schools and the growth in the town is not happenstance. Make no mistake, Hopkinton would still be a very rural town if not for the Interstate Highway System: Route 495 and the Mass Pike put us on the map. In my business, the magic number is the 45-to-50minute commute. And Hopkinton falls right on that edge, both for Boston and for Worcester.

Fred Merrill: As an outside observer who works in communities like Hopkinton across the state and around the country, I see a split between people who have been in Hopkinton a long time and want to hang on to the small-town character and the agricultural legacy, and some of the newer folks who have only seen it as a bedroom community. They have different images of the town and that creates an interesting tension between these two groups that gets played out in land-use planning strategies.

Elaine Lazarus: People have different set points along this continuum, depending on when they arrived. That set point establishes their view of the town. And a lot of people have arrived in the last 10 years.

Chuck Joseph: We did a study in 2002 that showed that over 50 percent of the people currently in Hopkinton had moved there in the previous five years. That was our boom period.

Elizabeth Padjen: In fact, the report that Tina co-authored indicates that between 1990 and 2000, the communities along

the Route 495 beltway grew twice as fast as the greater Boston region as a whole.

Finley Perry: And as a result, the whole battlefield of land use, planning, and development has moved from the inner suburbs and the Route 128 area out to 495.

Elizabeth Padjen: I compiled a list of local news stories that provides a good snapshot of where Hopkinton stands. The biggest story is the proposal for the Weston Nurseries site: Legacy Farms, which would include over 900 housing units and 450,000 square feet of commercial space on 700-plus acres. The whole parcel represents about five percent of the town's total land area. There is Chuck Joseph's proposal for Hopkinton Square: 100,000 square feet of retail and office development. Another proposal, Hopkinton Village Center, would include 42,000 square feet of retail, office, and condos. The Toll Brothers development, Hopkinton Highlands, is close to completion. One proposal that was recently withdrawn would have provided 1,500 units of over-55 housing on 200 acres.

At the same time, the town is facing financial challenges a \$2 million shortfall in town revenues. There's an \$8 million proposal to expand the library. The neighboring town of Ashland is concerned about its water sources and wants to protect part of the Weston Nurseries site. You have your own infrastructure issues. People complain about traffic. All these things indicate a lot of potential stress and a lot of potential change in a town that considers itself a rural community.

The challenge in planning is to get people to imagine how all the pieces might work toward a unified whole. *Muriel Kramer*

Muriel Kramer: I don't think that sets us apart from other towns working with the same issues. The deficit in expected revenues and expected income is not unusual compared to what every town in Massachusetts is facing. In some ways, we're better positioned because historically we tend not to get as much state aid, so we are not hurt as much when the state adjusts its aid formulas downward.

Tina Rosan: I think you're right about that. But the big issue we found in the course of interviewing local planners and officials for our study was that, although these communities really do share similar problems, they're each struggling with them on their own, each reinventing the wheel.

Fred Merrill: We're what is called a "home-rule state," so each community has its own land-use, planning, and zoning controls. In New England, home rule is jealously guarded, so we do end up reinventing the wheel a lot. In other parts of the country, towns deal with a lot of these same issues — transportation, water,

> Photos by HopNews.com (left); Ken Richardson (right).

sewer, education — but they tend to work within a regional or sub-regional context. They can share a larger base, either geographic or socioeconomic. It makes a lot of sense because every town doesn't need to have its own fire department, for example, or its own police department. Regionalization of schools can make sense. We don't have any kind of regional planning at all in Massachusetts, which is unfortunate.

Elizabeth Padjen: Hopkinton, like many towns in this region, has a town-meeting form of government and relies on volunteer boards. Would anyone really design such a political system if the goals were growth and efficient land-use allocation?

Rick Holmes: One advantage of this system is that it can mean that a lot of people get involved in creating the future for a town. As someone who's observed these issues for 20 years, I think Hopkinton is actually a very good example of a town that has grappled with growth issues pretty well through the volunteer form of government. When I arrived in the mid-'80s, Hopkinton was already talking about preserving its rural character. In fact, it was doing more than just talking — it was doing studies and appointing committees and saying, "What is rural character? Can we define it?" "Well, it's the stone walls." "So, can we protect the stone walls?" Even in the mid-'80s, it was the fastest-growing town in eastern Massachusetts by some measures. But the people in Hopkinton were dealing with this head-on, rather than sitting back and complaining about some county government that was messing things up.

crizabeth Padjen: But is it a problem to find people to participate and serve on boards?

Muriel Knower: It typically is not a problem, although sometimes it's a little harder to encourage people to run for elected office. One of the things that astonishes me and is to our credit is that the schools were turned around principally on volunteer energy. An army of people — parents and others — just came out and created a system of volunteerism that not only raised a lot of money but also created programs and then supported those programs.

What I see as the challenge is to be able to focus that same energy on land planning. It's easier when you're talking about excellence in schools; folks can easily understand and rally around that goal. The challenge we have in land planning is with visioning, that ability to see how all the pieces can work together — for example, how economic development can work with conservation and preservation. It can be hard to get people to imagine how all those pieces, that might seem divergent, might work toward a unified whole.

RJ Dourney: Just because you have a resource available doesn't necessarily mean that it is being used efficiently. We have some great people in town, smart people whom we could never afford to hire as consultants. There are many folks who volunteer a lot. But the challenge over the next three to five years will be to engage more of the new folks who have moved into town over the last 10 years — to take advantage of them as a resource.





Rick Holmes: In New England, decisions are made by the people who show up for meetings. That's not necessarily true in other places, where they hire folks to make the decisions. The problem is you can have a real gap between the people who come to meetings and arrive at a consensus and the people who don't. It's still a minority of folks who actually show up.

The bigger problem, beyond volunteerism, is the next step — implementation. In all the communities we studied, people spend hours at meetings putting together master plans. But it often turns out that, in order to get everybody's opinion represented in the master plan, it ends up being pretty vague and doesn't hold up when you need a two-thirds majority at Town Meeting. Massachusetts towns also tend to lack consistency between zoning and master planning — new zoning is rarely adopted to reflect a master plan. Even the best volunteers can't fix that, because that's really a political problem.

Finley Perry: I'm always amazed by how much actually does get done. In a democracy, it's very easy to stop something but it's hard to get something done. When you add a two-thirds vote on top of that, it just becomes that much more difficult.

Chuck Joseph: Hopkinton is a little different from some of the neighboring towns — for a very hot Town Meeting, we might pull 1,800 people; other towns might get 250. People who have been engaged in the community tend to recruit the next generation. The high-school civics classes have to go to town meetings — there's a lot to be said for that. Local-access cable television provides terrific coverage of public meetings. But right now, many of us who've been doing this for 20 years or so are very concerned: the 30-to-45-year-old age group is not stepping up to the volunteer plate. I don't know if that's a generational difference. When we got involved, we all had kids and we were all too busy, but we just did it. It's not happening in the same way right now.

Tina Rosan: There is another possible explanation. Maybe those people who've moved into Hopkinton for the good schools and the moderately priced homes really don't care if they live in Hopkinton or the next town over, as long as they can get to Boston in 40 minutes. And maybe they're not there for the long haul.

Elizabeth Padjen: How much do the town's fiscal challenges drive the growth debate? Are people willing to give up some of the rural character that they hold so dear in order to get more of a commercial tax base that might offset rising property taxes? Muriel Kramer: I think people are aware that they have decisions to make. But the Legacy Farms opportunity offers a new way of thinking about growth. We all at this table have our different focuses and advocacy positions, but we all have been closely engaged in and energized by the process for planning the future of the Weston Nurseries site. We understand that it's what we have to do in order to stay vibrant and economically sound. I'm not sure that the community understands how growth can be done differently and how it can work to our advantage. Their taxes have gone up and there are stresses. Some people see growth only as the cause of all that pressure and discomfort — all those schools we had to build.

Fred Merrill: That's what's so amazing about having this large piece of land available. It's huge by eastern Massachusetts standards — 728 acres. And it can be a showcase for large-scale land-planning that addresses all these issues through smart-growth strategies, that demonstrates how growth can be fiscally, environmentally, and socioeconomically positive. In a region where a 50-acre development is considered big, this is off the charts.

Rick Holmes: And that's part of what makes it scary to people. There are still a lot of people out there — I would guess between 40 and 60 percent of the town — whose first choice would be to turn back the clock. Their second choice would be to stop the clock and change nothing from here on out. Their third choice is to do it as slowly as possible, at the greatest possible expense to the developer.



Elaine Lazarus: As the town's only professional planner, sometimes I feel overwhelmed, not because of the work, but because of the difficulty in translating what everyone feels, both positive and negative, into a plan. People are willing to have more development for economic reasons, but they also want high quality from it. And the planning professionals who try to implement what the town wants need political cover as they try to listen and translate what they're hearing.

RJ Dourney: Rick was right when he said 40 to 60 percent of the people in town would either want to roll back the clock or stop time right now. But that also means that 40 to 60 percent want to move the town forward. Those are diametrically opposed views of what to do in the same situation, and that's what Elaine is contending with. On the one hand, you have the folks who remember riding snowmobiles through town and complain that the police won't let them do that anymore. And on the other are the people who want to know why they can't have a Bertucci's and a Whole Foods downtown.

Muriel Kramer: The challenge is to have a conversation between those two. I believe that there's a way to develop Legacy Farms so it has some of the best from both sides of that dynamic. But does everybody understand that no one is going to get everything they want? That's the piece that worries me.

Chuck Joseph: One of the things you cannot underestimate is the level of schizophrenia within individuals in a community. Every survey that's been done shows the same response: "We need non-residential tax revenue." But that's quickly followed by the don't-wants: "We don't want big-box stores. We don't want chains. We don't want industrial." It's very hard for communities to determine their margin of tolerance — finding the balance that is enough to keep property taxes reasonable without losing things that are important to them.

Rick Holmes: There was a proposal to rezone from residential to commercial for exactly that purpose. It went through the committee process, and everybody who was at the final meeting said, "Yes, we've got to do this." Then it went to Town Meeting and it died.

RJ Dourney: That is why one of the key issues that needs to be addressed in Hopkinton over the next few years is the leadership that exists within the community. There are people representing different points of view who are considered by their constituents to be voices of reason. Those voices have to be willing to reel their own constituents in. They have to work out the compromises and talk to their constituents. And in so doing, we create reason. And with enough reasonable voices, people will say, "You know what? I am going to listen to the other side. It doesn't have to be only my way or the highway."

Fred Merrill: That's what the East Hopkinton master plan strategy was all about: trying to strike that balance of development and conservation with mixed-use development that would be fiscally positive and still provide meaningful open space.

Elizabeth Padjen: What was the process that led to that master plan?

Finley Perry: The stone that dropped into our quiet pond was an e-mail in February 2005 announcing the public offering of the Weston Nurseries property. The town selectmen established a special committee, the Land Use Study Committee, to look at the town's rights and how we might best position the town in the sale and development process. When it became clear by the winter of 2006 that a sale wasn't going to happen quickly, we decided to hire a professional planner. Elaine wisely urged us to look beyond the Weston property at all of East Hopkinton, where there are several parcels that might similarly be targeted for sale and development. Concurrently, MAPC [Metropolitan Area Planning Council] did a regional study, which Fred and his colleagues at Sasaki were able to take advantage of, and a team of students from MIT conducted another study. Interestingly, they all came to similar conclusions. Sasaki's master plan was finished in spring 2007 at the same time as the sale of the property to Roy MacDowell's firm, Boulder Capital. v Photos by James N. Miner AICP/Sasaki (left); HopNews.com (right).

Elizabeth Padjen: How close is the master plan to the Legacy Farm plan? How much negotiation is the town facing?

RJ Dourney: First, Sasaki's package was not a defined master plan. It was understood to be a framework for development. I think Boulder Capital did the right thing — they took clear cues from the community and said that they would use the Sasaki document as a road map. Are there interpretations? Absolutely. Make no mistake, they will do what is financially necessary, because on the back end of all this, they're a business. Along the way, we have the Zoning Advisory Committee, which is a subcommittee of the Planning Board, that is shepherding this process and working with Boulder. Eventually, we hope to take something to Town Meeting that might not be exactly what anybody wanted, but is very much in line with the vision that we've created.

Elizabeth Padjen: And ultimately, in terms of process, what exactly will be taken to Town Meeting?

Muriel Kramer: The zoning certainly will be. The master plan that will be attached to that zoning is a separate product of the planning board, through a public-hearing process.

RJ Dourney: We wrestled with this process, which could be overwhelming. The town has to trust that the planning board will make sure that the master plan for Legacy Farms matches the community's intentions. But the key is the Town Meeting vote on the zoning change. Because without any zoning changes, Roy MacDowell could build whatever he wants to build.

Finley Perry: This was the real purpose behind the Land Use Study Committee once we realized the town couldn't buy the property. What could we do to control it? The first goal was to try to let the development community know what kind of a buyer we were going to accept. And I think we were successful in getting the right buyer. The second was to communicate what we wanted the buyer to build. Now we're going through the messier process of getting from a general concept to a specific plan.



Muriel Kramer: I think we all have confidence in the intellectual process. My concern still rests with that emotional process, to actually trigger the vote and make it happen. That's where a lot of work still has to happen. That's our biggest challenge.

Fred Merrill: If you use the planning process as a deliberate educational process, which I think the town has done really well, you build trust as well as new ways of seeing things. That can

facilitate a more meaningful dialogue. Some people will never change their minds, of course, but a lot of people will.

Elizabeth Padjen: Thinking about your experience in other communities, Fred, do you see any sticking points here that are different from sticking points in other towns?

The whole battlefield of land use, planning, and development has moved from the inner suburbs and the Route 128 area out to 495. *Finley Perry*

Fred Merrill: I think the people in Hopkinton are a lot more engaged. There's a lot more passion and a lot of people who really care, which is great. But the issues really aren't any different: it's development versus non-development, and the fiscal challenges. Everybody has those. There are the growth and no-growth constituencies. But here there's an opportunity to achieve some of the larger community goals around tax-base issues and commercial development, and do it in a new way, a way that can be designed to look different and meet the quality issues that the town is concerned about, because the site is large enough to support first-class work.

Elaine Lazarus: I think the level of emotion makes it all the more important that people are proud of the final outcome. Growth can have a negative connotation — for all the discussions about "smart growth," I prefer to think of it as "smart change." Change is hard for people, so to whatever extent it can be made easier, more gentle, more inclusive, people can come to understand and trust everyone who's working on it.

Finley Perry: What's going to make this thing work is whether we can successfully engage with one another in a way that allows us to make intellectual tradeoffs, rather than emotional tradeoffs.

Rick Holmes: You can have a lot of smart, dedicated people coming together in the middle, negotiating tradeoffs, and coming up with a good plan. But Hopkinton is a small town, and like small towns anywhere, personalities get involved — friendships, economic interests, loyalties. Sometimes, just when you've got all the pieces moving together and you think something's going to happen, someone will come out of left field — someone who is really mad at somebody else who happens to be in favor of this thing, so he's against it. That can muddy the water, and it's happened over and over again in Hopkinton.

Tina Rosan: You're not going to get many more 700-acre opportunities, so at some point, you have to look over to your neighbors, and say, "Maybe we don't all need to have commercial and office development. Maybe we could share some revenue." That seems to be the case in other places I've studied, where they have started doing revenue tax sharing across municipal lines. Right now, it seems as if each one of these communities around 495 has to have its own portfolio of residential, office, and commercial, and it seems really unsustainable.

RJ Dourney: Where have you seen that work?

Tina Rosan: Denver is one example. The cities of Denver and Aurora are sharing revenue on the \$1.5 billion High Point project. One key difference in many other states is the way that schools are financed, which affects planning choices. Here, towns have zoned bigger lots in part to keep out families who will drain fiscal resources.

Rick Holmes: So our tax policy drives bad land-use decisions.

Tina Rosan: The school systems in Oregon and Colorado, for example, depend much more on state financing. In other states, communities are not as afraid of residential development bringing in more school-aged children and increasing property taxes.

RJ Dourney: Are you familiar with Vermont's process for revenuesharing? It's affectionately referred to as the "Robin Hood tax," whereby the more affluent communities have a higher propertytax rate than the poorer communities. So one town might pay \$20,000 a year in taxes for the average house, most of which revenue goes to the next town, which is a poorer community where taxpayers pay less. Certainly the poor communities benefit. But you have towns talking about secession. It doesn't work. But the notion of banding together to buy together makes economic sense.

Chuck Joseph: I agree that the Vermont system is too radical to overlay here. But that doesn't mean the larger idea isn't worth discussing. You could probably succeed with talking about four small-town fire departments sharing a ladder truck. You can start by taking baby steps, getting people used to the idea that this regionalization thing is not necessarily bad, and picking your early battles carefully to make sure they're successful. The political reality is that it's sometimes a monumental task to move long-held attitudes.

Tina Rosan: The other way is to push it down from the state level by mandating certain requirements.

Rick Holmes: Or to change the incentives. If the state changed its tax policy so that we weren't as dependent on the property tax to fund the schools, you would change the housing equation. It's simple: towns don't want more residential subdivisions because they don't want to pay for the schools for those families. All of that comes from the state tax policy.

Elizabeth Padjen: Here is a quotation from Tina's study: "Because increases in state aid have not kept pace with increasing costs, all the communities in this study area have increasingly relied on property taxes to fund local services. When adjusted for inflation

v Photos by Ken Richardson (left); HopNews.com (right).

between 1988 and 2005, property taxes paid by local residents in the case-study communities increased by between 35 and 123 percent." Of course, property values have increased, too, in that time, but if your plan is to stay put for the long haul, the tax bill matters more than the assessment.

Rick Holmes: We haven't talked about what's happened to housing prices in Hopkinton over the last 10 years. Most of us can't afford to live in Hopkinton any more. People who rent in Hopkinton can't afford to buy houses there. So the question is whether Hopkinton can create affordable-housing opportunities.

Elizabeth Padjen: What is the affordable-housing percentage in town?



Elaine Lazarus: It's 3.1 percent. We adopted an inclusionary housing bylaw this year, so we hope that percentage will go up over time.

Elizabeth Padjen: Do you know what the median house value is?

Chuck Joseph: It's just under \$500,000. And it's interesting to note that Boulder currently is not proposing any more than 40 or 50 single-family homes for Legacy Farms. They're virtually all condominium cluster homes.

Muriel Kramer: There was some discussion in town about rental solutions to tackle the affordable-housing problem, but there wasn't a lot of receptivity. People would look at it, they'd poke a stick at it, they'd contemplate how it could be beneficial. But they didn't really want to take the chance on rental units.

Chuck Joseph: We do have a very progressive piece of workforcehousing zoning that nobody's ever taken advantage of. It provides for small houses on quarter-acre lots. But you can't build it without a public sewer or a treatment plant, and we have no public sewer. I would love to be able to go in and build some workforce housing, but I haven't found a way to make it work economically. But we could do some great things downtown, if some things got rezoned — even if it was just residential rezoning and not commercial.



RJ Dourney: Conceptually, everybody likes the idea of affordable housing: my first house is here, the fireman can live here, the rich guy down the street can live here. But the reality is that not everybody's comfortable with the notion of an apartment or condo complex right behind them.

Finley Perry: And that brings us to 40B [a state law allowing developers to bypass local zoning if 25 percent of their units are designated "affordable" in a town with a housing stock that is less than 10 percent affordable]. But 40B is intellectually wrong. It turns the political discussion from housing affordability to gaming the system. We tend to think only in terms of how we're going to comply with its requirements. Or how we are going to dodge the possibility that 40B developers will come in and pretty much do what they want. That's not really solving the problem. There are lots of places in Hopkinton that are in fact affordable, but they're not counted in the affordable inventory. The goal should not be compliance with 40B, but creating a diverse housing stock that achieves the kinds of goals it is supposed to represent.

Chuck Joseph: I think that's a political question. Because right now, it still comes back to families with children and the perception that we're going to have to build more schools. That may change, in which case the whole conversation may change. Some towns have come to a point of maturation where school population is pretty stable. Our school population is actually going down now.

Rick Holmes: Looking at the political lay of the land over the next year, and assuming that you will go to Town Meeting with a new zoning bylaw for Legacy Farms, do you see alternatives? Is there an "or else" scenario that you'll put before the town? That's where 40B comes in — it's often the "or else."

RJ Dourney: There is an "or else." It's an enormous "or else." It's called "by-right use." Boulder can build 350 or so single-family houses if it wants to. Or, say, 200 single-family houses in a 40B development.

Chuck Joseph: Or any combination thereof. That's the sword of Damocles hanging over Town Meeting. Whether or not it gets clearly articulated is another issue.

Rick Holmes: Do you guys play on that as you're promoting the alternative? Or does that get to be fear-mongering?

Elaine Lazarus: I don't think we should be afraid of 40B.

< Photos by James N. Miner AICP/Sasaki (left); HopNews.com (right).

RJ Dourney: Maybe not 40B, but I do think people need to be aware of by-right use of that land. I think the worse-case scenario for most people would be 350 single-family homes on acre-anda-half lots sprawled all over that beautiful landscape.

Muriel Kramer: Let me play devil's advocate, though. That scenario is what people understand. It's where they live. They choose sprawl for themselves and their families. It's what people are comfortable with.

RJ Dourney: But sprawl in this region will only get worse unless we change our mindset. Hopkinton benefited from its location companies like EMC looked at the intersection of 495 and the Mass Pike and said, bingo. And they could find all their \$25,000to-\$50,000-a-year employees in a region where they could all afford to live. Now, a lot of people can't afford to live anywhere east of 495. So where are they moving? They're moving out beyond Hopkinton to points west. EMC has been a great corporate citizen — it's not intrusive and it's been very supportive of town organizations and programs. But the fact is that a lot of its employees can't afford to live here anymore.

Finley Perry: And that's the conundrum for a lot of towns in this region: they all want to have an EMC in town, but they don't want the employees to live there, because of the burden on the school systems. But if they live someplace else, they create traffic nightmares on 495.

Growth can have a negative connotation — for all the discussions about "smart growth," I prefer to think of it as "smart change." *Elaine Lazarus*

Muriel Kramer: So we need to be able to answer how having the employees living here with their families works for us, and how we can manage the traffic. I frankly don't know how to answer that question when it's asked of me. Some choices affect some people adversely, and I think we haven't necessarily acknowledged that sufficiently. We need to have more conversations that start, "You're right. But this community really needs this. How do we make it work?" I don't know what those answers are, but we have to hear people and engage them, not just listen to them and then show them the door. We have to answer some of these challenges. Their problems have to be our problems, too.

RJ Dourney: It's a question of leadership. We have a responsibility to step up to our constituents and say, "Look, stop throwing marbles at the feet of this. You may not like it, but that doesn't mean that it's bad for the community. We're going to do what's morally and ethically right. We're going to make integrity-based decisions." As leaders, we've got to be able to say that. Sometimes you've got to tell people what they don't want to hear.



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Portraits of a Small Town

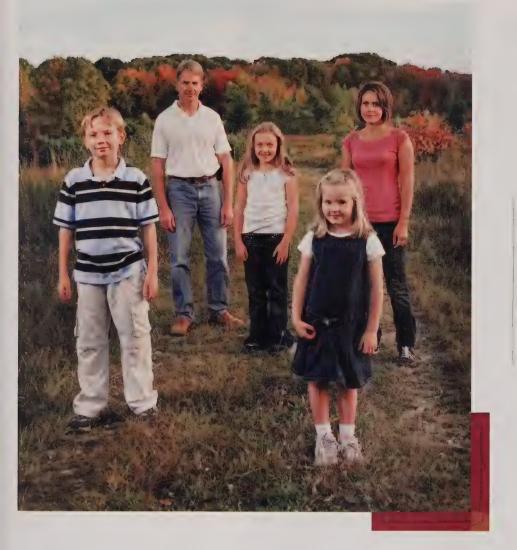
Text by Ken Richardson Photographs by Ken Richardson and CJ Heyliger

My parents moved my brother, sister, and me to Hopkinton in 1978, when the population was less than half of the more than 14,000 residents who live there today. I remember only one stoplight in town, and the woods behind my parents' house seemed to be endless. When I graduated from high school in 1991, I was one of 68 in the senior class. Today, the classes each number more than 250 students, the woods behind my parents' house are now a small neighborhood, and quite a few new stoplights are trying to handle the swelling traffic downtown. During my high-school years, one of the things that always made Hopkinton seem special to me was its small-town, rural feel, despite its location close to a major city - 26.2 miles to be exact. Telling new acquaintances I was from Hopkinton always elicited a blank look until I learned to append "the place where the Boston Marathon starts" to the town's name. It's the kind of town where the school sports teams - the Hillers - are named after

the minor topographical distinction that the highest point in Middlesex County lies within its borders. This safe, smalltown character and the proximity to Boston and major highways have made Hopkinton attractive to many people in search of a good place to raise a family.

Going back to Hopkinton makes me realize that, although much has changed in the town, much of its character has remained the same. With its recent population increase, Hopkinton is struggling to find its place and its identity. Can Hopkinton retain its rural charm? Can it make room for new businesses that will serve the town and bear some of the tax load? Or will this growth jeopardize Hopkinton's essential appeal? Planners and policy-makers have written about changes and challenges that the town faces, but its people tell the story best.

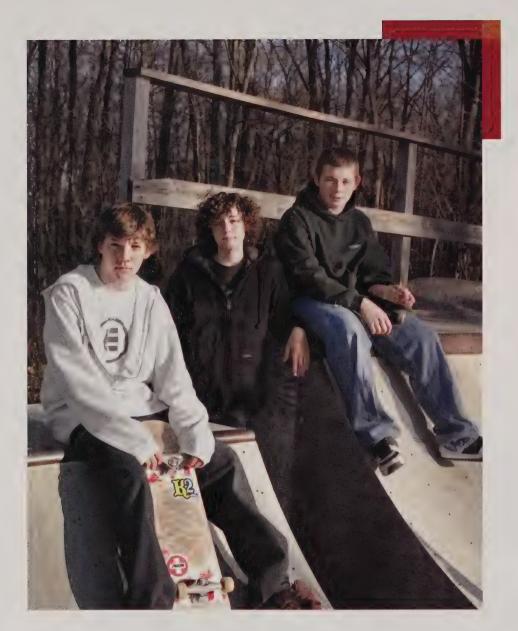
Ken Richardson and CJ Heyliger are the principals of Richardson Heyliger Photography in Somerville, Massachusetts.



Karen and Peter

Peter Mezitt grew up in town and is now president of a fourth-generation familyrun business that for many outsiders defines their image of Hopkinton. Weston Nurseries was established in 1923 and has been in Hopkinton since the mid-'40s. Peter and his wife, Karen, who also works in the family business, live near the nursery and are raising their three children there. Peter has noticed a shift in the nursery's business over the past few years. "It has gone from do-it-yourselfers to do-itfor-me. As a result, our services have expanded — more landscape design and installation, more customized containers that you just pick up and put on your porch. Fewer people have the time to plant their own trees and shrubs because those people are working more. They don't want to be doing that kind of thing in their spare time. They want to enjoy their quality of life, but they want to have their yard look good, too. There's a competitiveness."

Weston Nurseries recently sold much of its acreage in order to restructure its business. This 700-acre site will be developed for commercial and residential uses as well as open space. The sale of such a large amount of land has been the focus of much attention from town officials and residents and has contributed to broader discussions about the character of the town. Karen observed, "Many people in town want more fine dining and nice shops, and I think that's why people are really excited about the development of the downtown. They don't want to drive outside of Hopkinton if they don't have to. People are willing to trade some development for a tax break and to support new amenities." Peter added, "They want a village center that is more upscale."



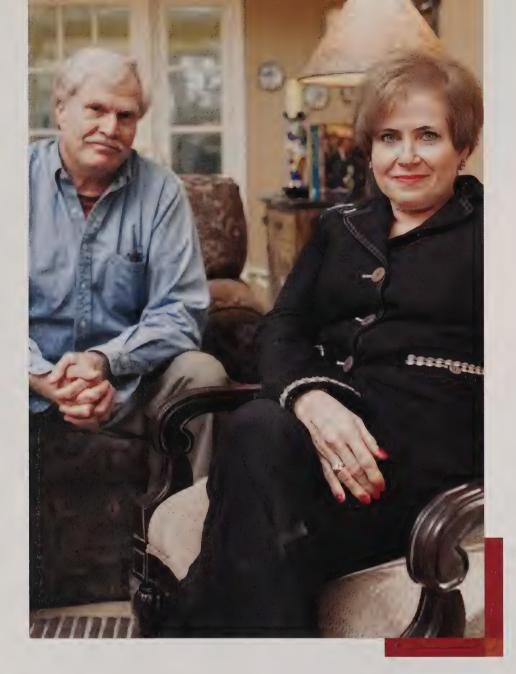
Burt, Alex, and Matt

On a recent afternoon, Burt, Alex, and Matt, three students from Hopkinton High School, were hanging out at the town's skatepark, within EMC Park. All three moved here from out of state their families chose to live in Hopkinton because of jobs and, in one case, to be closer to relatives. Although the town can seem too small, they agreed that it is a good place to grow up; one even states that he definitely plans on coming back after college. They like the fact that the town has places like the skatepark for kids but wish for a few more conveniences: "If you want to get something to eat, you have to drive to the next town over." Alex had positive things to say about the community at the high school: "It's not cliquey or anything like that movie *Mean Girls*. It's pretty good." Hopkinton has built new schools and athletic facilities in recent years to handle the increase in the student population; in turn, this has helped to make the town more attractive to new families. Burt, Alex, and Matt were all in agreement that Hopkinton is a great sports town: one yelled, "Go Hillers!" as I turned off my tape.

Lauren

Lauren Bassick has been cutting hair for 22 years in a busy shop in the town center, called The Razor's Edge. She took this job as a 19-year-old living in nearby Franklin and, since then, has seen the town grow: "It's changed a lot. Every town does." Even so, she runs a business that thrives on the familiar. "For the most part, the clientele that I draw in has stayed the same. Real, true, blue-collar, somewhat white-collar folks, just real good people." It's certainly a loyal clientele - as Lauren spoke, she greeted one customer who has been coming to The Razor's Edge since before Lauren bought the business from its previous owner. She knows a lot about her customers and talks to them as if they are all old friends; she has little patience with some of the newcomers in town: "They're very nice people, but it's almost like they come in with an entitlement attitude. I don't deal with that. That's not the kind of clientele I want. We're real people here." And her customers speak up: "You hear a lot of people talk, people who are on committees in town, trying to keep the town the way it is. So they'll fight hard to keep it that way." As a business owner in the downtown, she expressed concern about the traffic and the need for a downtown revitalization: "The traffic is crazy in this town. Try pulling out of this driveway at four o'clock in the afternoon to take a left. You can't. You just stick your nose out there and hope that somebody will be nice."





Bob and Judy

Bob and Judy Benson have lived in Hopkinton since 1976. Before retiring, Bob commuted to Boston to work as a civil engineer; Judy recently retired from her job of 35 years as a schoolteacher in nearby Framingham. Their original plan had been to retire on Cape Cod or in Maine, but instead they decided to add on to their home and stay in Hopkinton where they can be near family and friends. They live on North Mill Street, a designated "scenic road" that winds through the woods. The stone-wall- and tree-lined street is so narrow that you have to pull over to allow oncoming traffic to pass. This is part of what makes Hopkinton special to Judy: "To me, it was the perfect place to live. I always felt that Hopkinton was so bucolic, yet in a matter of 15 minutes you can get to somewhere that feels like a city, which is what Framingham started to feel like. I could always come back home to Hopkinton and this wonderful, quiet setting with the animals and the trees. It really felt like 'all is well.' And I think Hopkinton has maintained that character."

Bob, who also served on the planning board in the '70s and '80s, observed: "Hopkinton, in the 30 years that we've been here, has grown from what some may have called a hick town to a community that is more educated about and more aware of development issues. Development of all types is watched carefully. The demographics have changed somewhat since we moved here because, with the commercial and industrial development in other towns, more jobs have developed in the surrounding area. People who move to Hopkinton now don't have to work in Boston. They can find jobs in Marlborough or Westborough or even in Hopkinton."

Brian and Mary

Brian Herr and Mary Murphy came to Hopkinton eight years ago and have been very involved with the community. They first got to know the town by running in the Boston Marathon and previously lived in Natick, which Mary describes as developing "more of a city feel"; they were also concerned about its school system. Brian is the regional manager of a major electrical supply company - which means he travels frequently throughout New England — and was elected a town selectman last year. Mary, a former elementary-school teacher, started Hooray for Books in downtown Hopkinton, teaching reading and cooking classes to young children. Mary described their reasons for moving to Hopkinton: "It seemed to be a very up-and-coming town. It was just opening a brand new high school, and the town seemed to be investing a lot of money in education. We also liked that it had a small-town feel, but we felt it was a town that was going to move into the future." They have five children and have found Hopkinton to be a great place to raise a big family: "Hopkinton is an extremely familyoriented town and we have met a lot of really good people who have the core

values that are important to us: they work hard and care about the community, and they're very involved with their children."

They worry about the increasing cost of housing and taxes. Mary is concerned that seniors might be forced out — "a dangerous thing" — although they don't feel that pro-growth and antigrowth sentiments in town necessarily fall along newcomer versus oldtimer lines. The political climate in town is very energetic, and as a selectman, Brian is in the middle of the debates about the growth of the town. "The biggest problem is we want to have our cake and eat it, too. We want to have as many trees as possible and winding country roads, and we want to have great schools. But we don't want to pay for them. It's a no-win situation. You've got to increase the revenue somehow, or the schools are going to deteriorate. If the schools deteriorate, home values deteriorate, and it becomes a vicious cycle. We have to accept the fact that we have grown. We use the term 'rural character' a lot out here. But we're 25 miles from one of the hottest cities in the world. So there's not much that's really rural about it."



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Why Boston and Hopkinton Need Each Other

When you need to find a place for 300,000 new housing units, you need to plan.

by James C. O'Connell

Greater Boston's Metropolitan Area Planning Council (MAPC) recently launched a regional planning project to figure out where to locate 300,000 new housing units needed over the next 25 years. One of the most startling findings of the agency's MetroFuture Plan is that in communities along the I-495 corridor, where the greatest growth is expected to occur, the zoning for 80 percent of future housing requires lots of one acre or more. At this rate of consumption, it will be nearly impossible to build affordable middle-class and worker housing, preserve ecologically valuable natural areas, and locate residents close enough to public transit to make it a feasible transportation option.

Planners came up with this finding by analyzing the "buildout" potential for virtually every Massachusetts community. In 2002, the state estimated the potential additional development that could take place on each municipality's real estate under existing zoning laws — the "buildout." The zoning code of each community has created a DNA that narrowly shapes how future growth can occur.

According to this study, the development capacity of the region is close to reaching its limit. There is not a great deal of open developable land, often referred to as "greenfields," near the urban core or in much of suburbia. The total potential growth in housing units in the 180 communities of Eastern Massachusetts is 24 percent. The fast-growing I-495 corridor has some of the greatest development potential — 36 percent

growth and 60,453 new housing units. Meanwhile, the buildout of 45 communities in the region's inner core (not including Boston, since its buildout potential was too complicated to determine) would be 11 percent.

One of the I-495 towns with the greatest growth potential is Hopkinton. When Hopkinton became the starting point of the Boston Marathon in 1924, the town was distinctly rural and far beyond Boston's suburban belt. Only in 1980, did the US Census Bureau include Hopkinton in the Boston Standard Metropolitan Statistical Area (SMSA). Since then the town's population has grown from 7,114 to 14,172 (2006).

With 43 percent of Hopkinton's land still ripe for development, the town has the potential to double in size, adding 4,632 housing units and 12,599 people. This gives Hopkinton more buildout potential than most communities in Greater Boston and the I-495 corridor. These buildout projections indicate a development endgame, even though there are no fixed limits on development because zoning can be changed and greater density could be allowed.

Greater Boston is considered the first metropolitan region to be built out, according to Joel Garreau's influential 1991 suburban study *Edge City*. Garreau argued that Boston's growth opportunities have been constrained by the Atlantic Ocean on the east and that decades of suburban expansion have made easily developed land scarce. Now major cities constrained by coastlines, from New York and Miami to Los Angeles and Seattle, are struggling with buildout and the

Additional Housing Units for Some I-495 Communities at Buildout (Highest and Lowest Growth Rates)*

Community	Potential New Units % Growth			
Berlin	1,338	150%		
Bolton	1,740	118%		
Hopkinton	4,632	91%		
Framingham	3,227	12%		
Maynard	547	12%		
Chelmsford	1,053	8%		

Eastern Massachusetts Buildout Projections*						Additional Commercial/
Sub-Region	Number of Municipalities	Additional Population	Existing Housing Units (2000)	Additional Housing Units	Growth in Housing Units	Industrial Development (sq. ft.)
Greater Boston	45**	150,904	588,966	61,763	10.5%	129,740,906
I-495 Corridor	27	162,581	167,906	60,453	36%	194,832,460
Northeast	41	213,423	548,133	86,011	15.7%	235,610,488
Southeast	52	724,346	596,826	259,792	43.5%	117,964,732
Cape Cod	15	52,347	147,083	21,517	14.6%	9,019,568
Total	180	1,303,601	2,048,914	489,536	23.9%	687,168,154
*						

*Based on a 2002 study by Metropolitan Area Planning Council

**Not including Boston

Buildout projections — the total amount of development allowed by zoning codes — tell us how much communities are likely to change in the future.

imperative of increased density. Los Angeles has added so many new housing units that its density is twice as great as Boston's — 5,400 persons per square mile versus Boston's 2,700 persons. According to an MIT Center for Real Estate study, new houses in the West are typically built on one-quarter-acre lots, and new Southern homes are built on one-third of an acre.

Meanwhile, new homes in Hopkinton are being built on 1+-acre lots. Approximately 76 percent of developable land in Hopkinton is zoned for housing lots of 60,000 square feet (if cluster subdivisions are not built). The move to large-lot zoning has occurred during the past 15 years. The size of the average house lot has virtually doubled since 1990.

The development capacity of the region is close to reaching its limit.

Although the low-density development pattern gobbles up open space, local residents have favored it because it seems to maintain the community's traditional "small-town" character. According to a 2004 survey, Hopkinton residents continue to value its "rural nature," "wooded quiet acres that are nice for those who walk," "country atmosphere," and "small-town feel." The survey found that, after town center revitalization, the biggest concern is to "slow down residential growth." Residents fear that rampant development is "destroying the environment" and that additional housing is increasing school costs.

Buildout is also an issue of perceptions, not simply the zoning code. In this long-settled region, the essential character of most communities is considered to be fixed. Local residents are loathe to alter the zoning and buildout scenario of their communities.

In the meantime, the MAPC's MetroFuture Plan wonders if buildout under existing low-density zoning that consumes vast acreages of open land is environmentally and economically sustainable. Housing advocates fret that high housing costs are making the region less competitive and are exacerbating the growing income divide. They argue that restrictive local zoning regulations, particularly large-lot zoning, increase housing costs.

As a solution, MAPC posits "smart growth" models that strategically locate new development in compact, transitoriented neighborhoods and preserve large swathes of greenfields. MetroFuture developed four scenarios that the cities and towns of Greater Boston could follow. Each scenario entails varying levels of open-space protection and housing density, ranging from the loss of 150,000 acres of open space under current zoning to the loss of only 14,000 acres under the most radical conservation and high-density scenario. Under the scenario illustrating current trends, Hopkinton and other towns on the periphery would accommodate most new growth, mainly on single-family house lots. Each of the other three scenarios would concentrate progressively larger proportions of housing in existing centers, thereby preserving more open space in the I-495 corridor. After an extensive citizen outreach effort, MAPC has recommended that Greater Boston pursue an ambitious scenario that would consume only 36,000 additional acres of open space while building 50 percent of new housing in the Inner Core and Regional Urban Centers. The regional planning agency is developing an implementation strategy, which most likely will provide strengthened state incentives for Hopkinton and other communities to build more compact mixed-use developments and preserve more open space.

Los Angeles has added so many new housing units that its density is twice as great as Boston's — 5,400 persons per square mile versus Boston's 2,700 persons.

Even before implementing MAPC's smart-growth strategy, local communities have been rezoning land to accommodate compact mixed-use residential development, after decades of separating housing from commercial and industrial activities. With state funding, communities are cleaning up "brownfield" sites for infill development and the conversion of underutilized industrial buildings. Since 2000 in Eastern Massachusetts, more than 90 projects with over 26,000 residential units have either been built or are planned within a quarter of a mile of a transit station. New state programs referred to as Chapters 40R and 40S pay communities a density bonus per unit and education costs for new students for allowing dense housing in designated growth centers.

In Hopkinton, Town Meeting recently voted to allow housing to be built above commercial space in the town center. In 2000, the town established zoning for cluster-housing, called Open Space and Landscape Preservation Design (OSLPD) subdivisions. Under this zoning, developers of parcels larger than 10 acres are required to preserve at least 50 percent of the land as open space, while building houses on smaller lots. Since 2000, 10 cluster subdivisions have been built, preserving 197.5 acres.

Yet further land-use reforms are on the horizon. The Massachusetts Municipal Association cites the need to get rid of the "minefield of exemptions, prohibitions, and zoning freezes" in state zoning laws that prevents municipalities from controlling sprawl and transforming their current buildout trajectories. Currently, municipalities may develop master plans that propose a future growth scenario, but often they never translate the master plan into new zoning. Massachusetts is one of the few states that does not require master plans and zoning to be consistent. Zoning "freezes," often referred to as "grandfathering," can allow property owners to block zoning changes for up to eight years. Hopkinton's town planner, Elaine Lazarus, says that the threat of grandfathering often discourages her town from considering rezoning. The Massachusetts "Approval Not Required" subdivision law allows developers to build houses along any road without having to obtain local approval, encouraging development to occur in an unplanned, sprawling fashion.

The broad-based Zoning Reform Coalition, which includes municipal officials and planners, has been promoting passage of the Community Planning Act (CPA-2), which would require community master plans to be implemented in the zoning code, shorten zoning "freezes," abolish Approval Not Required subdivisions, and provide municipalities with more flexible planning tools. The Community Planning Act could cope with buildout by encouraging rezoning for more compact development and the production of more affordable housing.

The debate about buildout in Greater Boston will continue for years to come. In Hopkinton, the big question will be whether to develop its projected 4,000–5,000 new housing units on spread-out 1+-acre lots under current zoning, or to shift development to denser configurations that preserve more open space. More than some of its neighboring communities, Hopkinton has recently promoted broad public discussions about growth, town character, and quality of life. Only one thing is certain: communities cannot avoid grappling with growth-related change.

James C. O'Connell is a community planner at the Boston office of the National Park Service. He teaches smart-growth planning at the Boston Architectural College and chairs the Massachusetts Zoning Reform Working Group.

For more information:

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One solution to the affordablehousing dilemma might be hidden in your garage or attic.

Affordable, diverse, sustainable. The goals for new housing in suburban communities are neither new nor unique. The quest to relieve development pressures on the suburban landscape is not an easy one, but it does require looking critically at new land-use and housing options — and even revisiting some old ones. One such option is the Accessory Dwelling Unit (ADU). Though their potential remains untapped, ADUs provide a highly viable and minimally intrusive — mechanism for addressing critical housing needs.

ADUs, more commonly known as "in-law units" or "granny flats," are secondary housing units on the same property as the primary residence and are usually subordinate in size, location, and appearance. They can be apartments that are embedded within or attached to the primary residence or cottages located separately on the main lot. These accessory units are not a new invention. Prior to World War II, they were relatively common, often rented to boarders after the homeowners' children moved out. However, in the explosive growth of the suburbs that followed the war, many of the zoning ordinances passed were more focused on addressing the needs of the traditional nuclear family, often resulting in the prohibition or strict restriction of ADUs.

This deference to the traditional nuclear family is in part what makes the debates around suburban development so complex today. The demographics of the suburbs are changing. No longer are the suburbs strictly the domain of

+income

the traditional nuclear family. The 2000 Census revealed that singles, elderly couples, and multi-generational families represent a greater percentage of the suburban population than married couples with children - a trend that will continue to figure prominently in the future of the suburbs. With an estimated 78 million baby boomers entering the 60-69 age range — currently the fastest growing household type — over the next two decades and polls consistently showing that 80 percent or more of older households would like to remain in their homes, "aging in place" is set to have a profound effect on the suburbs. The trend toward multi-generational housing is also likely to continue. Foreign-born households also represent one of the fastest growing household types in the suburbs, and a Brookings Institution study found that many new immigrants are moving directly to the suburbs — already home to nearly half of all immigrants in this country. This is significant because the last census revealed that multigenerational households are more likely to occur in areas of recent immigration.

These demographic shifts point to the increasing need for flexible housing options, something that ADUs are primed to address. They can provide both the older and single populations with the additional income necessary to make living in the suburbs financially feasible. Additionally, they can provide the elderly with the support — either financial or through onsite caretakers — needed to enable "aging in place." And by adding a unit to the traditional single-family house, ADUs can allow the existing suburbs to be more accommodating of the diverse needs that the increase in multigenerational households brings.

ADUs also have the potential to address issues of sprawl and affordable housing. Accessory units can offset some of the decline in the nation's rental stock and provide housing that

Photos by Ruediger Baun (left) and Jennifer Nickert (right). Agency, Dreamstime.com (both).

Not Just for Grannies Anymore: The Case for Accessory Dwelling Units by Liz Ogbu

allows townspeople and workers, including young people, to remain in their hometowns. Significantly, they offer a solution to two of the underlying factors in the affordability dilemma: high land costs and lot restrictions. Sited on previously developed land, ADUs can increase the supply of housing without consuming additional land or requiring additional infrastructure.

Despite this potential, the development of ADUs is still limited. They are generally at the discretion of municipalities, often treated legally as "a conditional use." The process of public hearings and permitting is usually so onerous that the process itself becomes an effective barrier to homeowners and homebuilders interested in building such units. Opposition to ADU ordinances is often rooted in the fear that they would trigger the rampant development of accessory units, bringing with them significant problems: decrease in property values, change in neighborhood appearance, increase in parking and traffic congestion, renters in single-family neighborhoods, prevalence of absentee landlords, and increased density.

These concerns are not insurmountable, and the experience of one community demonstrates some effective ways to address them. Since 2001, the City of Santa Cruz, California, has been a pioneer in looking at the potential of ADUs. To city officials, ADUs offered a way to create much-needed rental housing stock as well as provide an additional income for homeowners that could help them remain in their neighborhoods in the face of skyrocketing housing prices. In 2002, the City Council passed an ordinance to provide both regulatory relief and incentives for ADUs.

With the assistance of a state grant, the city created a more comprehensive ADU program the following year. The program has been widely successful, garnering a great deal of community support and a five-fold increase in the number of permits issued. This success is rooted in its three primary components: regulatory changes, homeowner assistance, and community education.

The regulatory changes addressed many of the fears often cited about ADU development. New design standards ensure that the ADU is visually subordinate to the primary residence, and size restrictions ensure that the unit is not out of scale with the primary residence or the neighborhood. Parking requirements were modified to address the needs of urban neighborhoods. Perhaps most importantly, the city requires that homeowners live either in the main house or the ADU.

Homeowner assistance comes in the form of both financial and technical aid. The city offers both loans and fee waivers for the permitting process. Manuals, available in print and online, guide homeowners through basic information about ADUs as well as design options. In 2005, the city commissioned seven architecture firms to design prototypes reflecting possible configurations; this was followed by a more detailed *Garage Conversion Manual*.

From the beginning, marketing and public participation has been a crucial aspect of the success of the Santa Cruz program. The city viewed this process as a means of helping the public understand the benefits that these units might provide as well as airing public concerns and addressing them during the regulatory process. In making community education a core part of the program, the city was able to minimize much of the public opposition.

The Santa Cruz initiative was closely followed by a statewide effort to encourage the development of accessory units. In 2003, California amended its accessory-unit legislation. The new law, AB1866, mandates that the permit process for these types of units be ministerial, meaning that rather than submitting ADUs to public hearings and discretionary approval, they must be Accessory Dwelling Units can increase the supply of housing without consuming additional land or requiring additional infrastructure.



+affordability

allowed "by right" — as long as they meet objective standards defined in the local zoning code. Several cities, such as Santa Cruz, Daly City, and Carlsbad, have taken significant steps to bring their local ordinances into compliance with the law and, in some cases, have championed it as a means of addressing affordability and sprawl issues. In addition to California, the states of Washington, Oregon, and Vermont have all taken steps to increase ADU development through state legislation.

Unlike these states, Massachusetts has no statewide mandate for municipalities to develop accessory-unit legislation. Many municipalities do have some legislation governing ADU development, but laws vary from outright bans to "by right" to "conditional" or "discretionary" approval. However, in 2002, the state did amend Chapter 40B, its Comprehensive Permit Law, to allow accessory units to be counted toward the 10-percent affordability goal set forth by the state's Department of Housing and Community Development for municipal housing inventories. The amendment has not necessarily made it easier to develop ADUs. Ordinances and bylaws governing ADUs are still at the discretion of individual municipalities. Along with income restrictions, there are often affirmative marketing and longterm deed restrictions that many homeowners balk at.

Some Massachusetts communities, such as the town of Barnstable, have successfully used accessory units to increase their SHI (Subsidized Housing Inventory — the list of affordable units counted toward the 10-percent affordability goal). In other communities, accessory units cannot be included on the SHI because they are not deed-restricted. One such case is Hopkinton, which allows "Accessory Family Dwelling Units" — a form of ADU akin to the familiar granny flat: size-restricted units (up to 800 square feet) for people over 60 years old or family members, within single-family, owner-occupied dwellings, subject to a special permit. Since the bylaw's adoption in 1993, over 30 units have been built.

Some communities have met their affordability goals but still encourage ADUs, in part to continue to address affordability. The town of Lexington, where 11.3 percent of the housing stock meets affordability standards, altered its ADU bylaw in 2005 to ease the process of development. The changes allow homeowners who meet certain standards governing the age of the primary residence and minimum lot size, to build ADUs by right; units that don't meet the specified standards may still qualify through a special permit. Maryann McCall-Taylor, director of the Lexington Planning Department, notes that when the bylaw changes were initially proposed, there were fears that the amendments would "open the flood gates" and change the character of the town. But radical change in neighborhood character has not come to pass, and the Lexington Housing Partnership is considering more proactive efforts to make more residents aware of the policy.

ADUs will not be a panacea to the development problems faced by many suburbs. But the potential of their impact should not be underestimated. They are inherently flexible and intrinsically affordable. Sometimes, some solutions to the most daunting problems can be found in your own backyard.

Liz Ogbu is a designer and project manager for the nonprofit Public Architecture in San Francisco. Public Architecture directed the *Garage Conversion Manual* project for the City of Santa Cruz, a collaboration with Race Studio.

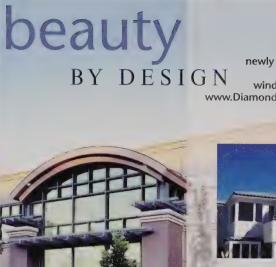
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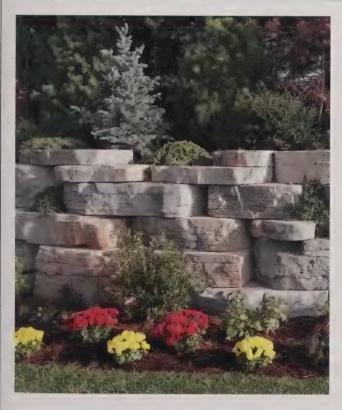
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BUILDING SUBURBIA

Dolores Hayden talks with Jeff Stein AIA



The American Dream of a house and yard and picket fence was no accident.

Dolores Hayden is professor of architecture, urbanism, and American studies at Yale University. She has written extensively about the history of American urban and suburban landscapes and the politics of design. Her most recent books include *Building Suburbia: Green Fields and Urban Growth, 1820–2000* (Pantheon Books, 2003) and *A Field Guide to Sprawl* (W.W. Norton, 2004). Her earlier books include *Seven American Utopias: The Architecture of Communitarian Socialism, 1790–1975* (MIT Press, 1976); *The Grand Domestic Revolution: A History of Feminist Designs for American Homes, Neighborhoods, and Cities* (MIT Press, 1981); *Redesigning the American Dream: Gender, Housing, and Family Life* (W.W. Norton, 1984, revised ed., 2002); and *The Power of Place: Urban Landscapes as Public History* (MIT Press, 1995). She is also an award-winning poet. (www.doloreshayden.com)

Jeff Stein AIA is head of the School of Architecture and dean of the Boston Architectural College and is the architecture critic for *Banker & Tradesman*.

Paintings by Jason Brockert, from his series *Suburbs, American Landscape*, and *Malls*. (www.jasonbrockert.com) **Jeff Stein:** You have been credited with introducing a British term, "the built environment," into the American lexicon. The phrase wasn't used much here before you popularized it.

Dolores Hayden: I spent a fair amount of time in England in the 1970s and was familiar with British scholarship on architecture and planning, including the built environment. The term seemed to encompass many things that were not often included in the word "architecture." So when I started teaching at UCLA in 1979, I introduced a program within the urban planning department that we named "The Built Environment." It allowed graduate students to concentrate on land use, physical planning, vernacular architecture, and all of the social and political questions about built form — which were not necessarily the same questions that would be addressed by someone getting an architecture degree.

Jeff Stein: What in your experience led you to this interest? You're educated as an architect, and yet the focus of your work — urbanization, suburbanization, and related issues of class, race, and gender — seems really to be at the core of the American experiment.

Dolores Hayden: I studied architecture at Harvard, where my professors included JB Jackson and John Coolidge, and later became a licensed architect. But along the way, I realized I was

interested in the larger political and social questions that could be asked and answered through detailed analysis of land use and vernacular building. I began to see that it was possible to write a different kind of history, not urban history in a quantitative sense and not architectural history in an aesthetic sense, but a larger social and political history of the built environment. It was a neglected subject at the time, although there are hundreds of younger historians pursuing this kind of work today. Some of them have been my students at MIT, Berkeley, UCLA, and Yale. My first book was a study of 19th-century towns founded by communitarian socialists, who thought of the model town as a vehicle for political change. I studied places like the Shaker village in Hancock, Massachusetts, and Llano del Rio outside Los Angeles, an early 20th-century socialist colony.

Jeff Stein: Many of those communities seem to have been successful on their own terms for a short time, yet none really became the model for a larger American culture.

Dolores Hayden: The Shakers were successful for many years. And some of the other communities lasted as long as 90 years. They tried to combine agriculture and industry and to think about the implications of housing arrangements — they were struggling with complicated questions about how people could form a community and live together. In that sense, they were not unlike the earlier Puritans in New England who founded the covenant communities grouped around village greens.

Jeff Stein: You suggest in one of your books that the Puritan notion of common land is the oldest and best model for land use that we have in America.

Dolores Hayden: Yes. Many of these traditions were quite influential up through the early 1940s. And of course, the Garden City movement, which was founded in England at the turn of the 20th century, had some communitarian roots as well. The Greenbelt towns that were developed in the Roosevelt New Deal era are another example of that influence. What I find fascinating is that many people who are proponents of neo-traditional development today often cite the Greenbelt towns or the Garden City as precedents, but fail to acknowledge their political roots. The builders of those communities were very different from developers today, who tend to look at the physical questions but not the social ones.

Jeff Stein: You have had, in some of your work, an interesting relationship with aerial photographers. In *A Field Guide to Sprawl*, every essay is illustrated with Jim Wark's photographs; and you've lectured with Alex MacLean, whose images also appear in *Building Suburbia*. JB Jackson called aerial photography "a frank and distant way of seeing one's surroundings." Is that why you use aerial photography, to get distance?

Dolores Hayden: When I first began this work, I wanted to find images that reflected the new scale of building occurring outside cities. With an oblique aerial photograph, taken from a fairly low altitude, you see the buildings, their massing, and the surrounding

landscape. It reveals the context. And the public understands these images. People often can't read planning maps, for example, and zoning diagrams are often very abstract and confusing, deliberately so in some cases.

Jeff Stein: Aerial photography can also be horrifying — it shows relationships that we on the ground don't experience. In *Building Suburbia*, you wrote: "For over 200 years, Americans of all classes have idealized life in single-family houses with generous yards, while deploring the sprawling metropolitan regions that result from unregulated residential and commercial growth." With an aerial photograph, you begin to see the pattern, not just the house and the yard, but what happens when there are dozens, hundreds, even thousands of them.

Dolores Hayden: I think it's very important for Americans to try to understand the relationship between a house and a yard in the suburbs and the way in which metropolitan regions have been extended throughout the last 70 or so years. More Americans live in suburbs than in inner cities and rural areas combined — but people don't fully understand how this has come to be the national pattern.

Jeff Stein: As you write these books, which enable others to explore and understand this tradition of American land use, you're making tools — if knowledge can be considered a tool. Do you see your work that way?

Dolores Hayden: With Building Suburbia, I tried to give planners, landscape architects, and architects the long view of how American metropolitan movements have been shaped, by tracing the development of seven archetypal suburban landscapes. The federal government entered the world of real estate development in the 1930s after heavy lobbying by the real estate community during the Hoover administration in the 1920s. The government's participation included a variety of subsidies, often working through tax codes, which were incentives for greenfield development - the consumption of raw land. Then in the late 1940s, greenfield development began to take on new intensity, with urban-scale subdivisions built for up to 80,000 people, but without any serious infrastructure. Levittown, on Long Island, was built without a sewer system. So there was a complete abandonment of commitment to the public good and a tremendous commitment to suburban growth, which the federal government subsidized in ways that are not very obvious to the average homeowner, and often not even obvious to the average person thinking about policy, because many subsidies are not in the national budget.

More Americans live in suburbs than in inner cities and rural areas combined. *Dolores Hayden*

Jeff Stein: You coined a term for one of those archetypal landscapes — the "sitcom suburbs" — which is really powerful. Beneath its glibness, it describes the notion that people in the '50s could essentially watch themselves on TV. And television shows and movies in effect marketed and promoted this sort of suburbanization.

Dolores Hayden: Yes, they did. But what is most important to understand about the sitcom suburbs is that the mortgage arrangements were usually restricted to white, male-headed families. Women could not get mortgages, and people of color were denied mortgages in white subdivisions. So there was tremendous segregation going on, which is discussed well in a new book called *Colored Property* by David Freund. He lays out just how much the mortgage system was promoted to white men as a way of saying, This is something you've earned. This is something that's available to you but will not be available to other adults in this society who are women and people of color.



Jeff Stein: Even beyond that, as you mentioned in *Building Suburbia*, the suburban dream, from the beginning, conflated piety and gender-stereotype family values. You wrote: "The ideology of female domesticity, developed in the US during the same era when suburban borderlands were still attracting settlers, elevated the religious significance of women's work, defined as bearing and rearing children in the strong moral atmosphere of a Protestant home set in a natural landscape. The single-family house was invested with church-like symbols as a sacred space where women's work would win a reward in heaven. Catholic and Jewish immigrants also tied domesticity to religion." Yikes.

Dolores Hayden: Surprises you, does it?

Jeff Stein: Not exactly, but it really cuts to the core of a certain political and religious ideology in America. It makes you realize that suburbanization and sprawl— an American dream focused on houses rather than neighborhoods— are not an accident. All

levels of our culture came together over a long period of time to make this happen. You mention that bankers, speculators, developers, and builders have been a powerful force throughout American history as the producers of the built environment, but it's more than that — there was this theological imperative that set the stage for them.

Dolores Hayden: Yes. And you find evidence of it in sometimes surprising places - such as a 1910 Sears catalogue for mail-order houses that included the statement "To get the most out of life as Our Creator intended it to be, A HOME OF YOUR OWN IS AN ABSOLUTE NECESSITY." It's important to remember that back in the '50s and '60s, there was a good deal more of this sort of language, but it stretched all the way back to the 19th century. Very few urban historians have focused on it, just as they haven't really focused on gender. So much of the writing about cities for many years has been a glorification of urban sophistication and civilization. The suburbs were thought to be unimportant and banal, as were the related gender questions. One of my students recently wrote a marvelous senior essay on misogyny in 1950s suburb-bashing. She found male critics not only attacked suburbs as banal. They also attacked suburbs as dominated by women and children — a "man-less matriarchy." She had a lot of fun with that.

Jeff Stein: Your interest in the language of history seems to have led to your most recent book, *A Field Guide to Sprawl*. It's an illustrated lexicon of terms — clustered world, ground cover, mall glut, noise wall, zoomburb — that categorizes conditions here at the beginning of the 21st century.

Dolores Hayden: It's a devil's dictionary of bad building patterns. I was attracted to some of the builders' slang, and thought that the federal and local subsidies behind some of these building patterns could be identified in the context of a dictionary in which everything would be illustrated with aerial photographs. I look at the last three landscapes discussed in *Building Suburbia* and bring the scale down from settlement type to building type. Many people who perhaps would not pick up a nonfiction book about the history of suburbs would pick up the *Field Guide to Sprawl*.

Jeff Stein: So here you're not just a historian but also a critic. You have an attitude.

Dolores Hayden: Anybody who's a good historian looks at multiple sides of the culture. The reason I'm in American Studies at Yale is that I am a cultural historian — focused on the built environment. I come at this in the tradition of many people who have written about 19th- and 20th-century economic, social, and physical development, with an emphasis on everyday landscapes. I'm interested in a full understanding of what happens to ordinary working people. And that ultimately brings a political and critical perspective.

Jeff Stein: It sounds as though you are pioneering an approach like critical legal studies for the disciplines of architecture and urban planning.

Dolores Hayden: There's certainly some parallel. But people in American Studies are also interested in the question of how some of our practices in the US have affected people in other countries, and how people in other countries have affected what we're doing here. One of the things that's certainly notable is that we've exported many of these sprawl patterns across the globe — you can find sitcom suburbs in Asia and Europe, and you can find big-box stores all over the world.

Jeff Stein: I wonder if this whole pattern of land use is part of what we call "the exporting of democracy." William Levitt said, "No man who owns a house and lot can be a communist." That seems to be an ideological stand that American politicians, the government, and developers have taken toward land use here in this country, which is supported by a structure of government subsidies.

Dolores Hayden: I think the most important question about the government's role in land use is that structure of subsidies — where public subsidies for private real estate are available and who can access them.

Jeff Stein: One of the biggest subsidies, of course, is transportation — providing access to the land.

Dolores Hayden: That's the one that most people understand. The federal government had been building roads since about 1916, but in the Eisenhower era, we began the ambitious Interstate Highway System. By the time the 1956 act went through, there was a huge amount of money in the pipeline funneled to state highway departments. But what people don't understand is that, before 1956, many other subsidies had already fallen into place. One that was particularly significant was accelerated depreciation for greenfield commercial property, beginning in 1954. If you wanted to build a mall or an office building or a fast-food place, you could depreciate that building in seven years rather than several decades. It created a huge bonanza for people in speculative development, especially outside the existing suburbs and on raw land.

Jeff Stein: What was the purpose of doing that? Was it a way to put some energy into the economy?

Dolores Hayden: The Eisenhower administration and the real estate lobby felt that the consumption of single-family houses by white, male-headed families had been maxing out; this was their response. It would have been possible, certainly, to think about subsidies that would promote multi-family housing in cities, which would have housed female-headed households or people of color more effectively, because there were many people being displaced by urban renewal in those times. But instead, the subsidies were funneled to greenfield commercial development. And that was a definitive moment in changing the shape of metropolitan regions.

Before that, other significant subsidies came into play. The FHA and VA mortgages were mortgage insurance from the federal government that enabled banks to give large production advances to builders for subdivisions — loans of sometimes 90



percent or more. It was a huge boost for large-scale developers. This was the moment when the US shifted from the model of many small, local builders to today's model of a few big ones producing much of the housing stock. I should say that New England is a bit of an anomaly in that it still has many small builders doing a few houses a year.

Jeff Stein: One unintended consequence of these subsidies is that they produced a pattern of development that is unsustainable in terms of energy use. Many people, including many architects, believe that most existing buildings are obsolete in this energyhungry era. But the notion of obsolescence goes beyond individual buildings to the whole question of land use.

Dolores Hayden: There are two ways you can approach that question. One is to say it's necessary to tear down everything and build it again, more efficiently. Another is to say hold on, it's time to look much harder at how to save and update older buildings. It's especially important to try to save the scale of older town centers. This is where people find a sense of place. The US has never been as firmly committed to historic preservation as Europe. It's time to work a lot harder to provide incentives for saving these buildings.

Jeff Stein: And not just for their picturesque or historic quality, but also because of all of the material and energy embedded in them. Is this notion of preservation a part of what some people are calling "smart growth"?

Dolores Hayden: I really prefer the term "fair growth." It emphasizes the importance of looking at who is benefiting from growth and who is not. People need to understand the idea of the growth machine, which is a political alliance of developers, land speculators, and the political officials who are their allies, who believe that the best thing you can do for any town or city is to see it grow. The growth machine right now is likely to be promoting big-box stores, more highways, more parking. The growth machine in the 1820s might have been a farmer who wanted to sell some pastures and a steamboat operator who brought prospective buyers to the farmer and received a commission for each customer he delivered. At the end of the 19th century, we had people who owned the transit lines and ran streetcars out to subdivisions that they had just built at the end of the line; that's the familiar scenario of urban corruption in the late 19th century. We have the same kind of growth promoters in our own time; they work very systematically and are often aggressive lobbyists. The real estate lobby is probably second only to the defense lobby in this country, and that's been true since the 1950s.

Jeff Stein: The trouble with growth machines is that they don't address the evidence from other life forms — say, a tree or even the human body — which suggests there's a limit to growth, or that beyond a certain point, growth becomes a problem. We call it gigantism.

Dolores Hayden: And of course, the growth advocates are the ones who don't want anything preserved. They don't see the necessity for preservation. Architects have to ask themselves, as do landscape architects and planners, how much they care to be allied with the growth machine. Frequently the growth machine includes developers who are potential clients and who really disapprove of those who are involved in environmental protection and architectural preservation.

Jeff Stein: In one of your books, you quoted a reporter who interviewed Til Hazel from Fairfax County, Virginia, and pointed out to him that Fairfax County was losing 28 acres a day to

development. Hazel responded, "The land is a resource for people to use and the issue is whether you use it well. Is the goal to save green space so the other guy can look at it?"

Dolores Hayden: Hazel was a veteran of decades of legal wrangling over land use. He said, "It's a war. How else would you describe it?" Many people do use the term "war" or "battleground."

I think every American should understand how to read the landscape from the ground and from the air. Once taxpayers have seen the physical patterns and learned about the subsidies behind them, they will begin to ask political questions. If we had a nation of people who really understood how to read the landscape, things would be very different. It would affect how people vote on these issues and ensure that the issues were put on a ballot instead of handled under the table.

Jeff Stein: Yet these things seem to evolve. Land use, at least in this country, doesn't change through political revolution, and it doesn't quite seem to be the result of revolutions in thought. So what do you think about the future of land-use planning?

Dolores Hayden: There's a very strong pro-growth emphasis in much writing about the built environment, which will continue to have influence in the media and in our culture. Many authors take the celebration of growth as their story line. You find it in books about real estate, books about planning, books about architecture.





Jeff Stein: You can find it in education, too. We now have 118 architecture schools in North America, and all of those graduates are imagining they're going to design new buildings, which are the basis of the curricula in architecture schools.

Dolores Hayden: The architecture students at Yale take a course in professional practice at the very end of their program. One came to me and said, "Professor Hayden, the instructor in the professional

practice course just told me that 75 percent of the work in architecture is preservation and renovation, not new construction." This was a total shocker in the third year of this student's training. Maybe part of the solution is to be quite up front early on about many different aspects of the built environment, including the preservation of cities and older suburbs, and to talk about opportunities in architecture more accurately.

But perhaps there are always blind spots in education. Looking back, I'm really astonished at the kinds of things that the Harvard faculty in the late 1960s and early 1970s did not think to teach my generation of architects and planners. We learned nothing about the mechanisms behind the postwar building boom, either on the residential or the commercial side, for example. No one explained why suburban expansion combined with inner-city demolition and renewal so often disadvantaged both women and people of color. The faculty back then never spoke about their generation's acquiescence to the real estate lobby or their promotion of urban and suburban projects that were ultimately wasteful of land and energy — and so now we ask with real puzzlement: what were they thinking?

In *Building Suburbia*, I used everything I have learned since my days as a student to tell the story of metropolitan expansion and the influence of growth machines — each one larger in scale than the last. It's a story many architects think they know. But you can't really understand the design of the American city and suburb until you understand the politics.

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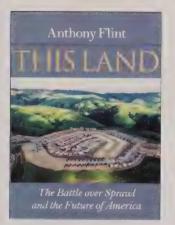


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THIS LAND: THE BATTLE OVER SPRAWL AND THE FUTURE OF AMERICA by Anthony Flint The Johns Hopkins University Press, 2006

Our nation is sprawling. By 2050, there will be 120 million more Americans, and all of them will need places to live. But where and how? The choices before us and the seldomtold story of the competing forces arrayed to battle over these questions are the subjects of *This Land*. On the one side are "smart-growth" advocates who, concerned about the negative impacts of suburban sprawl, urge more compact living patterns. Arrayed against them are the "don't tread on me" property-rights advocates and the NIMBYs who resist new growth, particularly if it's anywhere near them.

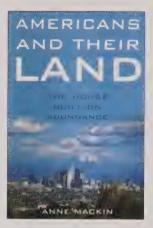
Flint provides a historical perspective on how we became a suburban nation. From the outset, a Jeffersonian anti-urban predisposition prevailed. Flint hammers home that our sprawl patterns are not just the result of consumer preference for the suburban life. They are also the direct result of real estate and auto-industry lobbying and government policies — including outdated zoning, the subsidized highway program, tax policy, and mortgage approval criteria that favor "low risk" suburban areas.

Flint then reviews all the familiar societal consequences of sprawl: traffic congestion; energy consumption; unaffordable infrastructure; race barriers to homeownership; a voracious consumption of land; environmental degradation; and increased social isolation. He also reminds us of suburbia's enduring appeal: a consumer preference for more space, less density, safety, quiet, and better schools. Clearly, these preferences are often starkly at odds with the collective good — a classic American conundrum.

Given these counter-tendencies, acrimonious political skirmishes between smart-growth advocates and their adversaries still rage. With the easy-flowing, narrative skill of a journalist, Flint describes these battles. He reminds us how General Motors, Firestone, and Standard Oil bought up and then dismantled the extensive trolley-car system that once weaved through Los Angeles - thereby deliberately setting LA on the road toward the auto society it has become. He tells of the precipitous fall of the "Growth Limits Boundary" movement in Oregon, which is seen as a significant win for propertyrights advocates. He then tells of the recent bitterly fought New London, Connecticut, "Kelo" Supreme Court decision, which ruled that local government can take homes by eminent domain simply to enhance economic value - a defeat for those same property-rights supporters. So the fights continue.

Looking forward, Flint believes that the smart-growth movement, to be persuasive, must become a better champion for increased consumer choice, rather than an advocate for more government restrictions. He is not optimistic, however, that Americans will choose societal interests ahead of their own consumer preferences for suburbia. Only when the consequences of sprawl approach intolerable levels, Flint argues, will the market finally encourage a change in consumer behavior that favors more compact living. Sadly for most smart-growth advocates, it seems that neither thoughtful arguments nor outright scolding will have much effect until then.

Lawrence Bluestone AIA is the principal of BPG/Bluestone Planning Group in Cambridge, Massachusetts. He is a past president of Move Massachusetts.



AMERICANS AND THEIR LAND: THE HOUSE BUILT ON ABUNDANCE by Anne Mackin University of Michigan Press, 2006

Each generation seems curiously invested in the uniqueness of the challenges it faces. This is certainly true of our ongoing dilemma about the suburbs, refracted in the current sprawl debate. Though it seems indelibly contemporary, the debate is just the current manifestation of a much deeper duality about land use, with its tendency to foster privacy and prosperity at the expense of community and responsibility. Boston writer and planner Anne Mackin, in her engaging book *Americans and Their Land*, reveals how old the seeds of this debate actually are.

Mackin frames current US land-use disputes, from the debate over water rights in the West to the "civil war" over landuse regulation in burgeoning Loudoun County, Virginia, in the context of the country's unique settlement history. Weaving together a variety of historical and contemporary sources with personal experiences, she explores how the beguiling idea of land as a limitless resource on the American frontier has shaped American values in ways that make the current sprawl debate so exquisitely contentious.

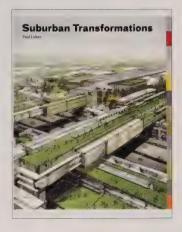
This frontier abundance nurtured the notion that individual freedom, equality, and economic well-being could be achieved by unleashing private initiative and that land exploitation therefore served

the public interest. Mackin gives an absorbing account of the early settlement of Ohio, describing the crucial role of the national government in adjusting the disposition of federal lands to encourage settlement, leading to a strong undercurrent of land speculation. Speculators were unscrupulous, but they laid out new towns and financed the roads, canals, and railroads to reach them, helping settlers fashion a civilization out of the wilderness. In a similar vein, Mackin describes how housing developers a century later built the tract subdivisions that satisfied post-World War II housing demand, but also attempted to influence federal housing legislation and stifle reforms.

In fact, as Mackin poignantly observes, encouraging the economic self-interest of risk-takers, which has served such an essential social function in our history, has always had a dark side: heedless exploitation, which depletes resources and concentrates wealth. Chapters on Progressive-era Cleveland mayor Tom Johnson and land reformer Henry George and on contemporary affordable-housing advocates illustrate efforts to counterbalance these harmful side effects.

It turns out that our historical habits are hard to break, even though they are particularly ill-suited to current circumstances of increased population density, scarcity, and environmental degradation. And what may have begun as thoughtlessness has now hardened into active resistance to setting new rules, exemplified in the property-rights movement. Though Mackin clearly sides with the reformers, she avoids the stridency of anti-sprawl activists. Rather than offering a prescription for specific reforms, Mackin implicitly acknowledges that it is no simple thing to harness the unquenchable force of private initiative to better serve the public interest but insists, nonetheless, that we can do better.

Matthew J. Kiefer is a land-use attorney at Goulston & Storrs in Boston. He teaches in the urban planning program at the Harvard Graduate School of Design.



SUBURBAN TRANSFORMATIONS by Paul Lukez Princeton Architectural Press, 2007

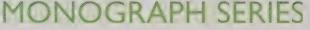
In concluding Suburban Transformations,

Paul Lukez asks: "Can we begin to transform the banal into the sublime, and in the process remedy the pathologies of present day suburbia?" Lukez thinks we can, and this book is his strong argument to prove the point.

That suburbia requires change is



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assumed. In his foreword, Anthony Flint suggests that transforming existing suburbs into "more habitable cohesive places" will be the highest priority for urban designers in the 21st century.

Yet this book is not just for urban designers. The handsome jacket proclaims that this is "a work of theory and a practical tool." The text is accessible, graphics and production are high quality, and the layout is organized for easy browsing. The book aims at an audience beyond academe.

Although not divided into sections of theory and practice, the book can be read this way. Lukez, an architect and assistant professor at MIT, offers a theory of suburban transformation founded on his belief that "engaging time in design is what creates a strong sense of identity," and that identity is the basis for meaningful transformation. He cites Jung and Norberg-Schulz to explain identity's role in orienting us in the world, providing a rationale to focus on urban form.

To foster suburban identity, Lukez proposes a set of intentional operations:

reading(analyzing); writing(constructing); and erasure (removing). Erasure and writing operations (for example, "excavation" and "infill") can be combined to create more complex recognizable forms-"hybrid typologies" — that also incorporate the passage of time. Thus, typologies provide a shorthand tool for analyzing a site, documenting its history, and suggesting future possibilities. At this point, academics and practitioners may drift apart. Forestalling this, a fundamental message comes through: development that respects carefully selected physical traces of site circumstance can evolve over time into rich and identifiable suburban environments.

Theory begets application in Lukez' "adaptive design process." This process relies heavily on mapping for collecting information and cross-mapping (derived from Ian McHarg's mapping overlays) to identify hidden site relationships. Next, a "useful history" for the site is determined through evaluation and editing. Thus armed, a designer can propose development strategies, for which Lukez includes a useful tool set of building typologies. Studies of the edge city of Burlington, Massachusetts richly illustrate the process, providing examples of mapping techniques and figure-ground "spatial models" that suggest alternative build-out scenarios developed over time.

Rounding out the argument are five case studies. Ranging from Burlington (further developed), Dedham, and Revere Beach to Amsterdam and Shenzhen, China, they vary in scope, detail, and vision, but are united in applying the "adaptive design process" to create design projections grounded in site history that can be implemented over time.

Suburban Transformations is a valuable contribution to urban-design discourse; one hopes that a future edition can provide additional case studies of actual projects, tested with real constraints in real time.

Tom Parks AIA is an architect in Boston and assistant director of the Distance Master of Architecture program at the Boston Architectural College.

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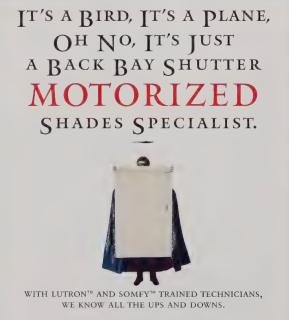
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Other Voices |

The Other Hopkinton

v Photo by Nicholas Coates.

My wife Sarah is an archaeologist. I am a newspaper reporter. We both rake through dirt to find truth.

As a reporter, I write about history as it happens. As an archaeologist, Sarah rewrites the history my profession gets wrong. She specializes in deciphering the meaning of migratory patterns of New England farmers from their farmsteads. I specialize in deciphering the meaning of zoning variances that are eroding the character of New England's historic lands and structures.

We live in Hopkinton, New Hampshire. Yes, there's a Hopkinton, *New Hampshire*, too, as I constantly explain to people south of "Live Free or Die" country. But they are related: In 1735, Colonial Governor Jonathan Belcher granted the land to transplants from the town in Massachusetts. I can hear the old codger down our dirt road cackling now: "Some things never change!"

I commute 149 miles roundtrip to and from Boston everyday. When I clear through the seemingly endless traffic and find my oasis (our exit), I happily drive unencumbered through town, especially on late winter afternoons.

On one such afternoon, I puttered along the straight and narrow road to absorb a row of homes I normally take for granted — sturdy blizzard-beaten Greek Revivals and Georgian Colonials that snake outward with each successive generation. They abut the refurbished Stanley Tavern, an 18th-century creamcolored pour house from which I fully expect Samuel Adams to stumble out. Four furlongs down the road sits the requisite white Congregational church, built in 1789, with its Revere bell. It gongs at 9:57 every Sunday morning for the 10 o'clock service.

Downtown reminds Sarah of pastoral Currier & Ives lithographs from the 19th century. In short, Hopkinton is her



archaeological world alive. I love Hopkinton because I am reminded of my hometown before the subdivisions and their finely-manicured lawns took over. Hopkinton is my childhood world alive.

Just past the church is the turn for our road. We live in a brick-red, one-room schoolhouse with its original pine floors and black cast-iron wood stove. If you go into our "junk" closet and peek through a semi-hidden doorway, you will find an old slate chalkboard still hanging on a wall. We look out our drafty kitchen window and see a stone-walled cellar hole about 25 yards long where, Sarah estimates, a stoic barn once stood. Snow covers wood piles from a recently felled tree and they look like inverted candy corns with puffy, white tops.

Our neighbor's mailbox says, "The Old Parsonage." Sarah thought it was a ruse from the beginning. It's a vestry, she said. One lazy autumn afternoon, we scoured the Henniker Book Farm — a used-book shop in a dusty post-and-beam barn and found a musty copy of the Hopkinton town history with a map from 1892. She won that round of "I told you so."

I did similar research to learn about our sister town in Massachusetts.

That Hopkinton sounds similar to our

town, still clinging tightly to a rural image. Like our Hopkinton, it has two properties on the National Register of Historic Places. Like our Hopkinton, it caught the interest of interstate highway planners and is an easy commute to city centers. But our city center is Concord, and our interstate is Route 89.

That Hopkinton is best known as the start of the Boston Marathon, arguably the world's most grueling road race. I took up running a few years ago after my teamsports playing days ended. I slog through a five-mile run around the streets of my town and have to force myself up one daunting hill near the end of my route. The hill peaks at the site of a historic garrison house. On April 27, 1747, natives raided the house and took seven people as prisoners.

Every time I run that route, I stop to catch my breath there. I look around and see historic farmsteads of pastel yellow and blue and am in awe of the horses running in a wide-open field.

I wonder what the papers will write when suburbia reaches our Hopkinton. I think I will ask Sarah what she thinks.

Nicholas Coates is journalist currently pursuing a graduate degree at Northeastern University.

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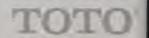
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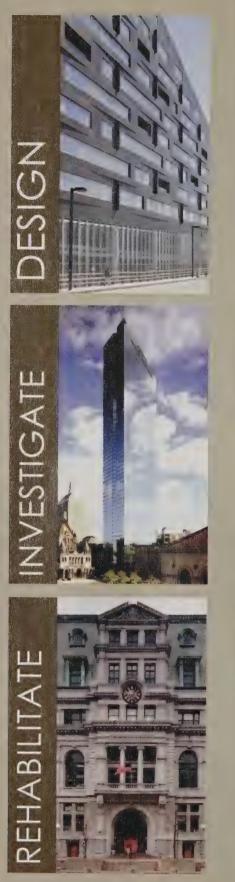
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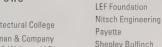
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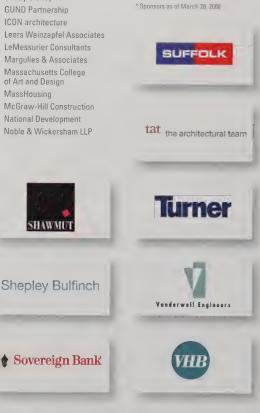
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BY ELIZABETH S. PADJEN FAIA From the Editor

Re:New

ver since the AIA Convention left town in 1992, Boston has been busily preparing for its return in May 2008. We buried a whole highway system, planted a new linear park (OK, that one's not quite finished, but you get the idea), and - figuring nothing is too good for the AIA - we even built a nice spiffy new convention hall. We hope the AIA appreciates our hard work.

Welcome to the New Boston. Actually, it's the New New New Boston — we've been through a few iterations since the 1960s, when the term "New Boston" was used liberally by the media to describe the shocking changes in the previously moribund cityscape: the new Boston City Hall and Government Center, and skyscrapers such as the State Street Bank, the Prudential tower, and the New England Merchants Bank.

By the time the AIA Convention came to Boston in 1976, Boston had reinvented itself once again: with its rediscovered appreciation of the harbor and waterfront and the opening of the Faneuil Hall Marketplace that year, Beantown was at the forefront of the nascent back-to-the-city movement. When the Convention returned 16 years later, the cityscape had changed yet again, as continuing investment made Boston an international symbol of urban renaissance. Today, after yet another 16 years, Boston is still evolving; in this issue, contributor Robert Turner describes what's new since the last time the Convention came calling.

In fact, a decade-and-a-half turns out to be a very good measure of change in a city: it's enough to reflect building cycles and generational changes in leadership as well as political, social, and cultural transitions. And it is a refreshing downshift from the breathless chase after "the new" that pervades our culture, where the novel passes into nostalgia in an instant. Since Michael Lewis wrote The New New Thing eight years and one bubble ago, his title phrase has passed from assumed irony to objective assessment: the blog Soft Machines reported a year ago that "it's fairly clear that nanotechnology is no longer the new new thing" — a judgment that will no doubt shock those who haven't yet figured out what nanotechnology is. Staying on top of the new is an exhausting proposition.

The new has been so entwined with our understanding of the modern era, our cultural obsession with youth, and the economic engines that sustain our society that a rejection of the new seems heretical. The past is useful only if it can be repackaged and rebranded --- retro, neo, vintage. Fans of Dwell magazine's Modern Revival style eagerly decorate their lofts with Barcelona chairs that were designed 80 years ago — the equivalent of Mies van der Rohe furnishing his 1929 Barcelona Pavilion with Victorian settees by Belter or Herter. It's hard to

imagine that even the most clever tastemakers of that era could have successfully repositioned Belter's rococo carved furniture with the aura of freshness, youth - and yes, newness - that the Barcelona enjoys today.

And yet there are some signs that the previously unquestioned supremacy of the new is facing challenges. As sustainability begins to influence our values and choices, previously unfamiliar calculations are now part of everyday conversation: Does buying that new electronic gizmo mean the old one goes to the landfill? Is renovating that existing house more carbonneutral than building a new one? What's the carbon analysis of replacement windows anyway? Will the payback from energysaving features of a new appliance justify tossing the old one if it can't be recycled? Suddenly, pairing "new" with "waste" and "consumption" seems hip and not just plain cheap.

Staying on top of the new is an exhausting proposition.

We do not yet know fully how environmental concerns will alter our culture and society. But we can guess that cities will be at the center of some new sustainable order. Boston --- with its relative density, existing infrastructure, proximity to similarly dense smaller cities, and access to a deep reservoir of talent and innovation — has the opportunity to become a national model for a sustainable society. Perhaps the AIA Convention will return in another 16 years to see if we have met that challenge. By that time, Boston should be new, again.

With this issue, ArchitectureBoston celebrates its 10th anniversary. Launched in June 1998 as a quarterly with a distribution of 10,000 copies, today it is a bimonthly with over 25,000 readers. I would like to thank the hundreds of people who have contributed to its success, including the board of directors and staff of the Boston Society of Architects; its advertisers; its editorial board; its editorial staff, designers, and sales staff; and especially, the contributors and readers who have made ArchitectureBoston a nationally respected forum for the discussion of the built environment.

Elizabeth S. Padjen FAIA Editor



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Letters Letters Letters

Go Hillers indeed! Thank you for your issue focusing on Hopkinton [March/April 2008] and, through it, on small towns in the metro Boston region. Each is filled with residents, like those profiled in Ken Richardson's "Beyond the Highways," who either grew up and stayed or moved into town because it is a special place. No wonder the dramatic growth rates seen in the last decades give pause — doesn't that inevitably mean the loss of something special, the danger of becoming just like everywhere else?

As towns across the region grapple with these concerns, they confront the challenges and constraints of land-use planning in Massachusetts. Within this context, each town acts rationally —- but together, unintended consequences are created and all municipalities in the region ultimately suffer.

Fred Merrill is right that we don't have regional planning with teeth in Massachusetts, but the 4,500 people who came together to create the MetroFuture growth plan have done a pretty good job of defining a future that capitalizes on the region's greatest assets: diverse people and landscapes, a history of innovation, and a commitment to education and civic engagement. MetroFuture would help the region to overcome its challenges and embrace its future, one in which towns are full of character and cities are more vibrant, where healthy families are connected with their communities, where the economy and the environment are both stronger, and where communities work together to find common solutions to common problems.

No, it won't be easy to achieve MetroFuture by 2030. But we have a history of making bold decisions here in Massachusetts, and I have every confidence we will continue to do so.

Amy A. Cotter Senior Program Manager, MetroFuture Metropolitan Area Planning Council

As an example of a Commonwealth town poised between a historic past and a healthy future, Hopkinton is an excellent case study. One of the things that makes the town unique — and a truly fantastic place to live — is the level of participation in town decision-making among its residents.

Since my election to the State Senate in 2005, I have seen the people of Hopkinton work hard to balance the inevitable pressures and opportunities that come from growth. While the transformation of open space to residential property in the form of the Weston Nurseries development was difficult, the fact that a large number of people became involved in the ongoing discussion about preserving the community's character in the face of change, and indeed continue to stay involved, has meant that the town continues to move forward in a positive direction.

One of the potential favorable outcomes of this process is Boulder Capital's offer to preserve a historic farmhouse on the edge of the property. Not only will this building serve as a visual reminder of Hopkinton's not-so-distant past, but it will also house the first-ever Marathon Museum, dedicated to preserving the history of and promoting the sport that has put Hopkinton on the global map.

Like all of my communities in the MetroWest, Hopkinton faces some unique challenges and opportunities. I have faith that Hopkinton will continue to embrace its opportunities and tackle its challenges. A community with this much dedication to stewarding the town's future is truly a great place to live.

> *Karen E. Spilka* State Senator 2nd Middlesex & Norfolk

As a local planning advocate, working in small-town planning issues, historic preservation, and now affordable housing, I was drawn to the article on Accessory Dwelling Units ["Not Just for Grannies Anymore," March/April 2008]. Nantucket has consistently turned to these attached apartments and secondary structures as a method for keeping affordable housing for islanders. Nantucket has been successful in creating a permanent restriction that allows secondary dwellings to be permitted as condominiums for affordable housing.

However, I was thrilled as I continued to read through the remaining articles. The manner in which they tied together was superb. As I read on, though, I found the key to the whole issue in Jeff Stein's interview with Dolores Hayden. Hayden says "every American should understand how to read the landscape from the ground and from the air." She goes on to say that if Americans could read these landscapes, "it would affect how people vote on these issues and ensure that the issues were put on a ballot instead of handled under the table." If we are going to take a stand to protect our communities, our historic buildings, and our community housing, we must take the 10,000-foot view: look beyond the local political infighting and see our communities from the air --- either literally or metaphorically.

> Aaron Marcavitch Executive Director Nantucket Housing Office Nantucket, Massachusetts

Everywhere in New England we take pride in the intimate scale of our landscapes and townscapes. Our village centers, often featuring streets and greens that date back centuries, are emblems of a quality of life that seems to be harder and harder to sustain under the pressures of the 21st century.

Generally, we protect our town centers by passing rules that make it hard for property owners to develop their land. Residential zoning districts with large minimum lot sizes limit density; height and lot-coverage limitations, and floorarea restrictions all reduce the size of the buildings that can be built without specialpermit approvals. We often restrict "as of right" development to assure that every project must pass review by a battery of committees, commissions, and appointed and elected councils.

What's the result? Bigger developments that undermine the community character that we're looking to preserve in the first place. Why is this happening despite every barrier to development that we can erect? Because these regulations make it hard to get a project developed. It takes time and a lot of well-paid lawyers to pull it off. It means land must be assembled into larger parcels to make it worth while to spend the time and money required. It means families who may own a couple of acres of land in or near a town center can't raise the capital to get a project off the ground so they have to sell it to those who can. This hurts local people and companies.

Barriers to development can play into the hands of the larger developers. They reduce the value of the land held in smaller parcels by local people and enable the big players to "create value" by getting their large plans through our protracted development approval processes. They squeeze local land owners and local builders out of the picture, eliminating the smaller, more fine-toothed projects that they would build.

One way to stop this is to zone out the uses that national developers might seek, like commercial space or hotels. But if uses like that are excluded, our taxes will inevitably rise and local people will be hurt again. Stopping growth isn't the answer.

Governor Patrick has called for simplifying our construction permitting process to help keep the Massachusetts economy competitive. That makes a lot of sense. But let's streamline our development review to promote the right kind of development. Let's create rigorous specialpermit review processes with high mitigation requirements for large projects and offer easier approval and incentives for small projects. Let's fast-track modestly sized houses and cluster housing on smaller lots and let's promote infill housing in our smaller downtowns. We should decide the kind of development we want and use our regulatory authority to help make it happen.

If we want to keep the treasured New England feel of our towns and cities, we need regulations that encourage smaller projects on smaller parcels — ones that strengthen our village centers and preserve our community character.

Russel Feldman AIA TBA Architects Waltham, Massachusetts Chair, BSA Legislative Affairs Committee Editor Elizabeth Padjen FAIA framed the November/December 2007 issue with the idea that the architect can be well advised to better understand the client. As stated, "Clients give architecture its purpose: without clients, it is fine art, inhabitable sculpture." With the exception of the GSA article, which identified an important area of public architecture, the issue missed a large group of individuals who have taken another road to architecture in representing public institutions and their projects.

Seldom do we as public architects have the same influence as the group that was assembled for the "Serial Clients" roundtable. Yet we still represent a very large number of clients. Today, 50 percent of buildings utilize public funding, be it local schools, public universities, or other government buildings. I am disappointed that this area of client representation was not included.

An architectural team must understand that in most public projects it has two clients: the organization that is responsible for the management (scope, schedule, and costs) of the project and a second group, the actual users. Both of these groups have the same objective, yet have different processes to adhere to. The users' objective is to get everything they need and more; the managers need to stay within the appropriated funding mandate. Neither group wishes to undermine the best creative solution possible. This point of view might have been interesting for discussion in this issue.

> Bruce Bockstael FAIA Chief Architect Administrator of Client Teams Department of Public Works State of Connecticut

We want to hear from you. Letters may be e-mailed to epadjen@architects.org or sent to *ArchitectureBoston*, 52 Broad Street, Boston, MA 02109. Letters may be edited for clarity and length, and must include your name, address, and daytime telephone number. Length should not exceed 300 words. BSA

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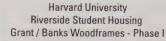
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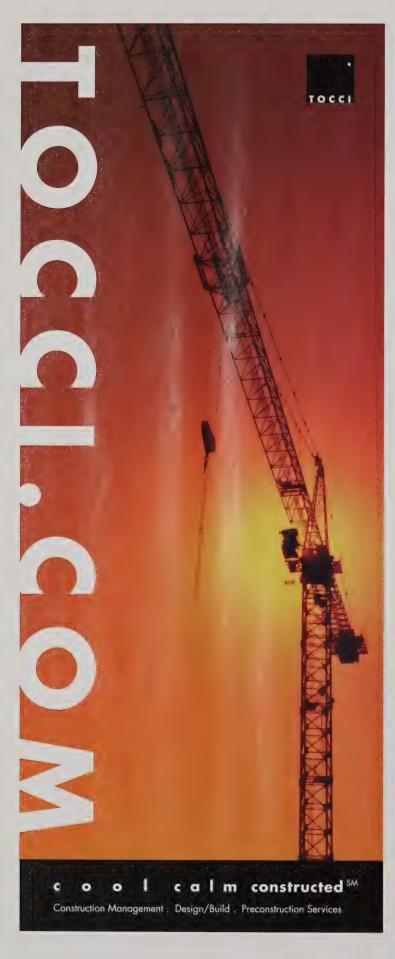


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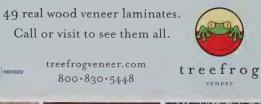


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Aqua_ray. Prototype, 2007. Rudolf Bannasch and Leif Kniese of EvoLogics and Markus Fischer of Festo. Image by Walter Fogel.

Design and the Elastic Mind

Museum of Modern Art, New York City February 24–May 12, 2008

Think of MoMA and design. Did you think of drawings by Mies van der Rohe or something to sit on by Charles and Ray Eames? Maybe a self-aligning ball bearing by Sven Wingquist? MoMA's permanent collection of architecture and design was assembled piece by piece, each a convincing statement in the ongoing discussion of design and art.

In contrast, *Design and the Elastic Mind*, about "the latest developments in design and what the future holds," fills six rooms with a range of objects and themes, with varying success. As with the Whitney Biennial, so here: written descriptions of the ideas behind the designs are vital to bridge the gap between viewer and display.

The exhibition is a science fair of concepts intended to "highlight how design is the bridge between advanced research and everyday life." That's not news. That's always been the case, as MoMA's permanent collection will attest. The difference here is the lack of discrimination in selecting manifestations of "the latest developments and what the future holds."

According to senior curator Paola Antonelli, "...the designer has changed from form giver to fundamental interpreter of an extraordinarily dynamic reality." In that case, something is getting lost in translation. Is MoMA asking that we adopt new criteria for appreciating design in an art museum — the design of process, over the design of product? To captivate in an art museum setting, interpretations still need attention to form.

Dominic Barth, a former journalist and book editor, is a graduate student at Columbia University School of Architecture, Planning, and Preservation.

Still Standing

Produced by Perry King Neubauer FAIA 2007, DVD, 35 minutes (available from pkneubauer@verizon.net or 617-234-4434)

A look back at The Architects

Collaborative, *Still Standing* is low-tech yet powerful. In 2006, former TAC principal Perry Neubauer interviewed founders Sally and Chip Harkness and Norman Fletcher (who died in 2007), and their recollections are interwoven with archival photographs of the architects and their work.

Neubauer reminds us how radical the TAC idea was — until its founding in 1945, most practices had the principal's name on the door, a Big Man backed up by anonymous specialists. TAC's Big Man was Walter Gropius, but his insistent egalitarianism had a powerful effect on the firm, its work, and even the profession.

These were young, beautiful people out "to remake the world"; as elders, they look back with pride, passion, and humor: one of the key moments in putting together Harvard's Harkness Commons was throwing the bentwood chairs Ben Thompson had designed out the window to see if they would break. They didn't. The building lives on as well, along with many of TAC's ideas and ideals. The hard fact that their authors can't makes this DVD a poignant experience.

Bruce Irving is a home renovation consultant in Cambridge, Massachusetts.

v Photo courtesy, Perry Neubauer FAIA.



Jonathan Segal FAIA Conversations on Architecture

The Boston Society of Architects January 29, 2008

Scratch most architects and you'll find a developer — or a developer wannabe anyway. What architect wouldn't want to live a little higher on the food chain and end the abuse that casts a shadow over design school? Too few, however, have the nerve to put their fortunes on the line or relish going over to the dark side when they would rather wax poetic about light.

But San Diego architect Jonathan Segal makes the case that being a developer isn't a sellout; it gives architects the tools they need to rebuild the world as they would like it to be. In his recent presentation at the BSA, he laid out an alternative to the architect's underpowered position: "It's all about control." Architects stopped being master builders, he suggested, when they ceded everything but design to somebody else.

Segal finds the sites, crunches the numbers, GCs the jobs, and gets in the bulldozer to dig the footings; he lets his wife do the sweet-talking when it's required. And with his three employees, he designs glorious places to live, winning five national AIA awards and a slew of other honors. His presentation showed how market demands and regulatory constraints can be turned into expressions of contemporary urban life.

Kettner Row is a line of stucco-clad townhouses with double-height glazing and projecting metal canopies. Built next to San Diego's downtown, it filters its southern California vernacular through a Modernist aesthetic. The Titan is a maze of parking spaces, gardens, and floating apartments; a pierced wrapper of rusted steel plates shields the interiors from the freeway outside. And The Union is a cluster of rowhouses on concrete-block bases defined by folded stucco planes infilled with glass. All are inventively sculpted with an unerring eye for composition.

But much of the architectural poetry is inspired by prosaic building considerations. Segal's simple but sexy spaces are cleverly interlocked on multiple floors to allow him to skirt restrictive code requirements. The urbane syncopation of his façades is derived from the flexible interiors that allow easy subdivision or the conversion of first floors to offices. Saying he is too cheap to keep painting, Segal uses materials that weather to a rich patina. By controlling costs, codes, and construction, he maintains mastery over the design.

Architects' diminishing role in building, Segal says, won't be stopped through their artistry or moral authority. They've got to grab the wheel of that smoke-belching 'dozer and learn to steer it where they want it to go.

David Eisen AIA is a principal of Abacus Architects + Planners in Boston and writes about design for the *Boston Phoenix* and other publications.



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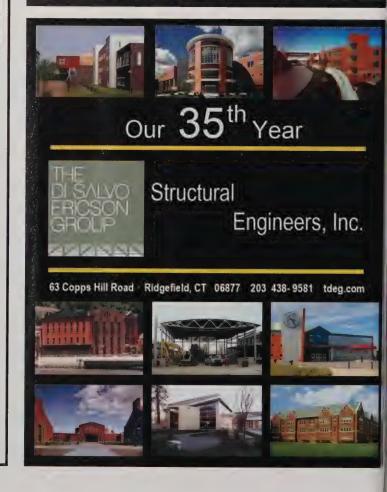
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BY JOAN WICKERSHAM | The Lurker

(Very Young) Architects Wanted

The event: The celebration (and judging) of the Orange Line Design Competition, a program sponsored by the Community Design Resource Center of Boston (CDRC) and by Citizen Schools, a national organization that partners middle school students with professionals in many different fields. For the past ten weeks, groups of students from a dozen Boston middle schools have been working with volunteers from local architecture firms and architecture programs to re-design the area around an Orange Line station — either the Jackson Square or Sullivan Square T stop. The winners chosen tonight will go on to meet with Boston mayor Thomas Menino about their project.

The setting: The ballroom of the student center at Northeastern University. The windows face out on a Boston winter dusk: the pale luminous turquoise of the John Hancock tower against a darker turquoise sky. Twelve tables line the walls, each labeled with the name of a Boston middle school and the architecture firm partnered with it in the competition. At the back of the room are more tables, where refreshments are being laid out; at the front is a stage with a podium, where someone is testing the microphone.

4:40 Two women from Gund Partnership walk into the ballroom carrying the large pieces of their group's site model of the Jackson Square area, which they proceed to fit together, jigsaw-puzzle-fashion, on the table assigned to them. "Does this section go here?"

The model is larger than the tabletop. "Let's angle it like this."

Amid the little cardboard buildings are photos of the students in the group, who attend Irving School, diagnosing the area's problems in comic-strip speech bubbles. "THERE IS A LOT OF LITTER THAT NEEDS TO BE CLEANED UP."

"THERE IS TOO MUCH VIOLENCE IN THE AREA."

4:45 The first group of students arrives, and the kids spot their school's name on a tabletop sign. "Wow— that's ours!"

As they speed toward the table, the teacher calls out, "The food in this room is for later, OK? I want to be sure you understand: *Those are not our cookies.*"

4:50 More architects have arrived and are setting up boards. The room is filling up with kids as well, some in T-shirts and jeans, but some boys wearing coats and ties, and some girls in satin blouses, velvet dresses, silk shorts. A teacher from Edison Middle School helps a boy with his tie, murmuring reassuringly, "Remember, this isn't a prepared presentation. We're just going to talk about what we've been talking about for the last ten weeks."

4:58 An architect is taking tiny trees out of a box and dispersing them around a model of Sullivan Square, while her colleague places an extremely large exuberant "T" sign near the subway stop. He smiles. "This project is more about signage than anything else."

"Is this something?" The first architect, finished with the trees, holds up a loose piece of styrofoam.

"It was, until they got rid of it."

5:02 An architect waiting for his school



A Photo by Joan Wickersham.

group to show up addresses the kids at the next table, who are waiting for their architect. "So guys, do you like architecture?"

"Yes!"

The architect grins. "Awesome."

5:15 The room is filling up fast now. Architects come in holding site models and posters above their heads, so they won't be jostled by the crowd. At the front of the room a slide show is running: snapshots of the students and architects working together over the past ten weeks. Every now and then there is a scream from somewhere in the room, as kids catch sight of themselves on the screen. The judges are gathering in the center, squinting at handouts that explain the rules. The panel is made up of educators, government officials, activists, business executives. A lot of them know each other; the mood is relaxed and friendly. Two get into a conversation about casino gambling, currently a hot political issue in Massachusetts. "Why make it easier for poor people to lose their money?"

"Well, especially when we already do that with the lottery."

5:30 John Werner, executive director of Citizen Schools Boston, booms out a welcome over the microphone. "And we've assembled the best set of judges this side of

the universe — *American Idol* has nothing on us!" He sends the judges upstairs for an orientation meeting.

5:32 On the stair, former Massachusetts governor Michael Dukakis, now affiliated with Northeastern and here tonight as a judge, falls in beside fellow-judge Ted Landsmark, president of the Boston Architectural College.

"So how's school?" Dukakis asks.

5:35 Upstairs, Brandy Brooks, executive director of the CDRC, welcomes the judges and reviews the procedures. Each team will have five minutes to present to the judges, and each pair of judges will evaluate six teams.

5:45 On their way back to the ballroom, the judges are asked to put in an appearance in a lecture room where a large group of students is presenting an environmental project they did as an alternative to the design competition, measuring the carbon footprint of their schools. The student at the

podium announces: "We hope you enjoy this video. We made it because we are interested in the environment." He adds gravely, "Please turn off all cell phones and pagers."

5:54 The judges re-enter the ballroom. "So what do we do, again?" one whispers to another.

5:56 Two judges approach the table where a group has set up a site model of Sullivan Square. "Hi, folks," one judge begins. "We're supposed to be judging this group. You're our first, so we're practicing on you guys."

The noise level in the room is so high that the two students presenting have to practically shout to be heard.

One points to a big "T" carved out of styrofoam. "This is our sign."

"If you're looking for Sullivan Square, you can see the sign and know where it is."

"So help me get oriented here," one judge says. "Where's the highway?"

An aerial photo of the highway, mounted on cardboard pylons, has been resting on the model, but a boy nervously removed it

Est. 1866

when the judges approached, in an attempt to give them a better view. "Put the highway back," one of the architects gently suggests.

6:02 The conversation continues, with the judges prompting students to articulate the concepts underlying their scheme. "Tell me about these orange gateways."

"Those are our gateways," a student says. Then adds: "To help pedestrians see where we are."

"So you think a major problem here was visibility."

The student nods.

"And let's see — you grassed over a parking lot, and moved the parking underneath the highway?"

An architect explains that the team came up with two concepts — one having to do with signage and the other with parking.

The judge smiles, and says to the kids, "So essentially you took the best of two schemes and melded them, without too much bloodshed."

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The kids nod solemnly.

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6:05 Over the noise of the crowd and the music, John Werner's voice comes over the microphone: "OK, judges, time to move on to your next group!"

6:07 Two judges stand in the middle of the floor, poring over a diagram of the room and their assigned judging circuit. "Are we supposed to be moving east or west?"

6:10 On the other side of the room another group begins shouting their Jackson Square presentation to two judges, who lean forward, straining to hear. "We wanted this to be a fun, safe place to play, so we put in a rec center and a movie theater. Now you don't have to travel downtown for entertainment," a boy explains.

A girl adds, "And there are a lot of working families in the area, so we put in a daycare center."

6:17 The kids in one group are all wearing large round black construction-paper eyeglasses. "Why?" a judge asks.

"Because we're architects!"

The kids in one group are all wearing large round black construction-paper eyeglasses. "Why?" a judge asks. "Because we're architects!"

6:26 A Sullivan Square presentation, featuring a design where the doors in the building open in sync with the doors of the arriving train. "I got the idea from the Georgia airport," a student says.

6:35 A team is presenting their Jackson Square design to two judges, one of whom is former governor Dukakis.

"I live right here in this building," a girl says, pointing to the model. "And I see a lot of litter. So I think more trash cans are a must."

"Litter? Who's going to pick up all that litter?"

The girl looks startled.

"We all should," the governor says. "I do."

6:40 Over the podium microphone, John Werner asks the judges to come up onto the stage. He thanks everyone involved in the competition, and acknowledges the wildness of the last forty minutes."The judges must feel like they've been drinking Jolt. But remember this is the first time for us. We're going to figure this out. And we want to keep bringing people together ---not just architects and planners, but real estate developers and investors who want to intersect with young people." He encourages the students, whom he refers to as "apprentices," to continue with architecture. "And we're proud the mayor let us influence a project that's actually going on. Our apprentices don't pretend to have better answers, just a different perspective."

6:50 Brandy Brooks speaks of the goals and benefits of the competition. "It allows bright young designers to figure out how to be active partners with the next generation. Good design isn't frivolous or decorative it affects how we all work, play, live, and get around."

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6:56 The next speaker is a young woman named Norma Fevrier, currently attending the BAC on scholarship. "Architecture is hard work, but I enjoy it. I don't have a problem with the fact that I'm not sleeping — OK, it's three in the morning, but I'm having fun." She ends by saying, "No matter what your problems and difficulties, don't give up on your dreams. There are always people to help you."

7:10 John Werner asks all the apprentices to come onstage, and reads off a list of finalists — a list consisting of all twelve schools that participated in the program. Each name is met with happy yells from parents and friends standing somewhere in the crowd. Werner introduces Kairos Shen of the Boston Redevelopment Authority ("He designs Boston!"). Shen: "I'm here to represent the mayor, and to say, 'Wow.' We're supposed to think outside the box and you aren't in any box."

7:17 Michael Dukakis: "I've met at least six future governors here this evening."

7:20 Ted Landsmark: "We're grateful to you for the ideas you've come up with. When you're ready, we want you to come to our architecture schools, because you're going to improve the city."

7:25 Werner announces the winning design: "Irving School and Gund Partnership. You're going to meet the mayor!" Everyone in the room cheers.

7:35 Upstairs at the VIP reception, John Werner asks the judges for feedback. One judge speaks up immediately: "The judges need more time to spend with each project. The work deserves it. There is a lot of depth here."

Werner acknowledges that this is true, and says that next year more time will be built into the schedule. He thanks the judges and invites them to submit more comments on feedback cards. "Really — let us know what worked and what didn't. We want to improve. To take this event and make it intergalactic!" Editor's note: The architects and schools participating in the Orange Line Design Competition were: BH+A with McCormack Middle School, Dorchester; BosNOMA with Mildred Avenue Middle School, Mattapan: Boston Architectural College with Edison Middle School, Brighton; Cubellis with Edwards Middle School, Charlestown: Deborah Drew Design with Wilson Middle School, Dorchester; Gund Partnership with Irving Middle School, Roslindale; Harvard Graduate School of Design with Citizen Schools' 8th Grade Academy, Roxbury; Icon Architecture with Rogers Middle School, Hyde Park; Jones Lang LaSalle with Mario Umana Middle School Academy, East Boston; KlingStubbins Architecture with Mario Umana Middle School Academy, East Boston; Payette with Mildred Avenue Middle School, Mattapan; and Shepley Bulfinch with Gavin Middle School, South Boston,

Joan Wickersham's new book, *The Suicide Index*, will be published by Harcourt in August.

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Design and the Reinvented City Turning a design community into a design industry

(Clockwise from top left) Media: WGBH; by Chris Pullman/WGBH. Landscape architecture: Michael Van Valkenburgh Associates; courtesy, Michael Van Valkenburgh Associates. Product design: Continuum; courtesy, Continuum. Architecture: Kennedy and Violich Architecture; by Bruce T. Martin. Graphic design: Stoltze Design; by Stuart Darsch. Architecture: Payette; courtesy, Payette. Media: WGBH; by Lisa Abitbol/WGBH. Marine design: Doyle Sailmakers; by Thaddeus Gillespie. Graphic design: Visual Dialogue; by Kent Dayton.

PARTICIPANTS

Beate Becker is a consultant in Cambridge, Massachusetts, whose work focuses on cultural economic development. She is currently directing Designing an Industry/Designing the Future, an initiative sponsored by the Massachusetts College of Art and Design.

Dan Buchner is vice president of innovation and design at Continuum, an international design and innovation consultancy based in Boston.

David Lee FAIA is a principal of Stull and Lee Architects and Urb. Designers in Boston and is an adjunct professor of planning and urban design at the Harvard Graduate School of Design.

Elizabeth Padjen FAIA is editor of ArchitectureBoston.

Kairos Shen is the chief planner of the city of Boston, a role that includes oversight of economic development, institutional planning, and research and policy development within the Boston Redevelopment Authority.

development consulting firm in Cambridge, Massachusetts Itur has conducted studies of the creative economy and workforce development around the country.

Frano Violich AIA is a principal of Kennedy and Violich Architecture in Boston, a design firm that also conducts materials research and product design through its subsidiary, MATx. He is currently serving as the BSA's Commissioner of Design.

Elizabeth Padjen: There is a new design energy in Boston and, with it, a much higher profile for the design community. This seems to be the right time to think about taking advantage of that energy, to be smart about capturing it for the region's benefit. In the last 20 years, we've seen big changes in economic cycles and in the ways we describe them, from "service economy" to "information economy" and now, "creative economy," all of which suggests that there is a trend away from the idea of an economy based on a narrow definition of service toward one based on application, in the sense of the application of ideas to products and processes. The Boston region is exceptionally well-positioned to take advantage of that trend, to develop a "design economy."

In addition to nurturing a creative environment that draws on the city's intellectual energy and the new energy that comes from its increasingly diverse demographics, there is a related need to create a physical environment that also cultivates that energy. And this suggests yet another opportunity — perhaps the kind of physical environment that supports a design economy can also improve our neighborhoods and the quality of life in the city and surrounding communities and promote the dynamic growth of the city.

There seem to be three people who have carved out positions in the popular press commenting on some of these issues: Richard Florida, Joel Kotkin, and Michael Porter. Perhaps it's useful to start by describing their influence. **Beth Siegel:** Richard Florida's focus has been not so much on the creative industries as economic engines themselves. Simply put, he made the case that a creative environment helps attract talent. In a way, it has become the latest fad in economic development, because every community now thinks it can compete on that basis, when in fact — and this is where Joel Kotkin comes in — the picture is a lot more complicated. Every community is different, with its own strengths and weaknesses. Not every community is going to be attractive to the same talent. We really need to think about what is unique in a community, and develop different strategies to address those differences.

Michael Porter has popularized the concept of looking at the economy in terms of "economic clusters." Clusters are agglomerations of firms that share characteristics and have linkages with each other in terms of buying-and-selling relationships and workforce relationships. Some of these ideas had been floating among economists, but he brought the idea of supporting the development of clusters to the public.

Beate Becker: It's interesting to note that Florida's more recent work focuses more on concentrations of talent, suggesting not that the world is flat but that the world is spiky. It's somewhat more in alignment with Porter with its recognition that brains and talent are in fact aggregated around centers where there is intellectual capital. And that seems to contradict the idea that every place can compete as a creative center.

David Lee: It's worth mentioning that Porter also codified to some extent the importance of the inner city as a potential economic engine. On a per-capita basis, an inner-city neighborhood might not have the same income levels that you would find in Wellesley or Newton, but if you examine these neighborhoods on a density basis — per square block — their earning power and spending power are substantial. Once you fold that idea into the mix, you start to redefine what a place-based creative economy might be, because some areas would otherwise be overlooked.

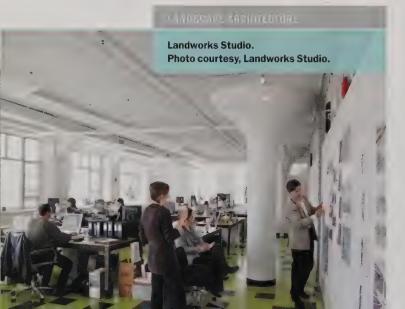
Elizabeth Padjen: Can you bring us up to speed on some of the current efforts in the state, and in the Boston area in particular, that focus on the creative economy? There have been some significant initiatives.

Beth Siegel: Our work on the creative economy in New England is focused on the Porter concept of looking at the creative industries as a cluster, an economic engine in itself. The case can be made that the design industry itself is a job-generating growth industry globally, in the same way life sciences are a growth industry. We need to look at its workforce needs and its technology needs, in the same way that we look at the needs of the life science or software industries.

Beate Becker: The biggest change over the past year has been simply the recognition of this notion of creative economy. The New England Council published a report in 2000 about the creative economy that re-framed the issue from the previous, more narrow focus on nonprofit cultural institutions to an understanding of a broader, more holistic economy that also includes communities and commercial enterprises. At that time, it was a pretty hard sell. It was a new idea, and it wasn't really seen as a serious effort — it was perceived as a ploy to get more money for arts and culture. And, of course, it was hard to implement across the six-state region.

Since then, and in part because of the attention that Richard Florida brought to these issues, people have begun to take notice and these ideas have gained legitimacy. More significantly, they have begun to take root on the state and local level. The governor of Maine, for example, really took this on as an economic strategy for his state. In his acceptance speech, Massachusetts governor Deval Patrick said "we have a mandate to help the creative economy flourish." And the Boston Redevelopment Authority has its Create Boston program. Now the work is evolving into an examination of design as an industry, and in a related effort, looking at craft, music, and media as industries. The conversation is moving toward workforce development and jobs. It's taken quite a while, but it's now generally accepted at the state and local levels that this really is about economic development in addition to arts and culture.

Frano Violich: The concept is also gaining ground globally. In London and Buenos Aires, for example, you see governmentfunded programs that are helping younger creative people find roles in manufacturing and production, with the goal of increasing the role of designers and creative thinkers to boost the competitive edge. The critical thing right now seems to be that the term "creative economy" is up there floating like a balloon. It's almost a target. You have to be very careful that it doesn't get misconstrued, then suddenly become more of a distraction than a goal. We haven't mentioned another writer, Daniel Pink, who thinks about these issues in a very different way. He's talked about this period as a moment of high-concept and high-touch experience in creative thinking and in making. That is, we started out with the industrial age, we've gone through the information age, and now we're in a different time, which is more of a conceptual age. That gives an enormous advantage to - and in fact creates a need for --- a robust design industry. One obvious example is sustainability, which is one of those common



The case can be made that the design industry itself is a job-generating growth industry globally, in the same way life sciences are a growth indust Beth Siegel

denominators that connects design to different trades and job opportunities, manufacturing, and academia.

Elizabeth Padjen: So we've got this balloon floating out there, and it sounds like everyone in the world is looking up at the same balloon. How can this region differentiate itself?

Kairos Shen: From my perspective, design has always been here; it's part of the culture. The question is the kind of emphasis that you give it: not more design, but better design. Looking at the physical environment side of the equation, I would say that in the time that I've worked for the city, our design standards have improved considerably in terms of the work that is both proposed and built. The question is, what led to it? One of Florida's observations is that people who have the leisure or the luxury of thinking about design quality create a market for it.

Elizabeth Padjen: Boston architect Tim Love has talked about Brand Boston, the idea of creating an identity for Boston as a design center, which can happen on many levels — in the streetscape in terms of high-quality buildings and a high-quality public environment, but also at an intellectual level, creating the notion of Boston as a go-to place for people who are looking for good design or design services.

Kairos Shen: I think for most ordinary citizens who associate themselves with Boston, there has always been a very clear Boston brand. In fact, one of the things that we in the cultural establishment presumably all share is a desire to challenge that brand — the Boston Beantown brand. It wasn't so long ago that [*Boston Globe* architecture critic] Robert Campbell asked, does brick connote Boston? Is the approach to design that created the Boston that exists today necessarily the brand that we want?

Tim Love is talking about an emerging set of ideas that may be less rooted in this place and more rooted to a high-design culture that transcends Boston. In some sense, Tim and people like him, who would consider themselves avant-garde designers, are feeling more comfortable that they can do their work here. Which is great. But it doesn't necessarily mean that work represents the Boston brand. Most people who come here who are not designers associate Boston with its cultural heritage. And this is the struggle that I face every day, trying to figure out how to encourage the kind of dynamism that's coming from a discussion about design, but at the same time make sure that the general public doesn't feel as though the result is an imposition of something that is not authentically Boston.

David Lee: One thing that's always confused me about Boston is that there is always a disconnect between the world of ideas and possibilities in the city and those things that are implemented on

the ground — not just in architecture, but in many aspects of the life of the city. Perhaps one window into that problem is this question of authenticity. The challenge is to find solutions that are in the spirit and culture and the DNA of a place but that aren't caricatures. One of the most problematic trends in architecture is that our buildings are becoming more and more placeless. On some level, and maybe it's a good thing, we've almost freed ourselves from context. But as someone once said, people have a very limited tolerance for driving lots of miles to get to a place just like the one they left. So the question really is, how can we marry the energy, the intellectual capital, and the creativity, without losing something that is place-based and still arrive at an exploration of new materials, new forms, and new ideas?

Frano Violich: I've had my own business here since 1988, and I have to admit that, for many years, it was very painful for any designers who wanted to break the conservative tradition. But I'd say, in the last five years, there has been a kind of liberation — we've been able to let go of those restraints, those weights that have held us back. I think a lot of it is due to an increased sense of community and collaboration in the city. There has been a blurring of the lines between all the design disciplines. I believe Boston has the potential to become a city of design; in fact, UNESCO is designating "Cities of Design." There are three so far: Buenos Aires, Berlin, and Montreal. Why can't we aim for that? That would be hugely significant for the city.

Beate Becker: I agree that there is a different feel to Boston over the last few years, and it's not so much about the production of things or about new buildings. I think it's really about young people driven by technology and an entrepreneurial spirit and the ability to network and to create new products and new businesses. The whole do-it-yourself, design-it-yourself, produce-it-yourself movement is big, and that's been enabled by technology and connections to the universities. I can offer two examples. One is Design That Matters, a nonprofit that grew out of the MIT Media Lab, which marries technology with design to address social issues in developing countries. And the other was a recent fashion show at the Museum of Science, integrating technology into fashion design. It had virtually no publicity, yet there were hundreds of people in line waiting to get in — almost all young people.

Elizabeth Padjen: Dan, your firm has offices in Milan and Seoul, as well as Boston — very different places. What is your sense of

There is a different feel to Boston over the last few years, and it's not so mu about the production of things or about new buildings. I think it's really about young people driven by technology and an entrepreneurial spirit and the ability to network and to create new products and new businesses. Boston as an environment for the kind of work you do and the people you can attract to your office?

Dan Buchner: Believe it or not, Boston has the second largest community of industrial designers in the United States, after San Francisco. And it's been here for decades. That's a well-kept secret. Most Americans would be surprised to know that the many of the things that they have in their homes were probably designed by people here in Boston. For example, our firm designed the Pampers line of diapers, the Swiffer cleaning system, and the Reebok pump. The iRobot Scooba, the Brita water pitcher, Oxo kitchenwares, even the Walkabout dog leash — all Boston products.

Elizabeth Padjen: What is the basis for that? Is it the schools here — people come for an education and stay? Or are they drawn here for some other reason?



Dan Buchner: It's a combination of things. First of all, it's always been the schools. Not just the design schools, but the universities that create a very intellectually stimulating environment. There's a fair bit of innovation that comes out of the universities, and the venture-capital industry supports a lot of start-ups that need help turning ideas into real things. Also it's closer to Europe than San Francisco or even New York, so a lot of talented European designers who want to work in the United States come here.

Elizabeth Padjen: There are obvious differences between Milan and Seoul and Boston, but what are some of the less obvious differences in their creative environments?

Dan Buchner: There are some very definite differences, even between Boston and San Francisco. The kind of product design that goes on here is heady stuff. It's new technologies, DNA analyzers, and medical devices. But it's also products for clients like Procter & Gamble, who produce in huge volumes, so the design

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	Firms	Jobs
Advertising and related industries	864	9,443
Architectural services	803	7,242
Graphic design services	404	1,353
Landscape architectural services	249	1,042
Interior design services	296	863
Industrial design services	55	422
Other specialized design services	29	132
Total Design Enterprises	2,700	20,497

SOURCE: COUNTY BUSINESS PATTERNS, U.S. BUREAU OF CENSUS, 2005.

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	Jobs	
Specialized design services	5,215	
Advertising and related services	2,974	
Architectural services	1,886	
Landscape architectural services	1,079	~
Total	11,154	

SOURCE: NON-EMPLOYER STATISTICS, U.S. BUREAU OF CENSUS, 2005.

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	Employment
Firms with Employees	20,497
Sole Proprietorships	11,154
Total	31,651

SOURCE: NON-EMPLOYER STATISTICS AND COUNTY BUSINESS PATTERNS, U.S. BUREAU OF CENSUS, 2005.

ALL DATA FROM PRELIMINARY RESEARCH BY MT. AUBURN ASSOCIATES FOR DESIGNING AN INDUSTRY/ DESIGNING THE FUTURE, AN INITIATIVE OF MASSACHUSETTS COLLEGE OF ART AND DESIGN. A FINAL REPORT, WHICH WILL PROVIDE A MORE DETAILED UNDERSTANDING OF THE ECONOMIC CONTRIBUTION OF DESIGNERS AND DESIGN FIRMS TO THE MASSACHUSETTS ECONOMY, WILL BE RELEASED IN LATE 2008. has to be integrated into the processes and the infrastructure of those companies. In places like Italy, the work is much more of a personal expression of the designers themselves. The studios there tend to be very small, and the individual designers have their own brand recognition. Korea is an emerging design force in terms of product design, but that's more because of the growth of big corporations there, like Samsung and LG, that support good design as a competitive advantage. San Francisco — I hate to use stereotypes --- really is very California: hey, that's cool, dude. A lot of the work there focuses on emerging electronic products that have a lifespan of maybe six months to a year, so there's very fast turnaround, and they're much freer from constraints. Compared to other design centers in the world, Boston has a very different character. It's one that's much more based on research, and that is very attractive to people in the marketing and design departments of companies like BMW and Ford.

Beth Siegel: It's this business side of design that has the most relevance in Massachusetts, especially in terms of the realities of job creation and what a design economy can mean for communities. We have found in our studies that, in addition to companies that are doing product design and industrial design as consultants, following the model that Dan is describing, there is an incredible number of businesses in this region that are both designing and manufacturing their own products. But they are designing here and producing elsewhere. For example, we found internationally renowned eyeglass designers who were living in the Berkshires but doing all of their production elsewhere. If you go to any open studios in Boston, you'll see people who are not just making little pots and jewelry but also designing products using incredibly interesting materials with production capacity - but, again, the production is going elsewhere. So in addition to this incredible concentration of really high-level product design in Boston, we have this incredible opportunity for bringing production back here. And that is significant, because it's the production side that creates jobs and possibilities for more broad-based economic gain.

David Lee: I spend a lot of time in Vermont, where I have found some very interesting cottage industries up in the woods in little hamlets and villages; people just turn on the computer and work on projects for clients in India or wherever. We need to make that link between the ideas and the production and find a way for that to nurture our entire population, not simply the ideas people.

Elizabeth Padjen: You just used a phrase that may be part of the challenge facing the design economy and its need for greater public recognition: "cottage industry"— the sense that this is all small potatoes compared to other sectors of Boston's economy, like financial services, healthcare, and education. And one factor might be that most design firms— even some of the leaders in the field — would be considered small businesses by many standards.

Beth Siegel: We define the design sector as architecture, landscape architecture, industrial design, interior design, graphic design, and specialized design such as marine design. When you combine them and take into account self-employed contractors, we're

talking over 30,000 jobs. So it's not financial services, but it's also not insignificant in Massachusetts. But unlike other sectors, the real economic importance of design is the impact it has on other sectors. Take manufacturing. We all talk about how to keep manufacturing in Massachusetts; we talk about technology and taxes and energy costs. But are we talking about design? How much can better design help keep those manufacturers we still have in Massachusetts? How much can better design help the tourism industry? Better design can be a core competitive advantage of many of the key clusters in Massachusetts, including life sciences. Design thinking is critical in the medical devices industry: we wouldn't have a competitive medical device industry in Massachusetts without it.

Elizabeth Padjen: Is it true that we have more architects in Boston than anywhere else in the country?

Beate Becker: Massachusetts ranks number one in the country for concentration of architects [as a percentage of the workforce] and number two in concentration of designers in all fields. The big question is, why is that invisible? Why isn't it known that Boston is second only to San Francisco in numbers of industrial designers? We need to raise the visibility of design and demonstrate that it is significant.

Kairos Shen: It doesn't surprise me that we never think of Boston as having the largest concentration of industrial designers. It's also not well known that we are one of the largest centers of private equity. I would argue that there's something very Boston about that — New Englanders tend to be modest about their work. And I think that influences the approach to problem-solving here. Many designers in other cities are focused on self-expression. I'm very proud of the fact that I'm in a town full of creative people who are more interested in the substance of design.

David Lee: The fact is that the media's default portrayal of Boston is stodgy. They focus on the financial-services industry and the white-shoe lawyers. They certainly haven't embraced the idea of Boston as a design center or a center for any kind of innovation. When the ski industry started off in Vermont, they paid everybody with gold coins, so that the towns would quite literally see how much that industry contributed to the local economy. I'm not sure what the design industry here in Boston could use as its gold coins.

Dan Buchner: Beate mentioned the youth and the energy here. We sponsor Youth Design Boston where we work with AIGA [the professional association for designers] to fund paid summer internships for kids from the Boston schools to work in design firms around the city. I'm blown away by the talent. And most of them don't even know that they have career opportunities. They're making cool websites, they're doing cool T-shirt designs, or maybe rigging up their own fashion statements. They don't really realize that you can make a viable career out of that, even here in Boston.

I'm sure we could come up with a GDP equivalent for the design industry in Massachusetts. But what I think is more important is the leverage that design, and good designers, can bring to the economy. That was proven in El Salvador, in an



economic development project with USAID. All the money the US government had been investing in economic development in El Salvador was about clustering furniture manufacturers or textile mills, making sure that they had credit vehicles and ways to get containers in and out of ports. The fact was that it really was not having an impact at all on the economy, because they were producing stuff that people didn't want to buy. And it wasn't until the person who was running that program decided to introduce design innovation and actually help those companies produce things that people in the United States and Europe wanted to buy, that all that aid had a dramatic impact on their businesses. That's an aspect of design that's worth talking about; there's no reason why those kind of programs can't be put in place here in Massachusetts.

Beate Becker: There was a series of symposia last year, organized by Designing an Industry/Designing the Future, that brought together international designers with their Massachusetts counterparts. The international people talked about their government support structures for the design industries. The Americans talked on a micro level about organizational structures, cost breakdown, integration of new materials into design. This is a different system here, and it is very much driven from the bottom up.

Beth Siegel: Part of the difficulty is that the design and art world isn't involved in the economic-development world. There are a lot of resources, some with considerable financial support, that are helping manufacturers remain competitive — such as the Manufacturing Extension Program that helps firms become ISO 9000 certified. But they do not address the significance of good design.

Beate Becker: I'm working now with the city of Brockton and the Fuller Craft Museum. Brockton is most likely not going to be a cultural tourist destination, but what it does have is a manufacturing base, and a world-class craft museum, and a city that's willing to think about bringing together craft, design, and manufacturing.

We are looking at ways not only to sustain but maybe even to grow that base to become a design manufacturing cluster down there. For example, there's a foundry that produces manhole covers. It's actually cheaper to produce them in China, but the foundry is in business because it does small runs, and it can put the names of municipalities on their covers. But what are the possibilities for that business if it embraces an innovative approach to design? It could become a sizeable business by aligning itself with landscape architects and public artists.

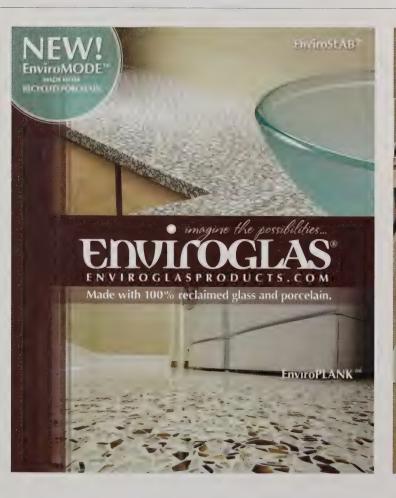
Kairos Shen: The challenge is to showcase the fact that we're not just capable of large-scale production design, but that we're also the Lamborghini of this industry — that we can produce the super-high-quality design that addresses function and is physically expressive. But that also means we have to take greater risks in all aspects of our design culture. Culturally we seem less amenable to risk-taking than Los Angeles and New York. Look at the Big Dig. We have the most sophisticated engineering in the ground. Yet when it comes to expressing that on the surface, we are terribly timid. Is that something about us? How do we in the public sector encourage more risk-taking? My hope is that we will say, "OK, maybe we were too conservative. We can do better."

David Lee: We need to make people think about design and Boston the same way people thought about technology and Silicon Valley for a long time — talented people and employers would go The mailenge is to showcase the fact that we renot just capable of large scale production design, but that we render the Lamborgian of this industry (Carris Shen)

there simply because it was the place where interesting people were just banging around and all kinds of interesting stuff was happening. We don't have that reputation here yet, despite the size of our design community.

Frano Violich: I'm a native of San Francisco so I understand the California mentality. And we couldn't be more different. It's a place of big landscapes and that promotes big-sky thinking. That's why the information economy did so well out there. For some reason, we don't have the ability to think big-sky in this culture. But I think that's changing, because so many walls between neighborhoods, between people, between disciplines, are now falling away.

Elizabeth Padjen: Boston is not a huge place, and the community of designers is very coherent. People tend to know one another, and that facilitates networking. We're certainly seeing a collaborative instinct among young designers. And young architects are definitely thinking a lot about blurring boundaries: they collaborate with one another; they collaborate with people in other fields; and beyond that, in their own work, they have erased



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250 Summer Street, 4th Floor Boston, MA 02210-1135 p 617 357.1800 f 617 357.1850 please visit our new website www.slamcoll.com Atlanta Boston Chicago Connecticut the boundaries. They don't think only in terms of designing buildings: they might design the building, then also the furniture and the graphic identity, and the website for the client, too. Maybe that's big-sky thinking.

David Lee: It's interesting that we should be talking about this because, more than 45 years ago, Cambridge Seven was founded to do exactly that — an architecture firm that gathered in other disciplines to take on all kinds of projects beyond buildings. But the market trended away from that model — though C7 remained true to that spirit — and most firms started to specialize. It's only in recent years that architects are starting to think more broadly again.

Dan Buchner: We see the same trend in our field of designers who are breaking out beyond the boundaries, but what I think is even more interesting is the number of people from other disciplines who want to break in. In our firm, for instance, we have social scientists, anthropologists, technologists, fine artists, journalists, and psychologists, in addition to mechanical engineers, industrial designers, graphic designers, and web designers. I would say 50 percent of the people are non-designers by background, but we all design. Maybe one of the reasons why Boston has fostered an unusually large design industry is its diversity — it attracts different kinds of people from diverse cultures who come here and go to school for very different things. **Beate Becker**: We seem to be entering an Age of Design — a lot of non-designers want to be in design. Look at the TV show *Project Runway*; my kids do, and they all want to be designers. Everybody wants to be making things. It's important to demonstrate that this





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industry includes real people working in real places, sometimes hidden in some very strange neighborhoods, doing really interesting work. And if young people can be exposed to the people who do this work, they can be inspired to study technologies that they may not be inherently interested in, like math or sciences — especially when they see the applications include some really cool stuff. **David Lee:** There's no better example of people laboring in obscurity making high art than the quilts of Gee's Bend.

Beate Becker: Yes. And Gee's Bend inspires people to think that they can start small, even quite modestly. That's one of the reasons State Representative Jeffrey Sanchez from Mission Hill has been promoting efforts to recognize the design industry. His district includes the Longwood Medical Area, but even though life sciences are important to his district, they're of limited interest to his constituents. But design — creating and making — cuts across the full spectrum of his constituents. They can all imagine futures in design.

David Lee: And it all comes back to the schools.

Elizabeth Padjen: It also comes back to an entrepreneurial instinct or, for people who don't have that instinct, giving support to small businesses, which may some day grow into bigger businesses. It's hard to imagine, for example, starting a life-sciences company. But starting a small design studio is realistic, and the dreams you might have for the steps beyond that seem attainable. But first, people especially students — need to know what the possibilities are.

Beth Siegel: You have to reach out proactively. We just finished a plan for the city of Lowell, which has incredible richness in terms of its immigrant community. We talked to them about identifying



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David Lee: It also comes back to risk-takers. We have to somehow say that Boston, this region, is a place where you can come, think big ideas in a small space, and get recognized and be nurtured.

Frano Violich: David is right. I know so many sole proprietors and young designers who struggle very hard, and sometimes it's hard

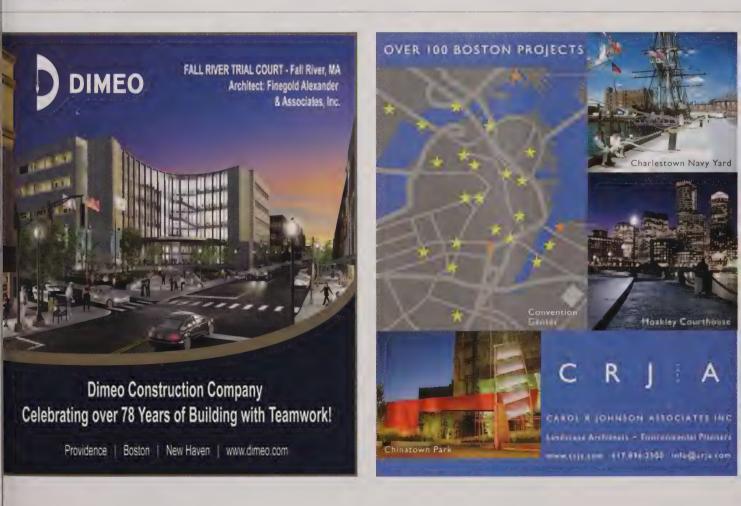
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Frano Violicii

for them to see a future for themselves. Some of them probably have more know-how in certain aspects of design than some others who have been around a lot longer — such as sustainability, or the use of digital modeling and digital fabrication, which can be so cost-effective that, for example, you don't have to go to China for cheaper granite. All it takes is a break, but instead there is a conservative, non-risk-taking mindset that doesn't nurture those talented individuals. That's one challenge.

The other challenge is that architects, who make up the largest percentage of people who work in these creative fields, need to accept the other design disciplines as part of the same design community. They tend to be too protective or defensive of architecture as a discipline. Don't we work better in greater numbers, when we begin to cluster? We shine brighter. Look at fireflies. You can hardly see a single firefly. But when they cluster around a big elm tree at night, you can't miss them.

Kairos Shen: Maybe the value of that cluster needs to be made more explicit. Similarly, I'm not sure that the economists have spent much time thinking about the incremental value of better design. For instance, I'm willing to pay extra money to buy an Oxo product because in addition to looking better, it actually works better. How many other people are willing to do that? And looking at the question from the other end of the consumer scale, is it the role of government authorities to put our money where our mouth is and be willing to pay extra for high-quality design?



We have a community of talented designers, and we want to support them, not by giving them subsidies, but by demonstrating that when they do good work, we collectively value it by being willing to pay for it. The demand side is very important. Unfortunately, there is a belief that good design is a luxury. It's not a luxury. But most developers still have this unfounded opinion that good design will cost them more.

Elizabeth Padjen: Dan, do you see parallels in your field? Clients who don't get the value of design?

Dan Buchner: There is a parallel with building developers, who maybe don't really understand the inherent value of good design, but associate it with greater expense because they think they need to hire rock stars. And in our business, some people similarly think having a rock star's name on a product will help market it. Obviously we have a wide range of clients, people who are very sophisticated and people who are total novices. We might have a client who comes to us and says, "Can you make us the iPod of our industry?" And we say to them, "Well, are you Apple? Do you have an organization and a philosophy and an understanding of what it takes to sustain that? Or do you just want instant success?"

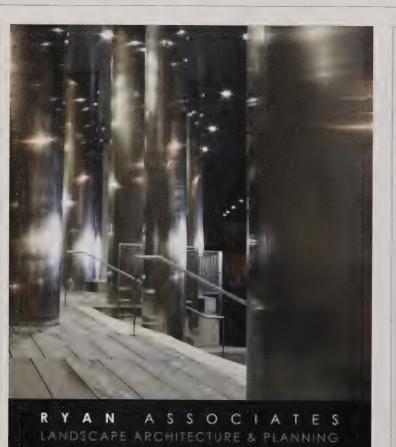
Frano Violich: Wouldn't you say that design is reaching a kind of tipping point where this rock-star mentality is beginning to fall by the wayside? After a while, you can only take so much of that. There

seems to be more critical thinking in terms of performance.

Dan Buchner: Yes — over the past few years, there's been a very significant shift in design, at least as it's perceived by business people. When manufacturing moved over to Asia, it was followed by product engineering and then design, and the process pretty much boiled down to picking through some design offerings, selecting one, and putting your brand on it. But after doing that for a few years, many of them realized that they were ruining their brand. So many companies these days are investing more money than ever before in well-researched and well-thought-out design that speaks to people in a very human way. And that's been the strength of the Boston design community.

Kairos Shen: The challenge is to build on this strength and embrace this new spirit of openness and risk-taking to create something that is still discernibly Boston — not just in the physical structure of the city, but also in a social and political structure that can harness all of that energy.

David Lee: Dan mentioned iPods. It's a great metaphor for what can happen here. You put your iPod on shuffle, and you've got Mendelssohn followed by Marvin Gaye. You start to think differently about how things go together and next, you're creating new playlists. It all comes from discovering connections that you never would have imagined.





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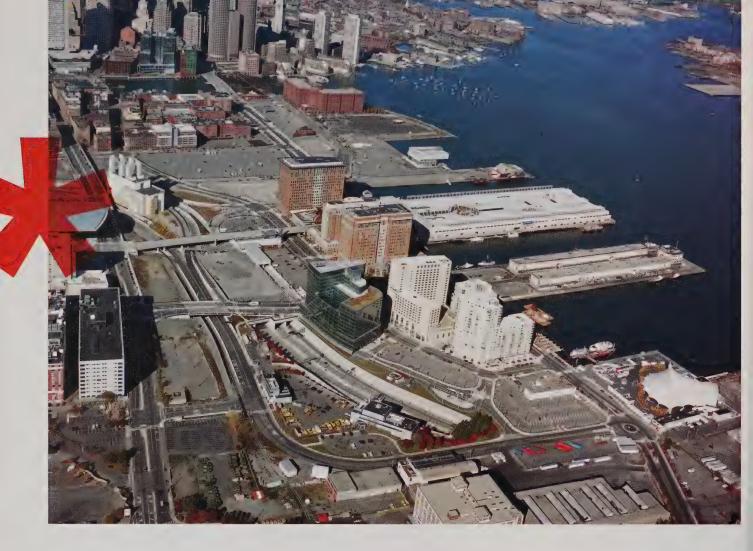
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Viñoly to the left of me, Cobb to the right, here I am stuck in the middle of ... what?

With apologies to Stealers Wheel, that's a good question to ask when standing in the approximately 1,000 acres that make up the South Boston waterfront.

While the area was the hub of a thriving seaport in the early 1900s, by the latter half of the 20th century, it had become an unimpressive and largely underutilized area that featured a handful of well-known restaurants, one area of notable buildings (the brick warehouses built by the Boston Wharf Company in the mid-to-late 1800s), a host of parking lots, and a smattering of unimpressive buildings. Tellingly, my 1984 copy of the *AIA Guide to Boston* mentions only three places of note in the area: the "Summer Street Warehouses," the Children's Museum, and the Postal Annex.

In contrast, the book's latest edition lists three new buildings in the area — the Boston Convention and Exhibition Center, the Moakley Federal Courthouse, and the Institute for Contemporary Art (ICA). While these clearly are noteworthy buildings, taken together, they and several other recent buildings that aren't cited in the new AIA guide do not create a coherent, enjoyable district. Rather, they are islands in a sea of parking lots, roads, highway

ramps, and other unappealing and largely disconnected structures. At first glance, this makes no sense. How could so many seemingly significant buildings rise in such a seemingly random fashion? Writing in the Harvard Design Magazine in 2005, Hubert Murray, past president of the Boston Society of Architects, argued that the problem was that the powerful Boston Redevelopment Authority (BRA) "failed to take an active role in planning" for the district until the late 1990s, after the area's future had been largely determined by the construction of the Big Dig, particularly by the highway running through the area. The fault, he added, was not with the BRA, but the fact that in Boston a combination of turf battles, "political stasis, and cultural conservatism" created a milieu where ambitious, meaningful, comprehensive planning could not occur. In its absence, he lamented, "expediency has become the governing principle of urban planning, and the art of the deal prevails."

Indeed, in the South Boston waterfront district, as in many other parts of Boston (and other cities as well), such dealmaking is the norm because the public sector is relying on private developers to provide a host of desired amenities including parks, affordable housing, the 47-mile HarborWalk (which is 80 percent complete), and, in the case of the ICA, the land for major

You Are Here* (why?)

What conventioneers (and Bostonians) need to know about the South Boston waterfront

by David Luberoff

new civic facilities. Writing about the South Boston waterfront in the same issue of *Harvard Design Magazine*, land-use attorney Matthew Kiefer warned, "this strange brew of profit motive and public benefit is fraught with complications." Not only could it produce amenities that are "inadequately designed, built and maintained," but the imposition of such requirements might also "hinder development that would be good for civic life." Moreover, the process was likely to be "erratic and opportunistic" in both the timing and location of new public facilities.

At one level, Murray and Kiefer explain why the South Boston waterfront is so disappointing. But Murray's focus on the lack of a singular planning effort and Kiefer's focus on carefully delineating public and private responsibilities overlook the fact that for over two decades in multiple planning and permitting processes, state and city officials, private landowners, and several civic groups (including the Boston Society of Architects) have been actively discussing the scale, type, and location of future development, public spaces, transportation facilities, and other uses in the area. Taken as a whole, their decisions have produced a comprehensive, consistent, and intellectually justifiable framework. In short, a plan for the area exists in everything but name and includes the following key elements:

Mixed Uses in Green Buildings

Earlier plans for key parcels in the area mainly called for offices that would have extended Boston's Central Business District into the area. But in response to concerns that this would create the equivalent of a suburban office park on what could be a vibrant urban area, the city is now pushing for a mixed-use district with roughly equal amounts of office, residential, and retail/tourist uses — all built to green building standards. Moreover, these uses must not crowd out nearby freight operations in the port of Boston, which handles a modest but not insignificant amount of traffic.

Accommodating Regional Growth

In an effort both to take pressure off the city's historic core and to slow (or even stem) the ongoing decentralization of people and jobs in Boston, the area is slated to absorb significant amounts of development. Specifically, city officials anticipate that the area will ultimately house almost 40 million square feet of office, residential, and retail/tourist space. To put that in context, there is currently about 17 million square feet of space in the area. Most of that space, about 13 million square feet, is in the area's historic buildings, and the convention center represents about 40 At first glance: this makes no sense, How could so many seemingly significant buildings rise in such a seemingly random fashion?

percent of the new space that has been built. Moreover, given that Boston as a whole generally absorbs about one million square feet of new office space a year and 1,000 to 2,000 units of housing a year, this suggests that it will be several decades before the construction in the area is largely done.

Density but not Height

The district will not include major high-rise buildings, largely because of concerns that such buildings might hinder operations at Logan Airport. While this seems like an obvious policy, it actually is one of the first times that the Federal Aviation Administration has taken such a strong stance on this issue, which is a growing concern at a variety of airports around the country. The limits on height, combined with the desire for significant development, suggest that buildings will cover the bulk of the land on buildable parcels.

Moderately Sized Floorplates

For the most part, the streets in the area, which is a combination of historic and new roads, are generally laid out in ways that will not allow for the creation of supersized developments. On the other hand, recognizing market preferences, the streets do allow for numerous sites for buildings with 30,000-square-foot floorplates, the apparent minimum for a successful commercial buildings. (Sites for hotels and residences are somewhat smaller.)

Respect for the Waterfront

Stringent state laws and regulations limit the size of developments near the water's edge and generally require that much of the waterfront be open to the public and that at least some be reserved for water-dependent uses.

Transportation

The new highway makes it easier (for now) to get to the airport, downtown, and many other residential and commercial areas and, in contrast to the early 1980s plans for that road, most of the road is decked, which both minimizes the road's impacts on the area and creates significant development opportunities. To be fair, the highway's ramps are intrusive and the fact that some of the district's roads have to serve the trucks of a working port creates difficult challenges. But these challenges do not stem from a lack of planning. Rather, they represent some of the many tradeoffs that have to occur in a robust planning process. Even with this constraint, the district's roads basically create a grid with a few oddly angled streets that in the long run should create



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needed variations in development patterns. The district also is served by the new Silver Line bus rapid transit system that still has excess capacity and that can be adapted as the region grows.

Strategic Public Investments

The public sector has made two significant investments in anchor facilities for the district. The first is the convention center, which was deliberately located away from downtown and away from the waterfront so that it would encourage rather than block new development. The second, located on Fan Pier, the closest pier to downtown, is the Moakley Courthouse, which has helped bring commercial tenants to the district.

To be fair, and in support of some of Murray's argument, the courthouse also involved deals because its construction helped resolve a bitter dispute between Anthony Athanas, proprietor of the well-known restaurant Anthony's Pier Four, who owned the land, and a consortium of the Pritzker family and Richard Friedman, who were going to develop the site. Specifically, in the early 1990s, after state courts ordered Athanas to pay the developers about \$150 million for breaching his contract with them, then-congressman Moakley, who like many of the region's politicians was close to Athanas, stepped in and helped broker an agreement to have the government pay \$34 million to buy part of the Fan Pier site for a new federal courthouse. With this money in hand, Athanas agreed to settle the suit by turning over the rest of Fan Pier (but not Pier Four) to the developers.

No Stadiums

Finally, it's worth noting the many things that the public sector decided not to build. In the 1990s, the city rejected plans to build a new stadium in the area for the Patriots. Several years later, it did not support two different plans to build a replacement for Fenway Park in the area. Proposed by two different prospective buyers of the Red Sox who also owned waterfront land, the first envisioned a new ballpark on Fan Pier and Pier Four. The second called for a stadium on largely vacant land near Fan Pier owned by Frank McCourt, who subsequently bought the Los Angeles Dodgers and sold his Boston land to help pay for that deal.

Will these decisions produce good outcomes? To paraphrase C. Ernest Fitzgerald's famed assessment of new weapons systems, the simple answer is that in the end there are only two stages in planning: "too soon to tell and too late to make a difference."

While Fitzgerald is right, this is too facile. To have any chance of succeeding, the plan for the area should be comprehensive, coherent, and justifiable. Like it or loathe it, the plan for the South Boston waterfront meets those tests.

David Luberoff is the executive director of Harvard University's Rappaport Institute for Greater Boston.





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Cheers finale

The Boston Globe becomes a subsidiary of The New York Times

> Thomas Menino elected mayor of Boston

Emerson College purchases the Little Building and starts its transition from Back Bay to the Theatre District

> Olympic figure skater Nancy Kerrigan attacked

> > Cathy E. Minehan named first woman president of the Federal Reserve Bank of Boston

 South Boston St. Patrick's Day parade cancelled rather than allow gay group to march



by Robert L. Turner

In this year of promised "change," the perception and reality of change often bump against one another awkwardly.

In 1992, the last year the American Institute of Architects met in Boston, the economy was sour, a son of Massachusetts was pursuing a long-shot bid for the White House, Thomas M. Menino was about to become mayor, and the Big Dig was embroiled in controversy. Now, much seems similar, even if a Romney has replaced a Tsongas on the hustings, Menino *is* the mayor — still — and the Big Dig's controversies have proliferated.

Viewed from a distance, the skyline of Boston has not grown dramatically in these 16 years. Yet there have been changes in Boston that are very real, even if more of them are deep than tall.

Cabots and Lodges still call Massachusetts home, for instance, but it is hardly the Brahmin bastion of yore. The state now has the ninth highest percentage of foreign-born residents in the country. On average, 5,000 persons are naturalized every month in Boston. And the 2000 Census confirmed that the city is now majority minority.

The governor is African-American, and the presidents of Harvard, MIT, the state Senate, and the Boston City Council, along with the state attorney general, are all women.

As for the skyline, the one new feature that stands out is the Leonard P. Zakim Bunker Hill Bridge (a/k/a "the Zakim" or "the Lennie"), a cable-stay design — the widest in the world — that has caught the city's fancy. The bridge is but one element of the Central Artery/Tunnel Project (the Big Dig) that has changed Boston forever. Despite a variety of setbacks, including the death of Jamaica Plain resident Milena del Valle when a ceiling panel collapsed in 2006, the project is undeniably a transportation success and an engineering marvel. The dismantling of the ugly elevated Artery has opened the downtown like a flower, leaving the Rose Kennedy Greenway, Keith Lockhart named 20th conductor of the Boston Pops Orchestra

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It's been 16 years since the ALA Convention last came to Boston — an interval that turns out to be a surprisingly good measure of change in a city.

a mile-long string of parks that has the potential to be an extraordinary urban space.

Architects have been busy, and often to good effect. The super-green Genzyme Building in Cambridge, the new Institute for Contemporary Art in South Boston, and the Frank Gehrydesigned Stata Building at MIT are among the most acclaimed, as are Moshe Safdie's redo of the Peabody Essex Museum in Salem and Bill Rawn's warm and acoustically brilliant Ozawa Hall at Tanglewood.

Many Bostonians would tell you that the most historic change hereabouts is that the Red Sox won the World Series twice! Indeed, Boston retains a sense of humor; check out the Liberty Hotel, the former Charles Street Jail.

But the bursts of optimism and creativity seem to lack staying power of late. Will the ambitious but much-delayed Fan Pier development, just now getting in the ground, deliver on its promise? Can Harvard's plans for a vast new campus in Allston move forward with both community support and high quality? Still, most of the innovation and boldness are coming from the private sector and universities. The park at Post Office Square, privately funded and operated, has been hugely popular since it was dedicated in 1991. But City Hall Plaza remains a windswept wasteland.

Many of the most troubling questions are directed at the public sector, which acts as if it has lost its nerve. Perhaps the Big Dig's troubles are seen by elected officials as a yellow light continually urging caution, despite the overall success of the project. Whatever the cause, the pall of uncertainty is palpable.

Perhaps it is cyclical, and the blood of designers and politicians will begin to rise again when the stock market does. In the meantime, only rank speculation can imagine how Boston will change in the next 16 years.



Photos (left to right): Nicolas Melo; courtesy, the Massachusetts Water Resources Authority/Allen; courtesy, the Massachusetts Port Authority.

Clean Water

Boston's reconnection with its waterfront has accelerated since 1992. The Boston Harbor clean-up reached a critical turning point in 1998 with the completion of the Deer Island Waste Water Treatment plant, whose 12 oblong sludge digesters, each 150 feet tall, have become a familiar feature of the harbor, like a giant carton of eggs. Federal legislation in 1996 created the Boston Harbor Islands National Recreation Area, with innovative financing including federal and private money. Use of the islands has burgeoned; some 120,000 local visitors and tourists took boat rides out to the 34 islands last year, far above the numbers from the early '90s, and an increase of 10,000 in the last year alone. One of the islands, Spectacle, grew enormously thanks to three million yards of fill from the Big Dig, and is now a favorite hiking destination. From East Boston around to Hull, commercial, residential, and recreational developments are blossoming. Along the North End and South Boston harborfronts, in particular, upscale residences are reshaping neighborhoods that were still rundown just a few years ago. Most harbor beaches are swimmable. Bluefish, striped bass, and seals are now common visitors.

This clean-up has occurred even as the port has experienced something of a revival. The Conley Container Terminal, once nearly moribund, handled more than 220,000 container equivalents in 2007; exports have more than doubled in the last six years alone. And passengers on cruise ships sailing out of Boston jumped from 29,000 in 1992 to 234,000 last year.

The Charles River has also been cleaned up substantially, following a campaign begun in 1995 by the regional Environmental Protection Agency head, John DeVillars, to make the river fit for swimming within 10 years. Then-governor Bill Weld jumped the timetable by plunging into the river fully clothed in 1996. Indeed, since 2005, the Charles has been safely swimmable except for brief periods immediately after large rainstorms. A private organization, the Charles River Conservancy, regularly pushes the state to make further improvements, but more needs to be done to provide better maintenance and access.

Harry Potter and the Sorcerer's Stone published (first of the series)

Frog Pond skating rink on Boston Common opens Moakley US Courthouse opens (Architect: Pei Cobb Freed & Partners) Monet in the 20th Century blockbuster show opens at MFA

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Economic Engines

Fidelity and the State Street Bank are still headquartered here,

but Boston is not the financial center it was in 1992. Other corporate civic leaders, including the Bank of Boston, John Hancock, and the Boston Globe, are now owned by out-of-towners. As a result, there are fewer power centers and much bemoaning of the loss of corporate citizenship and related charitable support. Filling the gap in part are the area's universities and medical institutions, which have maintained leadership positions despite sharp global competition. Known locally as "the eds and meds," they are major employers and community leaders. The "eds," in fact, are changing the face of Boston more than any other single group. Some 7,000 new dormitory beds have already been added. Northeastern University has expanded its campus aggressively, and commissioned several award-winning buildings. Boston College is planning significant growth that will incorporate the former

headquarters of the Roman Catholic Archdiocese of Boston. UMass Boston has a new campus center that takes full advantage of its location on the harbor, and is planning new classroom buildings and, for the first time, dorms. Emerson College, formerly in the Back Bay, has moved into and helped revive the Theatre District. Suffolk University is spreading its campus down Beacon Hill. And Harvard's plans for a vast new campus in Allston, on the Boston side of the Charles River, include a facility designed to make Harvard the world leader in stem-cell research. As for the "meds," hospital executives, health insurers, and medical policy-makers pushed through the state's innovative health-insurance program, and the medical community has even entered the transportation field, setting up its own network of private shuttle buses to serve medical facilities that were not connected efficiently by public transportation.

Big Dig

It is hard to exaggerate the Big Dig's impact on Boston or the

level at which it has preoccupied local and statewide attention while it was fundamentally changing the face of the city, in several ways. Transportation: The Interstate Highway System's worst bottleneck has been substantially relieved – the days of 15-hour, exhaust-filled traffic jams on the Central Artery, a fact of life in 1992, are gone. Construction: The immense engineering challenges, from the slurry-wall construction to the relocation of utility lines, were met, all the while keeping disruptions to residential and commercial life on the surface at manageable levels. City fabric: Demolition of the monstrous elevated Artery has created the possibility of reknitting parts of the city brutally ripped apart half a century ago and, especially, of reconnecting the downtown to its waterfront. Governance: Control of the project shifted in midstream from the state to the semi-autonomous Turnpike Authority, and it now seems clear that too much oversight was delegated to contractors. Federal funding, once generous, dried up as costs rose inexorably, putting pressure on state taxes and tolls. Corruption appears to have been a less significant problem than misfeasance and cost-cutting. Still, the project moved to completion through the administrations of two Democratic governors who were bitter foes, four Republican governors who rarely agreed, and now another Democratic governor. Worth noting is that the project's most visible element, the cable-stay Zakim Bridge, came out of an ad hoc process — the 42-member Bridge Design Review Committee that was mandated by the administration of Governor Michael Dukakis in 1991 but appointed by Governor Bill Weld. Several of the people who worked on that committee believe the normal bureaucratic channels would not have produced nearly so felicitous a result.

Photos (left to right): courtesy, the Rose Fitzgerald Kennedy Greenway Conservancy (pre-Big Dig); Hubert Murray AIA, RIBA; Peter Vanderwarker.



Northeastern University freshman Shawn Fanning develops Napster software

Edward W. Brooke Courthouse opens (Architect: Kallmann McKinnell & Wood)

> First Boston Cyberarts Festival, biennial celebration of art and technology

C Human genome deciphered

George Bush defeats Al Gore, becoming first president C elected since 1888 without a plurality of the popular vote



Greenway

Part of the Big Dig, the Rose Kennedy Greenway deserves its own look, because it embodies so much that is hopeful, even visionary, but also so much that is still uncertain. Amazingly, after two decades of planning, the project still teeters between its brilliant potential and the fact that its ownership, funding, governance, and much of its design are still in doubt. The overall concept is a bold one: instead of rebuilding to hide the shrapnel-like wound of the elevated Artery, as some urged, planners decided to create a unique urban oasis - three-quarters open space interspersed with three or four buildings along the winding, mile-long corridor. Parks on two parcels in the North End were dedicated last summer to general acclaim. And the slender Chinatown park at the southern end of the Greenway is popular in the neighborhood. But the five-parcel Wharf District in the middle is widely thought to be uninspired. Meanwhile, three key parcels just north of South Station, where an enormous glass winter garden was once envisioned, now have no long-term plans at all, and there is no guarantee that any of three built projects — a museum, an art-and-culture center, and a YMCA — will get further

than blueprints. Symbolic of the problems: Despite the fact that everyone has agreed on making the Greenway a four-season space, its central iconic element is a fountain that will be shut down for more than six months every year. One difficulty has been that the project was controlled by the Massachusetts Turnpike Authority, an agency established as a road-builder, not a city-builder. Mayor Menino said several times the city should take charge, but he never followed through; the cost burden would have been substantial without additional help from the state. In 2004, under pressure from Senator Edward Kennedy, the city, state and Turnpike agreed to create the Rose Fitzgerald Kennedy Greenway Conservancy to raise funds and, gradually, take on programming and maintenance functions. Blessed with committed leadership, the Conservancy is now seen as the most practical option for running the Greenway. But it is a commentary on Boston's labyrinthine politics and turf wars: This would never happen in Chicago or Barcelona. Nevertheless, the project has enthusiastic support in many parts of Greater Boston. One can still hope that the Greenway will become Boston's most vital and thriving common ground well before 2024.



Photos: courtesy, the Rose Fitzgerald Kennedy Greenway Conservancy.



Photos (left to right): Alex Budnitz; Elena Elisseeva; Peter Vanderwarker; courtesy, Hacin + Associates.

The Neighborhoods

Long known as a city of neighborhoods, Boston has become less Balkanized in recent years, but the shift is gradual. The city estimates its population this year at 599,200 – a gain of 12,000 over the 2000 Census figure, which was itself 16,000 higher than 1990. But the number of households has grown at a faster rate, an indicator that childless households, whether students, young professionals, or empty-nesters, are taking a bigger role in the city. The strongest growth has been in neighborhoods bordering Boston Harbor, especially East Boston, South Boston, and the Central District, which includes the North End and the Waterfront.

There is still considerable residential segregation by race, but the trend is slowly toward more heterogeneous neighborhoods. As of 2003, South Boston still had an 85 percent white population and Charlestown 81 percent. But these figures were declining. Even between 2000 and 2003, according to the city Department of Neighborhood Development, the African-American population of South Boston increased from 741 to 1,089, and in Charlestown the number of blacks went from 539 to 812. Conversely, Roxbury and Mattapan

Boston imposes indoor-smoking ban (statewide ban follows in 2004)

Peabody Essex Museum new wing opens

(Architect: Moshe Safdie and Associates)

are still predominantly black, but the number of white residents grew from 2,742 to 6,267 and from 1,428 to 2,352 respectively, over just three years.

East Boston is a neighborhood that is changing more dramatically. Once a bastion of Italian-Americans, more than a third of its population in 2003 was non-white — mostly Latino and Asian. Meanwhile parts of East Boston have been revitalized by new parks and the harbor clean-up, attracting more affluent residents, but the neighborhood is still poor, with a median household income some \$9,000 less than the city average of \$44,848.

Probably most representative of the city as a whole is Jamaica Plain, home of Jamaica Pond, the Arnold Arboretum, Doyle's famous political watering hole, and the Arborway and the Jamaicaway, two lovely parkways designed in a more civilized time by Frederick Law Olmsted as part of the Emerald Necklace and now favored by high-risk drivers. The population of Jamaica Plain was evenly split between white and non-white in the 2000 Census, and the income, age distribution, percentage of renters and homeowners, and other indicators are close to those of all of Boston.

MIT/Stata Center completed

(Architect: Gehry Partners)

Massachusetts becomes the first state to permit same-sex marriage

Red Sox reverse Curse of the Bambino by winning their first World Series since 1918

Boston Convention & Exhibition Center opens (Architect: HNTB/Rafael Viñoly Architects)

Democratic National Convention held in Boston; native son John Kerry wins presidential nomination

Genzyme Center opens (Architect: Iraq War begins Behnisch, Behnisch & Partner)

Public Education

K–12 public education has been the dominant focus of state policymakers throughout this period. Beginning with the signing of a landmark education reform law in 1993, billions of new dollars and persistent attention have flowed to the schools. Rigorous mandatory tests known as MCAS (Massachusetts Comprehensive Assessment System) were controversial, especially when passage became required for high school graduation. In the 2007 national assessment tests, Massachusetts students were first in the country. Fourth graders had improved an average of 24 percent on reading and math tests since 1992, while the rest of the country improved an average of 13 percent. Still, troubling problems resist solution. In many urban systems including Boston, some facilities are old and worn, dropout rates are far too high, and there are shameful gaps between the performance of students who are white and more affluent, versus those who are of color and poorer. The highly regarded Boston superintendent Thomas Payzant made some progress during his tenure (1995–2006), but Mayor Thomas Menino's oft-stated desire to attract more middle-class families to the public schools has proved difficult to achieve. The 2008 enrollment in Boston schools of 56,190 is actually 1,600 fewer than in 1992.



Photos (left to right): courtesy, Hacin + Associates; John Horner; courtesy, Valentino,

Luxe

Passing Hermes and Valentino during a walk from the Public Garden toward Copley Place, home of Neiman Marcus and Tiffany, someone returning to the city after an absence might well ask: "Am I really in Boston?"

Affirmative is the answer. Whether for better or worse, a luxe factor has become part of the Boston cityscape. Harborfront condominiums now commonly sell for seven figures — many of them well up in that range. Even as the residential market has been slipping here as elsewhere, the high end goes its own way. Back Bay and Beacon Hill, still the toniest addresses in town, saw the median sales price increase 7.6 percent in the November 2007–January 2008 period versus the previous year. And while that recent median price was \$542,500, the average price was \$964,551, indicating many of the sales were of very expensive units. The average listing price in that neighborhood as of January 1 this year was \$2,309,612, according to the real estate search firm Trulia.

This is a whopping figure for Boston, which never cared to show its wealth in the past. But high-tech, biotech, and financial services have created fast

fortunes, the area's universities are attracting a growing number of wealthy foreign students, sports superstars create their own subculture in this sportsdrunk city, and a change in state tax law in July of last year is attracting a flood of movie productions, along with the stars and the glitter they bring.

Tinseltown we aren't, nor Manhattan. But there is a growing demand for luxury that is being met by new hotels and hotel-condominiums such as the Millenium and the Mandarin, now going up by the Prudential Center, and condominium buildings such as One Trinity Place. Many more are on the drawing boards as empty-nesters move into the city, and are being joined by a growing number of young professionals.

One ripple effect to this trend is not so jazzy. Several neighborhoods, including the North and South Ends and Jamaica Plain, have seen rising real estate values squeeze out the kind of middle-income families that have lived there for generations. Many poorer families are now looking outside the city. One response to this is the "smart growth" policy that is being pushed in Boston and its suburbs to reduce dependency on cars by steering residential growth toward transportation nodes. One example is the Carruth, a residence building at Ashmont Station, on the MBTA's Red Line in Dorchester, that will have 42 condominiums and 74 rental units, all moderately priced.

Boston mayor Menino calls

for 1,000-foot skyscraper on

Winthrop Square site

Farmer's market opens on Northern Avenue Bridge Hurricane Katrina hits Gulf Coast

Institute of Contemporary Art opens (Architect: Diller Scofidio + Renfro with Perry Dean Rogers Partners)

Central Artery/Tunnel project (Big Dig) reaches substantial completion

Massachusetts increases tax incentives to the motion picture industry; celebrities start flooding the Bay State WGBH headquarters opens (with digital mural) (Architect: Polshek Partnership)

The Mayor

Thomas M. Menino's perspective as mayor of Boston blankets this period almost completely. As the president of the City Council in 1992 and 1993, he became acting mayor when Ray Flynn left to become ambassador to the Vatican on July 12, 1993. Menino is on track to become the longest-serving mayor in Boston's history – outlasting Kevin White and James Michael Curley – on July 13, 2009, whether or not he seeks an unprecedented fifth term.

Known for most of his tenure as a "neighborhood mayor," he embraces that label. The biggest change in Boston since 1992, he says in an interview, is that "we're more tolerant. The neighborhoods have changed. They're much more diverse, all the way from East Boston to Cleary Square" in Hyde Park. Menino also touts new housing construction and a reduction in the number of abandoned units. As for public spaces, Menino points first to the Rose Kennedy Greenway — "it's beautiful...a marvel. Every city wishes it could have something like this" — and the rediscovery of the harbor islands.

When Flynn was mayor, the growth of the city was guided by the dynamic and visionary Stephen Coyle, his director of the Boston Redevelopment Authority. Menino has never had a comparable BRA director, preferring to act as the city's chief development officer himself. He is not bashful about his role. Wanting to create a skating rink on Boston Common, but being told the price would be high — \$7 million — Menino says he responded: "Everyone has a toy. This is my toy. Get it done." Since it opened on January 24, 1997, the Frog Pond skating rink has been a delightful cold-weather common ground for people from all parts of the

city. But not every example is universally seen as a success. Menino's opposition to flat roofs on tall buildings became most emphatic in the construction of 111 Huntington Avenue, a new tower in the Prudential Center, which now sports a colorful dome-and-spikes top. "I designed it," Menino says proudly. Others call it the "crown of thorns," or worse. Although the city went through a thorough rezoning in the 1990s, virtually every major proposal violates those strictures, giving Menino a strong hand in deciding whether to grant waivers.

Some of Menino's proposals are bold, but highly controversial. Current examples are his plans to permit a thousand-foot tower near the retail district, and to sell City Hall and build another in South Boston, some distance from downtown. The Boston Civic Design Commission, established during Flynn's term, has acted as a filter for proposals from the mayor, developers, and the public. Peopled mostly by respected architects and other professionals, the BCDC has over the years provided useful guidance, although critics suggest some members who work in the city temper their views so as not to antagonize Menino.

Another criticism of these years has been that planning has occurred only sporadically. Menino responded this past February by naming a BRA veteran, Kairos Shen, the city's new chief planner, with a mandate to coordinate all relevant city agencies, including the transportation, neighborhood development, and parks departments, as well as well as the BRA, in comprehensive planning.



Photos: courtesy, City of Boston.

Robert L. Turner is the Boston Globe Fellow at the John W. McCormack Graduate School of Policy Studies at UMass Boston, where he is the director of Commonwealth Compact, a statewide diversity project. He is the former deputy editor of the *Globe* editorial page.

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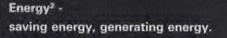
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From Moon Hill to Macallen: Searching for Purpose in the New Modernism

by James Hadley AIA

Virgil wrote his Eclogues and Georgics over 2,000 years ago, examining the relative virtues of life in the country and the city. Since Virgil's inspiration was the *Idylls* of Theocritus, written in the third century BCE, we know that our sales agent — who is cheerfully opening doors and pointing out views on this sunny Saturday afternoon — is on well-trodden ground as she enthusiastically compares life in the Fort Point Channel/South Boston area with her former home in the suburbs. Virgil drew no hard-and-fast conclusions in his pastoral works; today, distinctions are more easily drawn. The new Macallen Building that the agent is describing offers an on-site health club and lap pool; a function room with adjacent landscaped roof deck; and very attractive industrial-modern apartments with high ceilings, lots of natural light, and high-end appliances. High-speed Internet access is included in the condominium common charges. The building is right across the street from a Red Line T-stop and within a very short walk to South Station, so the enclosed parking that is included with every apartment is more a luxury than a necessity (and can be removed from the apartment offering with a substantial saving in the base cost). It is all very new, up-to-date, and quite appealing.

Most important, the building has achieved a LEED Gold rating for environmental friendliness; in fact, it is the first

LEED-certified residential building in Boston. The Macallen, designed by Office dA with Burt Hill, is the first step in what the developer, Pappas Enterprises, intends to be a model urban neighborhood. Pappas has already completed a rehabilitation and condo-conversion of the warehouse-style building that lies next to the Macallen. The former street between the two buildings has been blocked to form a pedestrian space between them. The developer's next structure — planned for a site across the street — aims for a LEED Platinum rating. All are in place to become the northwest outpost of a revived South Boston — perhaps the next evolving neighborhood in the city. For many, moving to this formerly neglected area will be a statement of belief as well as a move to a hip and attractive place. For these people, like our sales agent, the attitudes that created the suburban rings around our cities are out of date, and they are ready for a new life and a new way of thinking about the environment. Nature in the suburbs was about participation; at the Macallen, it is about stewardship. Sitting in your living room on the fourth floor may not offer you a view of trees, but it's nice knowing as you sit there that you may have saved a few. Society - at least in the West - has changed its entire attitude toward the natural environment; the old was all romantic passivity, today we are talking about concerned



- < Harkness House. Photo courtesy, Perry Neubauer FAIA.
- v Macallen Building. Photo by John Horner.



Beyond the glass and aluminum lies an uneasy relationship with the natural world. For many, moving to this formerly neglected area will be a statement of belief as well as a move to a hip and attractive place.

activism. Modern architects are, as always, ready to join the revolution — ready to create the new world.

And yet 60 years ago, when architects turned their attention and themselves towards the suburbs, they were just as convinced that they were doing the same. The members of The Architects Collaborative (TAC) who in 1948 began the Six Moon Hill community in leafy Lexington, just outside Boston, were all associates of Walter Gropius, who had brought European Modernism with him to the United States when he fled Germany in the 1930s. The simple, wood-sided houses they designed for themselves and the other families who built with them were, if anything, more revolutionary than the Macallen is today. With large areas of glass, flat roofs, and no ornamental trim, they were nothing like houses that Americans were used to seeing. More important than the style of the buildings was the attitude toward nature that they represented. They celebrated the natural world, mainly by emphasizing their slick newness in contrast to the rustic natural scene, which they left largely intact. With their elimination of ornament and emphasis on constructivist detail, much of the visual interest these houses provide to their occupants comes from outside. This became

clear to me when I recently called Sally Harkness, one of the founders of both TAC and Six Moon Hill. As we spoke, she described to me the warmth of the light that was falling on her from a large window near where she was sitting, and told me of her delight in the ever-changing views from all her windows. Clearly parts of the Six Moon design concept still work for one of its founders, even after 60 years of occupancy.

Other aspects of Ms. Harkness' life in Six Moon Hill have turned out to be less successful. These are mostly about mobility; although active, she no longer drives a car, and relies on neighbors for trips to town. She is fortunate, because the community spirit that characterized the original settlers lives on with newer arrivals, and much help is at hand in the form of rides from caring neighbors. Here is another aspect of Six Moon Hill that was, and still is, revolutionary — it was more than just an experiment in architecture. As Martin Filler reminds us, "The forgotten (or suppressed) truth about Modernism was that the radical new forms of architecture and urbanism its practitioners advocated were only parts of broad and highly detailed agendas for the reform of life in everything from economics and politics to spirituality and class equality." It is very easy to forget the impact of Socialism on the architecture of the mid-20th century. (Sally Harkness confessed to me that the founders of TAC had considered calling it "The Architects Cooperative," but rejected the name as too political.) The plans for Six Moon Hill illustrate the underlying feelings of the group. The elimination of all



fancy details in the houses other than what results from the needs of the construction process is very much in the European anti-bourgeois tradition. Communal ownership of the pool and open space, with common charges to support them were new, then. (Now they are standard operating procedures for condos like the Macallen.) What was most important was the group effort that Six Moon Hill represented. The founders were architects; they looked for and acquired the property together, then chose one of their group to prepare the subdivision design and fell into line behind him. Properties that were carved from the overall plot were assigned to the purchasers by the drawing of lots. The spirit carried on as the community progressed, with activities like snowstorm parties, held when the roads were covered, providing an excuse for getting together. Because of these organizational underpinnings, the sense of the place remains largely as it was conceived. Additions have been made to many of the original houses, but they still appear relatively small and deferential within the natural surroundings. There are no fences. Children still play in the street. And also because of the non-quantifiable things that a real community still has, Sally Harkness can get a ride to the store.

It is hard not to wonder what might have happened if the social thought that inspired Six Moon Hill had spread to the larger community. What if notions of a shared responsibility for public infrastructure had led to the development of high-density centers linked by rail, with additional public transportation networks reaching outlying districts, much as the Regional Plan Association proposed for the greater New York tri-state area in the late 1960s? Would amenities offered by cities have spread to the outer rings? Would traffic jams have evaporated along with much of the traffic that made them up? Could seniors with an interest in culture remain in their woodland homes? Would bright young adults whose children have finished high school still sell their homesteads and move to the South Boston/Fort Point Channel area?

The questions are important ones, because it is very clear that, at a certain age, most American families will choose the suburbs over the city for reasons that have nothing to do with design amenities or newness. The developers and architects of the Macallen are clear about their market: it is young professionals without children, or with children prior to school age; and empty-nesters. Much of the population at this exemplary building is either on the way into, or out of, the suburban ring, and the energy saved by its state-of-theart design will be used up by those families who move to a single-family home on a separate lot outside the city, in future commuter traffic and the many, many HVAC systems this lifestyle will require.

The opportunity to live on a field or in the woods remains at the center of an American dream. Alas, at the onset of the 21st century, this dream of a benign and life-sustaining natural world is deeply conflicted, in ways that neither Virgil,



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> Harkness House. Photo courtesy, Perry Neubauer FAIA.

Theocritus, nor the founders of Six Moon Hill could have imagined. There is perhaps no better example than the Slow House proposal by Diller + Scofidio: a beach house featuring a picture-window-cum-video-screen that records and replays the water view. We no longer live in nature, but with nature in an uneasy standoff. Having bought up the world, we are now frightened of the responsibilities we, as a species, have taken on. Within a climate of fear of — and guilt about — nature, we look only to the technological aspects of the Modernist vision for help. And we begin to sense the inadequacy of our current paradigm — the market — for solving environmental problems. Developing new and greener apartment buildings in cities may succeed as conservation and as a sales strategy, but the energy these projects save may well turn out to be less than the energy generated by a lifestyle that they facilitate. (I know of at least one architect with a home on Cape Cod who is purchasing an apartment in the Macallen as a pied-à-terre.)

It is hard to imagine architects and developers solving the environmental problems of the 21st century no matter how inventive our new buildings become. It will take social will as well as imagination to do this. Perhaps it is time to step back from the anxieties we have with our place in the natural order, and resurrect some of the collective self-confidence that characterized Modernism — in its broadest sense — for much of the mid-20th century, to look again at what Filler calls "...the humane ideals of the Modern Movement's early



> Macallen Building. Photo by John Horner.

masters..." We have reconnected with the vocabulary of the movement — could it be time to revisit some of the goals? One thing that architects know is that problems have solutions; we just want to be sure we're addressing the right problems.

James Hadley AIA is a partner with his wife, Patricia Crow, a landscape architect, in Hadley Crow Studio in Orleans, Massachusetts.

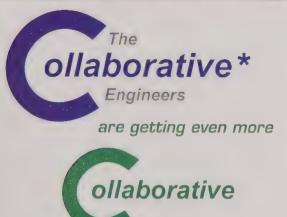
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Unnatural Acts

Technology and the American Landscape

Leo Marx talks with Jeff Stein AIA

Leo Marx is the William R. Kenan Professor of American Cultural History Emeritus in the Program in Science, Technology, and Society at MIT. His work examines the relationship between technology and culture in 19th- and 20th-century America. Considered a founder of the field of American Studies, he is the author of *The Machine in the Garden: Technology and the Pastoral Ideal in America* (1964); *The Pilot and the Passenger: Essays on Literature, Technology, and Culture in America* (1988); and editor, with Merritt Roe Smith, of *Does Technology Drive History?: The Dilemma of Technological Determinism* (1994).

Jeff Stein AIA is head of the School of Architecture and dean of the Boston Architectural College and is the architecture critic for Banker & Tradesman.

Prints by Justin Marable. (www.justinmarable.com)

Jeff Stein: It seems to me that America and Americans are constantly renewing themselves, not in some spiral that leads them ever upward, but in a pattern that is maybe more akin to a pendulum swing. In your book *The Machine in the Garden* you described that process in terms of the tensions between technology and pastoralism. Is it possible to actually chart it as a swing from technology to pastoralism and back again?

Leo Marx: It would be hard to chart it in any literal, chronological way, but certainly there are many expressions of that swing. The most nearly universal expression of this tension, almost a cliché, is "civilization and nature." It goes back to the idea of national origins. When I was a kid, everything we learned about national origins could be summed up in one simple sentence: "Columbus discovered America." The idea was that white Europeans left European civilization, which was built and old, and moved in the direction of nature, which was the North American continent perceived as wilderness — unworked nature.

Jeff Stein: Though that continent presented different kinds of nature. The nature that the first Americans encountered in Virginia was this wonderful climate and abundant pastoral Edenic landscape. A bit different from New England, where the next wave of settlers landed.

Leo Marx: I would take exception to that in one respect. When Europeans first encountered America, they perceived it as wilderness, not as pastoral. I reserve pastoral for a natural landscape that has been worked to some extent, that is not wild.

If you use the idea of mental maps, the mental map of America is tripartite. The Eastern seaboard of this continent was transformed gradually by Europeans accustomed to a built, "civilized" landscape. As they moved across the continent, they kept encountering wilderness and transforming it. The West was always the wild, the natural landscape. By the time of Jefferson, Virginia was a middle landscape, a compromise between too much civilization and too much nature, between cities and wilderness.

Jeff Stein: That middle landscape is the one in which most Americans are most comfortable now. It turns out not everyone wants to be a farmer; in fact, almost no one does. And not everyone wants to be an urbanite, either, except most of us want to have that experience from time to time. So this vast middle suburban place has flourished, in which there are some remnants of nature, imbued with the technology of civilization and cities.

Leo Marx: I think suburbia is a kind of debased version of the middle landscape. I use the concept of the "pastoral impulse," the impulse of people within a setting that is over-developed to move out in the direction of the natural, in search of a more salubrious, a more pleasant place. The same impulse that led Europeans to North America also leads people from Manhattan to Westchester.

Jeff Stein: Yet, while we might want to leave Manhattan, we don't want Manhattan to disappear. We need Manhattan to anchor us, to maintain civilization — to be the place that publishes the books we read when we're out in Westchester.

Leo Marx: But if you think about Central Park, you realize the converse is true, too. Olmsted said that the way to keep Manhattan from really ruining people's lives was to make sure that there was a piece of the natural world right in the middle of it. It's hard to imagine Manhattan without Central Park.

Jeff Stein: You have pointed out that many American writers have taken up the idea of the pastoral impulse, often in the form of stories about encounters with nature that change us.

Leo Marx: Yes. The narrative structure of many classic American novels re-enacts this movement from civilization to nature and back again. That's the structure of Walden, Moby Dick, Huckleberry Finn, Faulkner's The Bear, Hemingway's "Big Two-Hearted River." Perhaps the greatest book in American literature about the transformation of nature is Melville's Moby Dick. When that book came out, it was so far ahead of its time that almost no one understood it. It took almost a century before people fully understood that it is an enactment of the American encounter with the natural world. Melville took whaling as a model of the world, and suggested that the American enterprise is like the whaling industry, an organized assault on the natural world. In his novel, Americans are moving out across the Pacific, and in an organized, technological way, attacking the largest living creature on the face of the Earth. And the book ends with the destruction of the ship, which is in many ways an embodiment of American power and misguided power. Melville had a very clear sense that this assault on the natural world was an act of madness.

But our concept of the natural world is different from Melville's. I have a piece appearing in the Spring 2008 issue of *Dædalus* called "The Idea of Nature in America," in which I begin by describing the idea of nature as one of the concepts that used to define us. It doesn't anymore.

Jeff Stein: I'm not sure about that. You could make a case for defining 21st-century architecture in terms of its relationship to the natural world. For example, much of America's building history is about taking a stand against the vagaries of nature whether it's the white Colonial farmhouse set in the field, or cities like Boston that have built on former wetlands. All of which were about tremendous acts of will. And of course now that we've created an architecture based on fossil fuels only to discover that we're at the end of the fossil-fuel era, we are starting to think instead of ways our buildings can be part of the biosphere.

The niche in public discourse that was once occupied by the word "nature" has to a large extent been taken over by the word "environment." That's a very significant change. *Leo Marx*

Leo Marx: And yet there is a difference, as evidenced by the fact that the niche in public discourse that was once occupied by the word "nature" has to a large extent been taken over by the word "environment." That's a very significant change. The piece I have just written is about the "end of nature." We had in the 1980s and '90s the beginnings of enormous interest in the end of nature. When we speak of the environment, we are not talking about untouched wildness.

Jeff Stein: You could say that the history of American architectural culture is also a history of an organized assault on the natural world. And now that our population has grown and the assault has largely been successful, there are very few places left that you might call the natural world. Like Ahab, we're in some trouble.

Leo Marx: Except that architects have been conscious of this and have made an effort to cope with it. I would say that the organicism of Sullivan and Wright was an effort to meet this problem long before now. They understood that there is a relationship between the built and the natural that is inherent in architecture. The whole notion of organic architecture was an effort to resolve this tension. And for a time it worked. With his decorative interests, Sullivan thought he could even adapt a skyscraper to the natural world. We can talk about whether he was misguided or not. Of course, you can't generalize about all architects, but you can find many examples of architects and builders at least trying to address the issue. My friend Tom Hubka wrote a book called *Big House, Little House, Back House, Barn* as an effort to examine the ways that people adapted the New England farmhouse to the conditions of New England.

Jeff Stein: Is there an aspect of the pastoral in that sort of architecture?

Leo Marx: It's a bit of a stretch, but yes, I think so.

Jeff Stein: Of course, one way that the farmhouses adapted to their surroundings and to the natural world was that there weren't too many of them. There was great space between them. At the time when most of those buildings were built, say, the 1800s, there were fewer than two billion people on the planet; now there are seven billion. And now, a little more than half of all the energy used in America is used to heat and light and cool buildings. Every one of these buildings has a little power plant in it, a machine that's burning oil or coal or natural gas, and every one is connected by wires to other machines that are running our electric lights. Those machines are transforming our landscape. Sullivan and Wright may have given a few people a wake-up call and an interesting alternative that allowed them to value the pastoral and our relationship with the Earth in a different way. But it hasn't been sustained. And it does seem that the pendulum architecturally has been swinging toward the machine.

Leo Marx: So, what do you want me to say? Buildings change the world? Of course they do, not only in America but on the face of the globe.

Jeff Stein: You first introduced these ideas about technology and nature, or more specifically, the pastoral, with the publication of *The Machine in the Garden* in 1964 — which turned out to be the eve of the "greening of America" revolution, propelled by Charles Reich's 1970 book of that name. What was it that students were revolting against?

Leo Marx: The best way to put that period in context is to go back to that tripartite mental map. Remember, a mental map is not



literal; it's the way people locate themselves in space. They attach particular values to places on that map. The values attached to the easternmost places are values that we can associate with efficiency, wealth, power — or, using shorthand, things we identify with technology. And the values of the far West are the values associated with the freedom to do what you want, even freedom interpreted as license. And in the middle, represented by the pastoral, is the effort to have the best of both worlds. Jefferson wanted good French wines and he hated cities. He wanted to live in the middle landscape. In its dreamiest incarnations — Marie Antoinette dressing her maids up as rustic milkmaids — pastoral becomes fantasy.

The "greening of America" was one of hundreds of moments in American history marked by a yearning to recapture that fantasy, to achieve harmony between the world we're building and the world we imagine was there in the beginning: nature. Student protesters said, "Make love, not war." That's a pastoral motto. It was a reaction that had many political ingredients — civil rights, Vietnam — all wrapped up in the image of greening. And of course, it coincided with much of the early history of the environmental movement the first Earth Day was in 1970. But the stage had already been set by Hiroshima and Rachel Carson's *Silent Spring*, which was published in 1962.

Your comments about buildings and their energy consumption allude to a similar historical moment, when many people fear we've gone too far — that we're going to destroy ourselves. It is another version of the melodrama of human self-extinction, which has been with us, certainly, since Hiroshima. So I would turn that prospect back on you and say you're reflecting the mood of today very well.

Jeff Stein: The irony of the greening of America movement in

the late '60s was that even though it was an idea that many Americans found meaningful, they didn't yet have the technology to do anything about it.

Leo Marx: Well, we didn't have the technologies we have now, perhaps, but we had lots of technologies that could get you out of the city, like the automobile.

Jeff Stein: Yes, but the automobile at that time didn't lead to greening anything.

Leo Marx: I agree. I meant it ironically — it transported you to a greener setting. But of course, suburbia couldn't have existed without the automobile. Suburbia was a partial greening; as we discussed earlier, it is a version of pastoral, even if it's a debased version, and it offered the opportunity to move out of the complex environment into a simpler and more satisfying one.

Jeff Stein: But now it seems that we have the technology to make that work a little better.

Leo Marx: In fact, this happens all the time. At every stage of history, a new technology comes along to facilitate the next step. The problem is that, as we go on, the stakes get higher and higher, and the technologies become more promising — and problematic. The utopian pastoral vision, if you will, is reinforced at the same time that the destructive capacity of the technology is enhanced.

Jeff Stein: You quote Daniel Webster, speaking at the opening of a railroad, "Truly, this is almost a miraculous era. What is before us, no one can say. What is upon us, no one can hardly realize. The progress of the age has almost outstripped human belief. The future is known only to omniscients." Leo Marx: I use that to illuminate the doctrine of progress. The progressive world view was probably the dominant secular world view in America at that period, and to some extent still is. The idea was that you looked at history as if it were a record of the improvement that comes from the application of mind to nature. We can make a list of all the ways in which the railroad represented an improvement on earlier modes of transport — it gets you there faster, carries more, and so on. And that's also a pretty good metaphor for the history of technology. Human beings achieve increasing control over nature to create an ideal way of life, a better way of life. At the entrance to the 1933 Chicago World's Fair celebrating "A Century of Progress" there was a statue featuring a larger-than-life figure, an embodiment of technological progress, with his arms around a man and a woman, and a motto announcing "Science Discovers, Industry Applies, Man Obeys."

Jeff Stein: You've also quoted D.H. Lawrence, who wrote in 1923, just ten years before the Fair, "The most idealist nations invent the most machines. America teems with mechanical inventions because nobody in America ever wants to do anything. They're idealists. Let a machine do the thing." We certainly still have the same fascination with the machine, which seems to coexist with a growing obsession with the natural world, redefined now as you point out, as the environment. There's a whole genre of work — by novelists, filmmakers, artists, journalists — that focuses on





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that juxtaposition. One example is Rob Perkins, a filmmaker in Cambridge, Massachusetts, who, among other films, has recreated John Muir's walking tour of the southeast.

Leo Marx: Another example is Jonathan Schell's book *The Fate* of the Earth, a vision of the post-nuclear-war world — a subgenre perhaps — that describes what's left when non-human nature constitutes all the life that remains: weeds and insects and bacteria. Of course, in the strict sense of the word, there's hardly any unmodified nature left on this planet. Bill McKibben, in *The End of Nature*, argues persuasively that that's the case, since once the Earth's atmospheric envelope has been saturated with man-made chemicals, the entire planet has been enveloped by human artifacts. In effect, then, there is nothing on this planet that is "natural," which is to say, untouched by the works of man. Nothing.

Jeff Stein: So we are really a transformative species.

Leo Marx: Oh yes. Evolutionary biologists remind us that every organism modifies its environment in some degree. But humans modify it by orders of magnitude greater than that accomplished by any other organism.

Jeff Stein: Are these tensions somehow very American?

Evolutionary biologists remind us that every organism modifies its environment in some degree. But humans modify it by orders of magnitude greater than that accomplished by any other organism. *Leo Marx*

Leo Marx: The discovery of America presented a new, particularly dramatic instance of the opposition between technology and landscape. Of course, the conflict between nature and civilization is not peculiar to America. It was first defined in Biblical times. The most vivid example, in my experience, was the recurrent account - by 19th-century American writers - of the sudden appearance of industrial power, typically represented by a steam locomotive, in the American landscape. As I studied instances of this motif, it became apparent that it was an almost exact reiteration of the symbolic setting of Virgil's First Eclogue, with its tripartite division into: a built, or urban, sector, identified with Rome; its opposite, an unruly, inhospitable or wild sector; and third, a harmonious, or pastoral, middle ground, which was a compromise between too much and too little raw nature, too much and too little cultivation. But this has been a recurrent conflict throughout history. And history will continue to provide new, and probably more portentous, instances that will become fodder for future generations of writers.



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Periodical Roundup

Covering the Issues

How green was that valley?... Newsweek (March 17, 2008) predicts that despite the housing downslide, the value and construction of sustainable houses will only go up. They're "Not Just for Tree Huggers," claims Daniel McGinn. But "It's Way Too Easy Being Green," argues Daniel Brook in the online journal Slate (December 26, 2007). The LEED point system has serious shortcomings: it's often prohibitively expensive, and its loophole-filled checklist ignores a project's true context. Brook cites the extreme example of a 24-story luxury single-family "home" that will seek (and likely obtain) a LEED rating. Obviously, something's wrong here. Apparently revised standards and "neighborhood design" considerations are in the works. Bryan Walsh discusses exactly this point with New Urbanist guru Andrés Duany in Time online (December 19, 2007). In "How Green is Your Neighborhood," Duany promotes his standard neotraditional planning message, now with a new green lens.

Digging into the Dig... Even though the Boston Globe's Noah Bierman says there will be "No Big Dig Copycats" (March 14, 2008), Nicole Gelinas in City Journal (Autumn 2007) concludes, "The wrong lesson to take from the Big Dig is that other states shouldn't bother with ambitious infrastructure." In her well-researched "Lessons of Boston's Big Dig," Gelinas takes on our favorite hometown saga. Her story, more complex than the usual local coverage, extends from the 1930s advent of the Central Artery through the current blame game, discussing the politics, funding strategies, "mitigation" realities, construction innovations, personalities, and rat scares along the way. There's humor, too: describing the state transportation secretary credited with launching

the Big Dig, she observes, "If Robert Moses and Jane Jacobs had a child, it might have been Fred Salvucci." In the end, the Big Dig is a lesson in management and the need for learning how to "do it smart."

Ars longa, vita brevis..."Never Go Out of Style!" proclaims the cover of the December 2007 issue of House & Garden. Alas, it seems that House & Garden, first published in 1901, has done just that — the December issue was its last. H&G occupied a special niche: its featured places were so extraordinarily unattainable that you didn't feel inadequate ---- it was more like an art-history lecture. Today, the House & Garden website automatically redirects to Domino, a Condé Nast "sister" publication that is just another glorified shopping list. This shift in messages is subtle but significant: from "places to learn from" to "you can buy it all." Of course, in many ways, the early spirit of H&G has been reincarnated as Dwell. And according to rumors on media blogs, Condé Nast has noticed ...

An architectural report card... The Chronicle of Higher Education's weekly ideas magazine offers "The Architecture Issue" (March 7, 2008). Delving far beyond a mere catalogue of recent campus construction, the issue tackles a diverse mix of related topics and perspectives. Behavorial psychologist Susan Painter explains why dorm rooms should be small, while dean Thomas Fisher discusses the (often horrible) design of architectureschool buildings. Scott Carlson presents a thoughtful appreciation of St. John's University, Marcel Breuer's first major campus design --- worthy reading for all who are wrestling with midcentury Moderns. There's some unusual campus adventure, too, as the issue showcases the finalists for a different sort of academic



exercise: a "back-of-the-envelope" ideas competition for the George W. Bush Library.

Happy Birthday, HDM... As we enjoy the end of our own first decade, we'd like to give a shout-out to Harvard Design Magazine as it also celebrates its 10th anniversary (Fall 2007/Winter 2008). This "Open Mike" issue proves why HDM matters, demonstrating its "commitment to the best possible design thinking." Frequent contributors were invited to write on a topic of their choosing: in tones variously representing soapbox, scholarship, and reflection, the resulting essays discuss playgrounds, slums, rising sea levels, a reinterpretation of Alvar Aalto, an open letter to Rem Koolhaas, design pedagogy, and the importance of interdisciplinary education. Don't miss the student-authored "Blowfish," the nowfamous laugh-out-loud list of "what to do when a design jury attacks"—tactics that might be applied to annual reviews and community meetings, too.

Gretchen Schneider, Assoc. AIA, is the principal of Schneider Studio in Boston.

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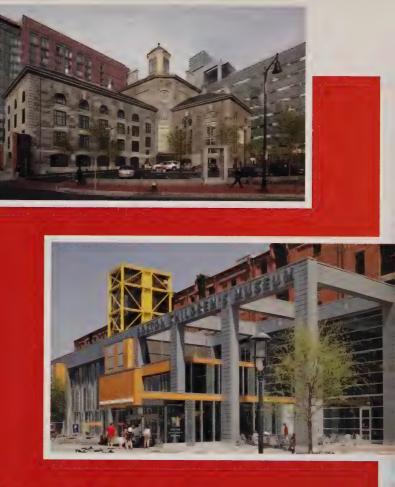
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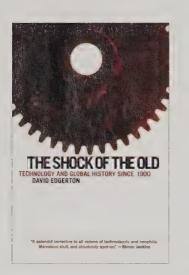
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THE SHOCK OF THE OLD: TECHNOLOGY AND GLOBAL HISTORY SINCE 1900 By David Edgerton Oxford University Press, 2007

Asked to name the most significant technologies of the last century, many will come up with the radio, the airplane, the computer and other contenders. To respond in this manner, says David Edgerton, is to confuse technology with invention (the creation of a new idea) and innovation (the first use of a new idea). Consider instead the significance of corrugated iron as a universal building material in poor countries; or the bicycle and its derivatives throughout the world. In the 1950s, bicycle and car production was at parity of 10 million each per year. By 2000, annual production had reached 100 million bicycles to only 40 million cars.

Edgerton urges us to reinterpret the history of technology as one based on use rather than as a catalogue of headlinegrabbing inventions. His chapter headings are indicative of the argument as it unfolds. *Significance* discusses the importance of the condom versus the airplane. *Time* discusses the impact of new technologies, their diffusion, continuity, transformation, and decline. The rickshaw, developed in Japan in the late 19th century, declined in the country of its origin but blossomed elsewhere in south Asia and even into Boston and Paris in the 21st century. *Production* challenges the standard history of industrial technology by examining instead the domestic economy of vacuum cleaners and washing machines that transformed the bourgeois housewife from employer and personnel manager into a self-employed machine operative.

For this reviewer, Maintenance was the most compelling chapter, mainly for its perceptions on the costs, economies, and social relations engendered by technologies-in-use. Take for instance automobiles, once a training ground for the mechanically inclined but now out of reach to all but the best-equipped workshops. Curbside mechanics who once could keep vehicles going far beyond their natural life are faced today with the impenetrable barrier of computerized ignition. What was once cheap and repairable, is now expensive and beyond intervention. We have become de-skilled and disenfranchised by our own artifice.

Other chapters include *Nations* addressing the role of nationalism in the propagation and adoption of technologies; *War* — a challenge to the notion that advanced technology wins wars, an obvious point to students of Vietnam and Iraq; and *Killing* — a study of the machinery of death from the Chicago slaughterhouses to the use of Zyklon B at Auschwitz-Birkenau and the technologies of capital punishment.

As suggested by the title, this book is an antidote to the history of the new as propounded in Alvin Toffler's *Future Shock*. Edgerton's approach is more akin to that of Howard Zinn's *People's History* or Bernard Rudofsky's *Architecture Without Architects*. Repudiating the "great technological breakthrough" approach, Edgerton is looking for continuities not disjuncture, seeking to understand technologies in use, their accessibility, and their robustness over time.

Hubert Murray AIA, RIBA is the principal of Hubert Murray Architect + Planner in Cambridge, Massachusetts.



TOWARD AN ARCHITECTURE By Le Corbusier (Charles-Edouard Jeanneret) Introduction by Jean-Louis Cohen Translation by John Goodman

Translation by John Goodman Getty Research Institute, 2007

The great thing about reviewing

Le Corbusier in 2008 is that you can write whatever you want - he was a gifted visionary or a crypto-fascist; the Promethean bringer of all things modern or the despoiler of cities from Baltimore to Bangalore. Everyone's heard it all before. When he died in 1965, Modernism was beginning to fray but Charles-Edouard Jeanneret was still revered by architects and students with funny glasses everywhere. Then his ideas, especially about urban planning, were largely repudiated, even if his individual works, like Ronchamp and La Tourette, continued to be celebrated for their singular if brutal beauty.

The Getty Research Institute has published a new translation, by John Goodman, of *Vers Une Architecture*. Le Corbusier's ideas about the inherent beauty of grain silos and steam engines remain powerful today — imagine how

they must have seemed in 1923. But in both old and new versions, the writing is choppy, seemingly an endless series of disjointed thoughts strung together during a 4 AM caffeine-induced high. He has a narcissist's tendency to begin sentences with pompous statements like, "And now you must understand that...." or "We now turn our attention to the important matter of ... "He repeats points over and over, and seems obsessed with the unlikely combination of a rakish sports car and the Parthenon — the two iconic objects are juxtaposed and discussed innumerable times

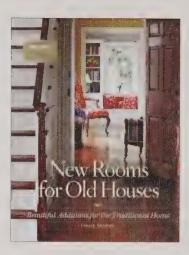
Le Corbusier's contempt for the bourgeoisie is evident throughout, as when he describes attempts to build in post-World War I France "thirty train stations in different styles ... because each community has a hill and such and such an apple tree that sets it apart and are its character..." He goes on to state that the private property owner "escapes the common law like a prince; he reigns" and "if the patterns of ownership were to

change ... we would be able to build." Therefore, deeply felt regional character is to be dismissed, as is private ownership, in favor of an all-powerful urban czar who will dictate what is built where, by whom, and in what style. Scary.

For this and other reasons, Le Corbusier should be discussed today - by those at both ends of the political spectrum. For the left, he is a cautionary tale about foisting a European male design hegemony onto places like Brazil and Algeria, indifferent to their cultural traditions and ways of urban life. For the right, he is as equally strong a tale about a control-freaky nanny state micro-managing every aspect of people's lives and presuming that public control and ownership can solve all of society's problems.

Pretty heady stuff — especially for a guy with funny glasses about whom you can write anything.

James McCown is director of communications at Sasaki Associates in Watertown, Massachusetts.



NEW ROOMS FOR OLD HOUSES: BEAUTIFUL ADDITIONS FOR THE TRADITIONAL HOME By Frank Shirley AIA Taunton Press, 2007

This is a well-written, well-organized, beautifully illustrated, and lavishly produced "how to" book wherein you will find nothing about carpentry, wiring, or plumbing.





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Instead, Frank Shirley, a practicing architect in Cambridge, Massachusetts (who is co-chair of the BSA's Residential Design Committee), analyzes four "cornerstones" that, he argues, underlie the successful expansion of any older home, namely maintenance and balance; respect for the distinction between public and private spaces; careful use of transitions from old to new; and choice of appropriate materials that fit the style of the house being expanded.

He devotes a chapter to each of these basic principles, and begins each with a clear discussion in layman's terms, which he then breaks down into a number of clearly organized subtopics. The text is then followed by several "featured houses" that succinctly illustrate the principles just discussed, including the programmatic needs of each owner that prompted the expansion in the first place. The text, the photos, and especially the before-andafter floor plans are completely integrated and interdependent. Altogether there are 15 featured houses, each of a distinct

architectural style, some big, some medium, and some small. Three are located in cities, one in Alexandria's historic district, four in small towns, three in suburbia, and three in wide-open country, each presenting different design challenges.

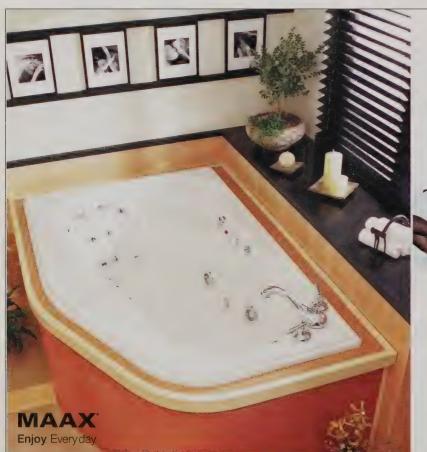
Shirley is careful to draw a distinction between homes that are "historical"those built between 1740 and 1940 - and those that are "historic" by virtue of some significant involvement in our history, irrespective of age. Since his principles are intended to blend an addition into the existing building fabric as seamlessly as possible, as distinct from the Secretary of the Interior's Guidelines, which emphasize a clear demarcation between original and new elements, Shirley stresses that only the latter should apply when expanding "historic" houses.

With one exception, Shirley's featured homes are so impressive, and the quality of the materials and craftsmanship so exquisite, that I wondered whether good design is only available to the very rich.

One example even involved picking up a classic five-bay Federal farmhouse and rotating it 180 degrees to accommodate the addition, not something that most of us would be willing or able to do. And yet, perhaps my favorite addition was to a primitive 350-square-foot Carpenter Gothic summer camp that was doubled in size while retaining its essential exterior appearance and spare interior, all entirely the result of good design.

The average homeowner may not be able to replicate the quality of the featured additions without professional help. But hiring people is easy. Shirley's book helps with the hard part - deciding what is appropriate and developing the confidence to make informed choices.

John H. Carr, Jr. is an attorney in Salem, Massachusetts, where he served on the Historic District Commission for 20 years and where he lives in an 18thcentury house.





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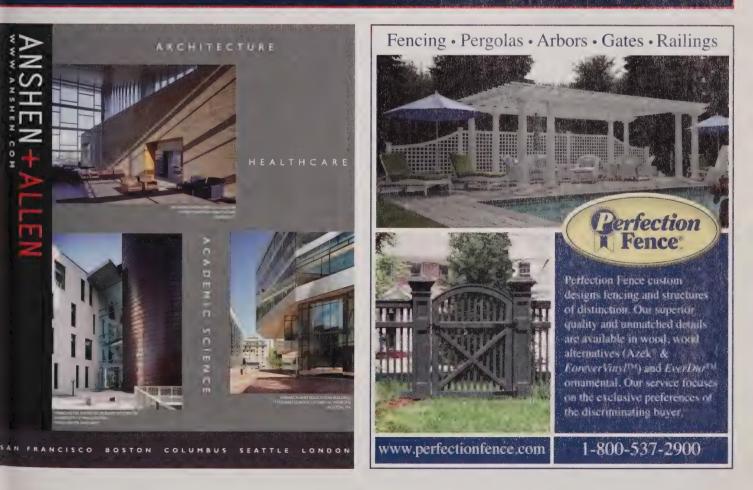
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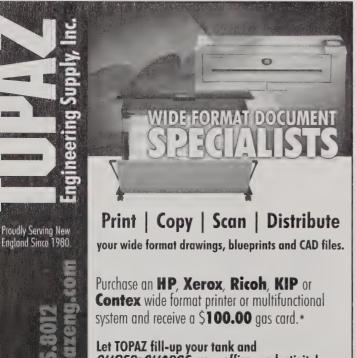
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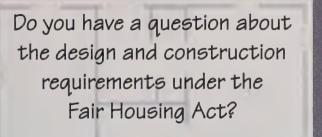
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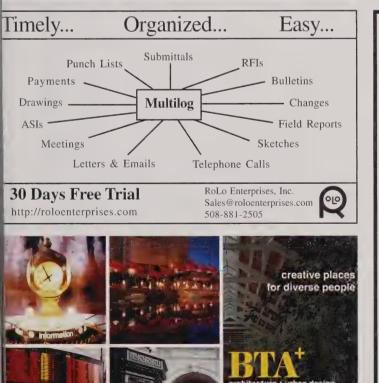
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The Berlin Walk

One October 3rd, while Germany celebrated the anniversary of its reunification, Julia and I set out for a walk. We began in Baumschulenweg, a peculiar part of Berlin where the pastoral, suburban, and urban rub shoulders in a collection of lawns, big-box stores, apartments, and *kleingartenkolonien* — clusters of tiny cottages built in allotment gardens on marginal lands all over the city (legally these were only tool sheds, but a skyline of satellite dishes suggested otherwise). It was hard to imagine *it* here. Had it really run alongside these modest country retreats, dwarfing their little wooden fences?

Only 15 years had passed since *it* divided this neighborhood, but there was no evidence of the separation. Eventually we found the trace we were looking for: a thin stripe just two cobblestones wide running through the grass, across the sidewalk, and off into the distance. Difficult to believe these ordinary stones laid end to end were all that commemorated a structure of such significance, a decidedly underwhelming scar to signify 28 years of division. We set off in pursuit.

The mark was not always easy to follow — it would blend in with other cobblestoned lines that demarcated here a parking space, there a bicycle lane. Or it would meet a curb and disappear, leaving us to wonder: had it turned unannounced or did they run out of pavers? The line even slipped away from us — under fences, into canals, through buildings but the trail never went completely cold.

In the end, we walked over 20 kilometers, drawing an eclectic section through Berlin. The bureaucratic, seemingly arbitrary logic of *its* placement was underscored by the variety of what crossed our path: suburbs, fields, warehouses, monuments, embassies, hospitals, and innumerable *döner* kebab stands. Usually the urban fabric had



been repaired as though nothing had happened, but sometimes the incision was still visible as an overgrown void. Other times, it was betrayed by a new city inserted in *its* place. Manicured parks, upscale housing, gleaming office towers; *its* destruction had been parlayed into Berlin's rebirth. For a while, it was the largest construction site in Europe; for a moment, it was the focus of the world's attention once more.

But just as the finishing touches were being put on the new skyline, demolition crews were carrying on elsewhere. Most recent to follow *it* to the grave was the Palast der Republik, the seat of Parliament in the former East and the most divisive monument from that era. It is curious that just as Berlin is coming very publicly to terms with its World War II history, erecting memorials and museums to its memory, it is also rushing to erase its more recent past. In a race to reinvent itself, Berlin is actively forgetting who it was. Soon it will be 1989's turn and there will be nothing left to preserve.

But maybe that's natural. After all, hadn't we reinvented ourselves a little in running away to Berlin? Didn't we tell some of our old stories to new friends and subconsciously omit others? Weren't we trying on a new identity and wasn't it part of the bargain that we could bury pieces of the past at our own discretion?

Do cities bear more responsibility to their truths than people?

But even we were able to retrace the path of what was no longer there. When *it* had disappeared someone thought to leave a trail of stones, and such paths seem fated to forever surface. Even after the physical artifacts have all been erased, memory finds a way to live on. Just as *it* has in this article, present in its absence. And anyway, aren't memorials easier to stomach than monuments?

Coryn Kempster, MIT M.Arch 08, spent a year in Berlin working for Barkow Leibinger Architekten.

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Cover image: nBots by Peter Yeadon. nBots are nanoscale robotic devices that rapidly self-assemble into mass, machines, objects, and environments. Each is capable of securing itself to its neighbor, to extend power and communication throughout the network (see page 26).

This page: Fantastic Voyage, 1966. Film still © John Springer Collection/CORBIS.



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BY ELIZABETH S. PADJEN FAIA

From the Editor

Small-Minded

e know you've been waiting patiently all this time since March 2004 to be exact, when *ArchitectureBoston* published the "Big" issue. Gifted with intelligence and foresight, our readers just *knew* that one day, the "Small" issue would arrive.

And so here it is, with a nice bit of synchronicity to boot: our "Big" cover featured an image of the surface of Mars, marking the recent success of a very big idea: the landing of the exploration rover Spirit. This issue goes to press just days after the landing of the Phoenix Mars lander — a very small object only five feet in diameter.

Within that introduction lies the essence of "big" and "small": they are relative terms; one does not exist without the other. And in our culture, they come loaded with implied values. Bigness, as in a big idea, is usually lauded; smallness, as in the small size of the Phoenix, is considered merely a bit of data.

In 1973, economist E.F. Schumacher took on this cultural bias with his book *Small Is Beautiful* (see page 50). The title, with all its '60s sock-it-to-me period charm, has survived in the language as a sort of shorthand for a point of view that is often too readily marginalized, even though it has perhaps more relevance now than it did 35 years ago. Small seems to carry a whiff of either the countercultural or the precious, rarely having much influence on mainstream tastes and choices.

And yet there are signs that attitudes are shifting, however slowly, and like all cultural trends, beginning to influence what and how we build. Science and technology have brought new appreciation of the small, whether in nanotechnology, which has introduced entire new classes of materials, or in electronics and digital devices, in which "small" is usually synonymous with "elegant." The business world, too, has learned to embrace attributes of the small, even in a time of ever-larger merger and acquisition deals. Small firms compete globally; consultants working from home offices no longer bother to try to conceal their non-corporate locations. A small office is not a sign of failure. Even so, the super-size-me culture is hard to beat down. With the 1998 publication of *The Not So Big House*, Sarah Susanka FAIA became architecture's E.F. Schumacher. Susanka confronted the bloating of the American house (which has grown not only in area but also in volume) and demonstrated that the qualities that many homeowners *thought* they were attaining in larger homes could be found with greater satisfaction in much smaller structures.

Unfortunately (and also like Schumacher), Susanka so far seems to have been unable to sway mainstream culture, which, in our society, is often shaped by celebrities. No one was particularly shocked when Red Sox owner John Henry paid \$16 million for developer Frank McCourt's 13,000-square-foot mansion, with plans to tear it down and build what is reportedly an even bigger house. Every era has its excesses, and stories such as these will likely someday be recounted with the same distaste and amazement with which we describe 16-course Victorian meals replete with oysters, soup, fish, sweetbreads, casseroles, roasts, game, poultry, ices, cheese, puddings, and dessert. (Of course, every era also has its cultural critics one Victorian observer sniffed that the custom of serving as many as 12 varieties of wine at a dinner was ostentatious, four being "quite enough.") It now seems likely that the American appetite for bigger and bigger houses will be sated only when celebrities link HVAC consumption with global warming; Hollywood stars driving Priuses surely helped to make hybrid cars popular even before the recent surge in gasoline prices.

"Big" and "small" are relative terms, and in our culture, they come loaded with implied values.

A focus on "small" is not an exhortation to return to Spartan values. But by exploring and legitimizing the worth of the small, we discover more choices and more opportunities: the individual who abhors the megacorporation can find satisfaction and respect in a home office. The tendency of our culture is to pursue the big; by fighting the law of inertia, we all can live richer lives.

Elizabeth S. Padjen FAIA Editor

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Letters Letters Letters

Thanks to the participants in the "Design and the Reinvented City" roundtable [May/June 2008] for helping to bring the discussion about the creative economy in Massachusetts to the forefront. I'm an industrial designer and co-founder of a design and distribution company based in Boston. Lured by the exciting product design happening here, we moved from Canada in 1997. Boston's design reputation is in fact firm among designers everywhere; the challenge is to disseminate this information more broadly to integrate it more fully into our culture. For a creative economy to flourish, it needs to be both "special" and "common" at the same time; we want people to take good design as a given, yet we need to maintain its integrity via well-educated, skilled experts. When people walk into one of our stores, they're startlingly engaged and want to learn about the items that have been designed here; this knowledge adds value to the products and also equips customers with new information to pass on ---- to "preach," if you will.

People love to learn about their city and state and how the things that happen here impact their daily lives. With this in mind, a simple, proud campaign of "designed in Boston" would go surprisingly far in helping to raise public awareness of Massachusetts as a design center, and in illustrating the breadth of the design industry in a very straightforward way. The more far-reaching benefits of efforts such as government funding and public programs would follow suit much more smoothly as a result of establishing Massachusetts' creative economy as common knowledge.

It looks like we have a self-driven design challenge on our hands — but who better to tackle it than entrepreneurial designers themselves? Think about how great the posters will look!

> Stefane Barbeau Vessel Boston

In the May/June 2008 roundtable

discussion ["Design and the Reinvented City"], the participants spoke about the potential of the design industry as an economic engine that needs to be fostered and supported akin to our more visible industries in Massachusetts. Though the article was specific to Boston, I believe it is applicable to the rest of the Commonwealth as we search for new forms of revenue and jobs.

One of the greatest potentials I see in the design industry, and something that was touched on by Beate Becker during the discussion, is the ability of design to offer opportunities to our workforce outside of the more visible sectors of our economy: financial services, academia, healthcare, and biotechnology.

I have seen this with my own constituents. Young people in particular, considering training and entry into professional fields, are attracted to technology-intensive career opportunities in design — from graphic design and architecture to industrial, fashion, and web design. As we strive to strengthen our young people's skills in math and science, design offers a bridge connecting education to real-life application. That experience is what can spark creativity to power innovation. It is where I feel Massachusetts can stand apart from the rest because of our unique population.

If the design industry is to fulfill its potential as a dynamic economic cluster, there is much work to be done in defining, quantifying impact, raising visibility, organizing, and making connections to other industries. On the state level, we have begun this work with a commitment to the creative economy through recently passed legislation, and filed legislation seeking to establish a Creative Challenge Index. We in the House of Representatives have recently reinforced our commitment to the design industry through an appropriation for the Designing an Industry Initiative. I am excited for the future of design in Massachusetts as we work in partnership

to find new ways to foster its growth and see this vibrant industry's full potential.

Jeffrey Sánchez State Representative 15th Suffolk District

Readers of the roundtable discussion

"It All Starts Here: The Politics of Planning in a Small Town" [March/April 2008] may be wondering about the outcome of the Hopkinton Town Meeting's vote on the future of Legacy Farms (the Weston Nurseries site). I am pleased to report that on May 6, and with a very large turn-out, the Hopkinton Town Meeting overwhelmingly passed (87 percent in favor) the proposed special zoning district (Open Space Mixed Use Development district — OSMUD) that will allow the 733-acre Weston Nurseries property to be developed as a mixed-use master-planned community with large contiguous conservation spaces, rather than as a conventional large-lot single-family home subdivision. The OSMUD benefits to the town will include major contributions to the economic, social, and environmental sustainability of Hopkinton through:

- Conservation of contiguous and connected open spaces.
- Creation of a neighborhood-scale retail center.
- Positive fiscal impacts to the town.
- Provision of a wide range of housing types and price ranges, including affordable housing.
- A mix of land uses for commercial, retail, civic, residential, and conservation purposes.
- Continued operation of the Weston Nurseries retail operation and viable agricultural/horticultural uses.

I believe this issue of *ArchitectureBoston* was very helpful to Hopkinton citizens in their consideration of how to vote on the proposed OSMUD for Legacy Farms. This article and the entire March/April issue in general were frequently cited throughout the zoning review process. The roundtable

was particularly useful in presenting the broad range of considerations and viewpoints and the potential ramifications of the choices facing the town.

The land-use planning and communityimpact challenges raised in the Legacy Farms planning process are clearly found in other suburban communities confronting growth and development pressures due to changing demographic, socio-economic, and environmental conditions. Hopkinton's experience and process should be seen as an instructive model in forward-looking town planning to which *ArchitectureBoston*'s Hopkinton issue made a significant contribution.

> *Fred Merrill* Sasaki Associates Watertown, Massachusetts

ArchitectureBoston's recent focus on

Hopkinton [March/April 2008] raises some interesting issues, but fails to acknowledge larger, more critical, issues linked to the region's inability to effectively harness the latent capacity within its former "gateway cities" (see "Reconnecting Massachusetts Gateway Cities: Lessons Learned and an Agenda for Renewal" by the Brookings Institution www.brookings.edu/reports/2007/ 02regionsandstates_muro.aspx).

Yes, it is important to develop near transit and to establish growth centers; however, if we focus on communities that lack proper infrastructure and support for such growth, we are overlooking more established historic centers that have ample gray- and brownfield sites, as well as a tremendous store of civic and cultural infrastructure. Most current literature on the subject shies away from the tired urban/suburban dichotomy for just this reason.

It pains me to see the Metropolitan District Planning Council's myopic insistence on irrelevant metropolitan boundaries in an age of increased regional interdependence. If Boston is to succeed as an emerging global city, it is going to need the help of its former partners from the dawn of the industrial age. Boston, Haverhill, Lawrence, Lowell, Worcester, Woonsocket, Providence, Pawtucket, Attleboro, Taunton, Fall River, and New Bedford once functioned as an integrated whole. One need only look to better integrated regions within the mid-Atlantic states or to the Bay Area of California for inspiration. San Francisco is now linked to San José by way of an integrated transit system that serves important communities on both sides of the bay and allows greater access to jobs, housing, and education for all. Locally, the extension of rail service to the T.F. Green airport and the South Coast Rail project are steps in the right direction; however, if the notion of Boston as "the Hub" is to be reinvigorated, we need more bold initiatives like these that break down barriers to regional cooperation.

> *Edgar Adams* Professor School of Architecture, Art & Historic Preservation Roger Williams University Bristol, Rhode Island

Not only did I thoroughly enjoy reading the recent issue on Hopkinton [March/April 2008] (Carlisle is also facing similar growth issues), one of the citations in your "Site Work" feature finally resolved a major question that has consumed debates within our home for the last six months — where to find the perfect dog for our growing family.

After visiting the Greyhound Friends' website, we visited the shelter the following Saturday and took home Millie, a 3-to-4 year old female lab/greyhound mix. She is extremely mellow and pleasant around our young children (Emily 8, Caroline 6, and Michael 4). Thank you for helping us find a gem of a dog!

> *Timothy Downing* Design & Co. Carlisle, Massachusetts

We want to hear from you. Letters may be e-mailed to epadjen@architects.org or sent to *ArchitectureBoston*, 52 Broad Street, Boston, MA 02109. Letters may be edited for clarity and length, and must include your name, address, and daytime telephone number. Length should not exceed 300 words.

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Ephemera



School in Rudrapur, Dinajpur, Bangladesh. Architects: Anna Heringer and Eike Roswag. Photo by B.K.S. Inan.

The Aga Khan Award for Architecture: Tenth Award Cycle, 2005–2007

Harvard Graduate School of Design March 31–May 21, 2008

The Aga Khan Award for Architecture is awarded triennially to projects that address the needs and aspirations of societies in which Muslims have a significant presence. The most recent program recognized nine winners, ranging in scale from the massive University of Technology Petronas in Malaysia to the discreet Samir Kassir Square in Beirut. Varying widely by geography and national identity — from Central Africa to Singapore — the projects underpin the award's engagement of modern Islamic culture's diversity, an apt repudiation to an American tendency to adopt a simplistic view of Islam.

The winners cut across not only political and social lines, but also the *de facto* boundaries of current design practice: landscape versus building, preservation versus new construction, traditional versus modern. By avoiding rigid categories, the exhibition highlights the unique qualities of each project, as with the Royal Netherlands Embassy in Addis Ababa, a cluster of concrete structures that alternate between landscape and building. The exhibition's consistent presentation (involving photographs, project information, and technical drawings, as well as models, videos, and analytic drawings) ties projects together without erasing their individual qualities. This focuses the viewer on the technical and social characteristics critical to each project, from the modification of vernacular bamboo construction to create a dynamic new school in Rudrapur, Bangladesh, to the role of modern infrastructure in the conservation of the historic city of Shibam in Yemen.

The sheer scope of the Aga Khan winners is a refreshing reminder to designers what successful architecture can be: not merely brilliant aesthetic and formal creations, but the embodiment of the social, cultural, technical, and political features that invisibly overlay every construction site.

For more information on the awards: www.akdn.org/architecture.

Brent Stringfellow AIA is a senior project architect with CBT Architects in Boston.

Charles and Ray Eames Commemorative Stamps

United States Postal Service First Day of Issue: June 17, 2008

Derry Noyes spent her childhood twirling her friends (and her cat) on Eames lounge chairs until they were dizzy, and hanging her jacket on an Eames Hang-It-All. She built crazy structures with the Eames House of Cards, absorbed by each intriguing image. She sat next to the Eameses themselves at the dinner table and watched as her father, Harvard Five architect Eliot Noyes, projected their films for his family's amusement.

Noyes grew up to be an art director at the USPS; her latest design honors the work of Charles and Ray Eames and was issued at the Eames Office in Santa Monica, California. Convinced that the typical four or five images allowed for a set of commemorative stamps would be inadequate to represent the range of their influence, Noyes persuaded the USPS to take a chance: the Eames set has an unprecedented 16 images. It is a handsome visual ode to two of America's most creative designers.

Brigid Williams AIA is a principal of Hickox Williams Architects in Boston.

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Symposium One: March 28, 2008

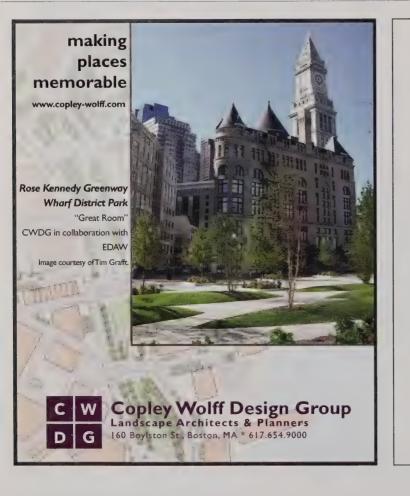
If 75 percent of the earth's greenhouse gases originate in cities, then solutions to global warming are to be found there. The organizers of this ambitious symposium on climate change, which drew multidisciplinary experts from around the world, urged participants to think beyond the scale of individual buildings to the scale of city and region to define the best solutions. Convened as a two-part program by sponsors MIT and the Boston Society of Architects (part two was held on June 9), the symposium is intended to lay the foundations for a design and policy agenda for New England.

The day began with an uplifting keynote address by Jaime Lerner, an architect and former mayor of Curitiba, Brazil. Lerner is internationally admired for his successful implementation of many city-scaled conservation, transportation, and land-use measures — including a world-renowned bus rapid-transit system, high-density development corridors, and beautiful parks throughout Curitiba. His message: While creating a sustainable city, create an attractive vision to gather wide political support.

Various speakers spoke of energyefficient buildings, brownfield recovery sites, the Harvard Green Campus Initiative, and visionary Boston Harbor plans. Repeatedly, the theme of scale, and the issue of where to draw the boundary line around the problem, returned in these presentations. For example, sealevel rise cannot be countered at the scale of individual buildings, but only at the scale of harbor barriers. At the building scale, exemplary gold- and platinumrated LEED designs are laudable. But if a LEED-rated office building is built in a suburb where employees must drive miles to reach it, the energy savings achieved are negated by the additional auto pollutants. And even if an award-winning LEED project, such as the new Bank of America tower, is constructed in Manhattan where most employees arrive by transit, that achievement can be diminished if it draws its energy from a distant power plant where considerable energy is lost in lowefficiency power transmission lines.

The symposium's many speakers talked not only of their achievements, but also of the road blocks that still hinder progress, such as obsolete regulations and vested utility interests. Mayor Jaime Lerner, having the final say, said he was disheartened to hear of the many barriers that still hinder progress. It is not the lack of means or knowledge that hobbles us, he said, but the lack of political will. In the end, "the city is not the problem, it is the solution."

Lawrence Bluestone AIA is the principal of Bluestone Planning Group in Cambridge, Massachusetts.



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BY JOAN WICKERSHAM

| The Lurker

Drills, Drooling Dolts, and Dominique

The premise: A rainy Sunday afternoon. A video of *The Fountainhead*, the 1949 ur-architect-movie, starring Gary Cooper and Patricia Neal and adapted by Ayn Rand from her blockbuster manifesto of a novel. Maybe you saw this a long time ago and it made you want to be an architect. Or maybe not.

1:26 Sketch of Richard Neutra-like house prompts old professor in dismal Gothic office to kick Howard Roark out of architecture school, explaining: "There is no place for originality in architecture."

1:27 Mediocre colleague Peter Keating: "You can't survive unless you compromise."

1:28 Louis Sullivan-ish figure: "You're setting out to ruin yourself." Looks at drawing again. "Oh why did you have to come to me. I'm perfectly happy with the drooling dolts I've got. Twenty years ago I'd have punched your face with the greatest of pleasure. You're coming to work for me, tomorrow morning."

1:29 Calendar pages flipping. The Louis Sullivan guy is a broken man, railing in Roark's austere office: "See those people down there? Do you know what they think of architecture?" Maddened by the prospect of Roark being crushed by philistines, Sullivan picks up a T-square, smashes Roark's office window, and dies under the desk.

1:32 Not dead after all, Sullivan lies in the ambulance mumbling to Roark: "I told them. I *told* them the form of a building must follow its function."

1:38 Stodgy bank executives award Roark a juicy commission, which he badly needs, having hocked his watch. The model looks like the UN. They like everything about the building except its appearance. They stick some neoclassical sections onto the model (thus transforming it into a mid-1980s Philip Johnson skyscraper). "The middle of the road," they say encouragingly. Cut to Roark. He does not look happy. "But we are your clients. It's your job to serve us." "I don't build in order to have clients. I have clients in order to build."

1:41 The architecture critic Toohey (rhymes with "hooey") shows sleazy newspaper tycoon buildings by Roark's mediocre rival (standard 1920s historicist skyscrapers). "The greatness of Peter Keating's personality lies in the fact that there is no personality stamped upon his buildings," the critic raves. The tycoon seeks a second opinion from the paper's other architecture expert, Dominique Francon.

1:45 Dominique holds phallic-looking sculpture, throws it out the window, and looks tragic. Her hairdo is the most distinctive piece of architecture in the movie so far. The tycoon, who obviously has the hots for her, asks which architect she would recommend. "I don't know a single architect of ability," she says. She tells him she threw the statue out the window because she wants no part of a world where beauty and genius and greatness have no chance. For some reason this seems to turn her boss on.

1:51 Dominique wearing sexy nightgown in Connecticut is awakened in bed by noise of Howard Roark dynamiting nearby.



∧ Photo by Joan Wickersham.

1:52 She goes to quarry and sees him in laborer's clothes sweatily using a drill. He sees her standing at lip of quarry. Her brassiere is remarkable piece of structural engineering.

1:54 She reappears at quarry lip holding a riding crop. "Why do you stare at me?" she asks.

"For the same reason you stare at me."

2:02 After more drilling, Roark hears from prospective client and leaves for New York.

2:04 Newspaper editor looking for something to crusade against. Toohey suggests, "This," throwing down rendering of new Roark tower, a Frank Lloyd Wright-esque building with lots of cantilevers.

2:12 Dominique meets Roark at party. She had not realized the quarry worker with the drill and the architect were the same person. "I admire your work more than anything I've ever seen. This is not a tie but a gulf between us," she intones.

2:14 She goes to his apartment and says prospective clients hate the greatness of his achievement. They exchange words of love like two skyscrapers embracing. "Destroy" "hate" "ruin" and "death sentence" are some of the terms used. She proposes, saying she'll cook and clean and scrub for

him, if only he'll give up architecture. "Save yourself from tragedy," she pleads. He says no. She drives speedboat out to sleazy tycoon's yacht and says she will marry him. Tycoon kisses her neck while she looks despairingly at Manhattan skyline.

2:20 Roark trudges around New York, pausing in front of construction sites displaying signs with names of other architects. Architecture critic Toohey says, "This city is closed to you and it is I who have done it."

2:22 Roark designs a gas station that looks like Fallingwater.

2:23 Renderings of small but integrityloaded Roark projects: store, farm, factory. Even the handwriting looks like Frank Lloyd Wright's.

2:25 Sleazy newspaper tycoon, now softened by marital love and no longer entirely sleazy, asks Roark to design a "home for my wife and me." Considering tycoon wrecked Roark's career and married his girl, this takes some nerve; but Roark says yes.

2:27 Tycoon goes home where Dominique awaits him. Their apartment resembles Metropolitan Museum. He tells her he hired Roark. She gets mad. Doesn't he remember his paper's smear campaign wrecked Roark's career? He'd forgotten. She says Roark is a man of integrity.

"He's no better than the rest of us. And if he is, then I'll break him."

2:31 Tycoon tells Roark, "I want you to be the architect of all the buildings I erect in the future. You will build Colonial houses, rococo hotels, and semi-Grecian office buildings." A postmodernist would be giddy with delight, but Roark gets that stubborn look we know so well. "Of course," he says with menacing lightness, "I'll be glad to do it." He picks up his Wright-like rendering of tycoon's house and scribbles a hodgepodge of applied detail all over it. The tycoon giggles, "Good heavens no."

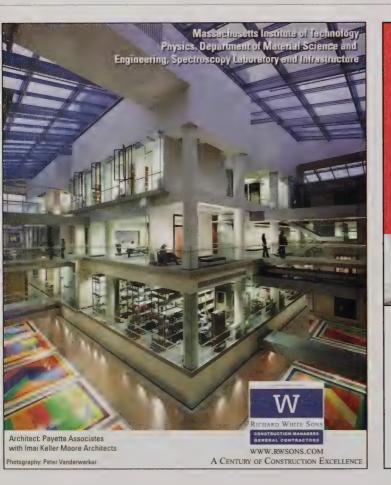
"Then shut up and don't let me hear any more architectural suggestions."

2:33 Roark goes to dinner where Dominique admires the blueprints. The men admire each other, then her. It's a lovefest. Her husband muses about the beautiful morning light that will come into their bedroom, and Dominique suddenly says she can't live in the house. "Why not?" asks Roark.

2:36 Mediocre Peter Keating asks Toohey for help getting commission to design Cortlandt Homes. Toohey says it must be brilliant product of planning ingenuity and structural economy. "Do you think you could do that, Peter?"

"I could try," says Keating, and then shoves his fingernails into his mouth and begins biting them.

2:38 Keating crawls to Roark. "Howard, I'm a parasite. Every good idea I had in school I stole from you. I've come to beg you to design it and let me put my name on it." Roark says OK, as long as Keating agrees to build it Roark's way, with absolutely no changes or compromises. Keating promises. Uh-oh.



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architects.org 617-951-1433 x221 2:42 The Roark-Dominique-tycoon ménage is sprawled under a tree. The tycoon suggests that Roark come on yacht cruise with him. Dominique pouts and asks her husband what exactly Roark is to him; he says dreamily, "My youth."

2:45 Design review on Peter Keating project, secretly designed by Roark, is not going well. Other architects are now involved and want to add "a few balconies."

2:46 View of completed Cortlandt Homes. Many balconies. Keating apologizing, Roark looking grim. "What are you going to do?" asks Keating, apparently unaware of Roark's quarry dynamiting experience.

2:50 Kaboom!

2:51 "What do you know about this?" the police ask, converging upon Roark standing calmly near the smoking ruins of Cortlandt Homes. "I'll talk at the trial," he says.

2:56 The architecture critic is browbeating Keating. "Who designed Cortlandt Homes?"

Keating, whimpering: "Why do you want to kill Roark?"

Toohey: "I want him locked up, strapped, beaten. He'll move as he's told. He'll work as he's told. He'll take orders."

3:00 The tycoon fires Toohey, but then everyone else on the paper walks out. It turns out the architecture critic has secretly taken over the paper.

3:01 The newspaper is boycotted, picketed, reviled by society matrons at cocktail parties. Fights break out in the streets. Mob violence over architecture criticism!

3:04 Maternally tender toward her husband while still secretly smoldering for Roark, Dominique brings the tycoon comforting hot beverages and the two of them manage alone to produce daily bigcity newspaper extolling Roark's genius.

3:05 Tycoon cracks under pressure and denounces Roark, thus halving movie's quotient of strong men who love Dominique and clearing way for her to

have happy ending with the only one left.

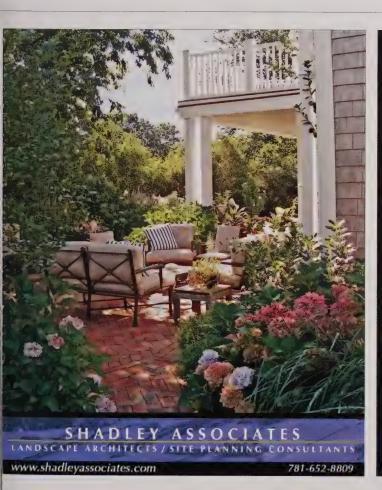
3:07 Roark makes really long courtroom speech about individualism, proving that Ayn Rand's attitude toward moviegoing public resembles Roark's attitude toward clients.

3:15 Roark is acquitted.

3:16 Tycoon hires Roark to design tallest building in city, predicting building will be "the last skyscraper ever built in New York, the last achievement of man on earth before mankind destroys itself."

3:19 Dominique, now Mrs. Roark (the tycoon having obligingly removed himself), comes to visit Roark at the construction site of his new skyscraper. She rides the elevator up the scaffolding. Roark waits at the top. The building is very large. She smiles and rides up, up, up ... well, you get the picture.

Joan Wickersham's new book. *The Suicide Index*, will be published by Harcourt in August.



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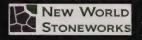
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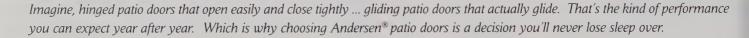
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Working alone can be satisfying, exhilarating, and sometimes downright scary.

Searching for the Roots of Creativity

by Deborah Weisgall

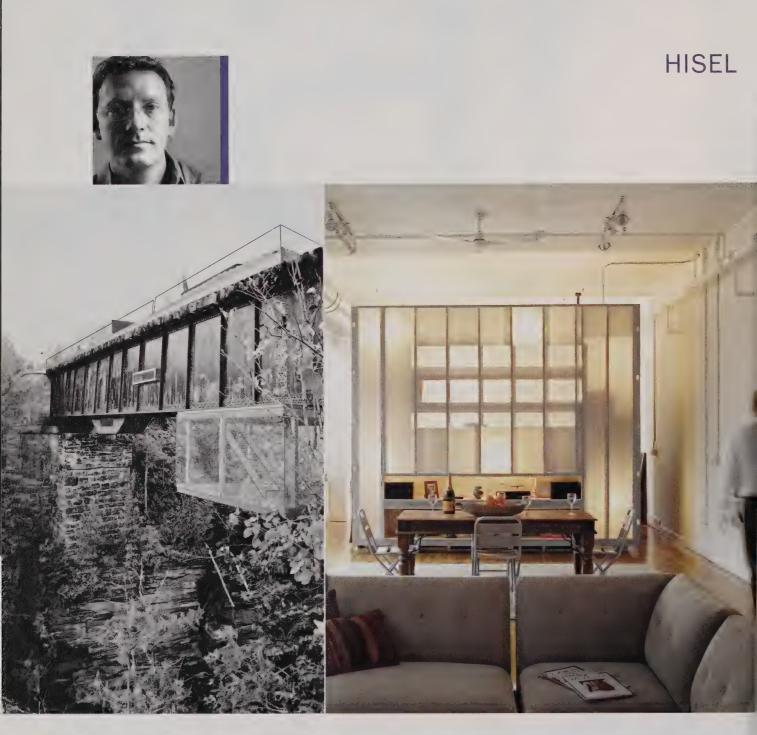
All work involving the mind, involving the invention of something from nothing, begins small. One person and solitude: blank time and space for an idea — a concept, a vision — to coalesce. And a blank surface where that mysterious process occurs: a notebook, a sketchbook, a blank canvas, an empty computer screen, silence, the raw land of a site.

These conversations with people who work alone explore the nature of that solitary process, its advantages and drawbacks, its points of collaboration. I spoke with an architect, Dan Hisel; a landscape architect, Patrick Chassé; a studio furniture maker, Jenna Goldberg; and two painters who are husband and wife, Gerry Bergstein and Gail Boyajian. Temperament, habit, the size and nature of ambition: these determine the decision to work alone, and the ramifications of that choice range — sometimes every day — from delight to loneliness, from the ability to control every aspect of a project to an overload of detail.

Sooner or later, though, every idea has to intersect with the real world. The nature of the collaboration differs. At the very least, the painters and furniture artist have their galleries and patrons; the architect and landscape architect have clients and builders and gardeners; even the lonely writer encounters agents and editors, or an assignment where it's necessary to go out and talk to other people. Negotiating these collaborations is part of the job; sometimes it's fruitful, sometimes it isn't. Working alone permits a greater degree of flexibility, both economic and intellectual; it also is more precarious, with no built-in safeguards, either creative or economic.

The common thread is that all of these people want to maintain — and control — a consistency and thoroughness of thought and of inquiry, an intensity that cannot be diluted. This intensity grows out of the physical aspect of doing what they do: carving wood, painting a painting, building a building, or constructing a landscape. At the same time, all require that place of stillness, the hypothetical space where the mind dances around and plays happily and precariously with possibility.

Deborah Weisgall writes about the arts for *The New York Times* and other publications. Her new novel is *The World Before Her* (Houghton Mifflin, 2008)



Portrait photo by Jennifer Roberts. Above left: Heavy/Light House; rendering courtesy. Dan Hisel. Above right: Z-Box; photo by Peter Vanderwarker. Dan Hisel has won many awards, including a Skidmore, Owings & Merrill Traveling Fellowship. He was a winner in the Young Architects Forum, and his work has been published in *Architecture, Dwell*, *ArchitectureBoston*, and the book *Young Architects 7: Situating*, published by Princeton University Press. He teaches at Roger Williams University in Rhode Island. He is currently practicing in Somerville, Massachusetts, and contemplating growth. His award-winning designs include the Z-Box — a sleeping/storage cube in an otherwise undifferentiated loft — and Heavy/Light House, a guest house imagined from an abandoned railroad trestle. **Deborah Weisgall:** How has working alone influenced the trajectory of your career?

Dan Hisel: I have focused on work that played to my strengths: intense, concentrated, and precise projects that emphasize experiential and perceptual conditions and material craft. I have tried to stick to what I'm good at, and I do have a real passion and temperament for more intimate architectural problems conditions that are easier to investigate at a smaller scale. A house is a wonderful medium for this kind of design work; it ranges from public spaces to private, intimate spaces. I think houses, those kinds of problems, will never get old for me, because this is where my interests naturally lie.

Working is easy for me. I get up early, go downstairs, and start jamming. I run on a high-octane mixture of terror and delight. I do have to say that I thoroughly love drafting and designing details. I can sit down at my computer and get in a zone for hours without getting up. I also have a fair amount of construction experience. I started out digging footings for my father's design/build firm when I was 16, and I've built several of my projects myself, including a sauna. I have an understanding of the way things go together, as well as how easy or difficult certain details may be for a contractor to assemble.

But I would love to grow, slowly, into larger-scale work: and these comments are a reflection of where my head's been at for the last several months. I'd love the chance to design a fire station or a small school, and lately there have been many points at which I would have preferred to be able to hand off something. Perhaps being a solo architectural practice only lasts until you get busy and start landing larger projects. Then your ambition overrides your sense of risk aversion, and you step up and do it.

Deborah Weisgall: How do you work? How do you begin investigating a project, an idea?

Dan Hisel: My design ideas tend to start with a close scrutiny of the program and the place. I try to get forms, spaces, ideas to *emerge* out of a complex chemistry of site, people, and program. But this might sound like design solutions just appear — and that's not true. As architects, we exert a will and make decisions that, in the best buildings, artfully craft experience and awareness. I try to make spaces for a life to be lived in this place with a higher level of intensity. It's like cooking — the more the sauce simmers down, the more intense the flavors become. The extraneous evaporates, and you're left with the critical moves that reveal a deeper, more complex and concentrated level of awareness.

But in any professional practice, there are compromises that come relative to research and design. I started out doing small projects in which there was an intense level of intellectual and creative investigation; I used those projects to ask philosophical and theoretical questions about architecture — to try to get to the deeper questions. When you're working for clients who have a limited budget, you're trying to get a kitchen and get the place insulated, then do a few things that are going to make the house beautiful and contemporary. The work is not cuttingedge the way I would like it to be. But money doesn't have to be a constraint; the Heavy/Light House and the sauna came when there was unlimited time and few restrictions — an amazing time when I was free to explore.

The question is how to maintain that level of inquiry; that's where my success has come from. Competitions afford that opportunity. And there are moments within each project that afford that opportunity as well.

Deborah Weisgall: What are the limitations of a solo practice? What do you miss?

Dan Hisel: I often wish I had a seasoned architect close by to bounce ideas and problems off. I'd love to have a salty old curmudgeon hovering over my shoulder telling me if something's going to leak, or when to call the civil engineer. Most of the help I wish I had is technical, of course — and this is normal. Most architects just want to design stuff and let someone else fret about the technical aspects. But a one-man office is responsible for everything. It's all on my shoulders — so that's where the terror kicks in.

The fantastic aspect of being solo is that I am the only measure of my own satisfaction, so if I'm content with the process, the design, the light fixture or whatever — then I am content. Dan Hisel

Deborah Weisgall: How do you work with your clients?

Dan Hisel: My new clients are coming to me after seeing my work published somewhere — so they're choosing me based on my designs, which makes it easy. I haven't had to turn someone away because I feel that we don't see eye-to-eye on design. Perhaps I'm lucky. But I'm also hungry and, for me, the process of working with clients is something I love. I have been lucky; my clients have valued design and respect my ideas, so the process is usually a lot of fun. The best clients want to make sure they understand how a design will work for them — how it will affect the way they live. I try to be a very good listener and respond with designs that respond to the things they care about. Contractors can be another ball of wax altogether, but so far so good.

Deborah Weisgall: How does working alone dictate the size of projects you work on? Do you think it is natural to work in firms of different sizes at different stages of a career?

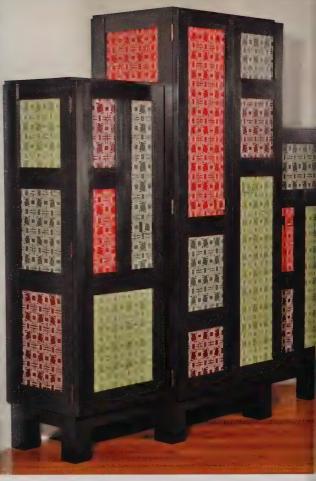
Dan Hisel: Up until recently, the question of being a solo practice has not been a conscious choice, but a matter of necessity. Now, though, I'm facing the question of possible growth; it's exciting and scary. And part of the dilemma about whether or not to get bigger is whether that means doing more conventional work. The fantastic aspect of being solo is that I am the only measure of my own satisfaction, so if I'm content with the process, the design, the light fixture — or whatever — then I am content.



GOLDBERG

Jenna Goldberg received her MFA from the Rhode Island School of Design in 1994 and has been making studio furniture in the Boston area ever since. She has exhibited her work – strong shapes with surfaces carved and colored in intricate patterns – in galleries throughout the country and in museums including the Smithsonian and the Philadelphia Museum of Art; it has also been featured in books and magazines such as *Scratching the Surface; Furniture Studio Tradition in Contemporary Furniture; Furniture Studio: The Heart of Functional Arts*; and *American Craft*. She also teaches at the Rhode Island School of Design. Her studio is in Fall River, Massachusetts.





Left: Gingko Buffet. Above: B and B Cabinet. All photos by Mark Johnston. The downside is that I'm left talking to my inner voice, which can be a bit of a saboteur. Working alone constructively is a constant exercise in being present. Jenna Goldberg

Deborah Weisgall: How do you come up with ideas for the surfaces of your furniture? Do they emerge as a response to clients' needs or from your own curiosity?

Jenna Goldberg: I spend a lot of time in bookstores and at the library. I'm fascinated with patterns, specifically fabric, wallpaper, prints, and I get a lot of inspiration from these materials. I use them as a jumping-off point. Sometimes clients will ask me to do what I want; sometimes I have to make something that works in a room that is already full of stuff. I'm willing to accept ideas and thoughts; commission work is a conversation, a little bit of give and take.

Deborah Weisgall: What about the uncertainties — economic and aesthetic — of being on your own?

Jenna Goldberg: I have learned that trying to do everything myself will ultimately drive me into total exhaustion and probably bankruptcy. But economic uncertainties don't really worry me; worry gets shelved as wasted energy. I haven't run out of projects yet, and people keep asking me to make them things.

I think that when you are an artist there is a preciousness about every part of the process of making something. Somewhere along the line I convinced myself that if I gave up any part of that process I would be taken less seriously, or I would fail in my artistic authenticity. But ultimately what I do is a business as much as it is an artistic labor of love. I have come to know the joys of outsourcing, whether it is bookkeeping or sanding, or any other part of the process that somebody else can do. While I enjoy not doing everything myself, I still like to work alone in the studio. Any work I have somebody else do occurs in their work space.

Deborah Weisgall: Solitude is important to you, then?

Jenna Goldberg: I like to go into my studio and know that everything is where I left it. I have a whole conversation around "don't touch my stuff" that I'm sure I got from years of sharing space and being in school. Ultimately, it's about control. I also like to control the noise factor. Music or no music. Book on tape or podcasts/radio. It's difficult for me to achieve any sense of flow with someone else in my space.

Deborah Weisgall: How do you balance the necessity for solitary work with the need for interaction, whether it's advice or companionship?

Jenna Goldberg: The downside is that I'm left talking to my inner voice, which can be a bit of a saboteur. Ideas and notions of who I am and what I'm doing can seriously spin out of control. There are days that go by when I don't speak to a soul, and this can get depressing. Pointless conversations with myself, when I question my worth as an artist, become significant when really they don't matter or mean anything at all. Working alone constructively is a constant exercise in being present. I love getting feedback from people, and sometimes I even listen to them. And I love having people around for conversation and fun, but when it's time to get some work done, I need to crawl back into my den and focus.

Deborah Weisgall: How do you balance teaching and work?

Jenna Goldberg: It's interesting — when my teaching time rolls around each year, I have to get into the groove of finding my words. Because I have been working in my medium for so long and by myself, I never explain what I am doing when I am doing it. That is what I have the most trouble with when I teach: I have to talk about what I'm doing.

I also teach during the summers at craft schools around the country. My students are adults. I find that these gigs are a real social injection that I do not get in my everyday life. I look forward to them. But I try to keep the work part of my life at about 80 percent and the teaching at about 20 percent. Teaching has a way of creeping in and taking over. Ultimately I am a fulltime maker, and the teaching is just something else I do.

Really, the whole working-alone thing is a double-edged sword. I love having my own space, but I crave the company of others. I created a life of solo artistic pursuits. It's only recently that this box has stopped working for me. I'm really looking forward to pursuing things outside of my solo world — moving into the realm of group. I have no idea what I want to do, but the desire is there.

BOYAJIAN





After graduating with a joint degree in fine arts from Tufts University and the School of the Museum of Fine Arts, Gail Boyajian attended architecture school at MIT. She practiced architecture for 17 years, working on graphics in projects such as the Statue of Liberty Visitor Center, Epcot Center, and the Big Dig; in 1994, she returned to painting. Her lush landscapes and fanciful cities are populated with historical and imaginary figures, giant goldfinches, and helicopters delicate as hummingbirds. Her paintings read like strata of time, layered into the future. Her work has been shown in numerous galleries and museums. She teaches architecture at Phillips Academy, Andover, and is married to Gerry Bergstein.

Above left: *Multidisciplinary Sky* by Gail Boyajian; photo and portrait by the artist. Above right: Gerry Bergstein with *Mound*; photo and portrait (right) by the artist.

Deborah Weisgall: How do you balance the need for solitude and the desire for companionship? And how do you maintain the important tension between your own invention and the world's response?

Gail Boyajian: My studio is a sanctuary — it's private. Sometimes I wish there were more people around, but I have teaching for that. When I've worked in studios in residencies, I've liked having the chance to show off what I've done, as I like to hear what others are grappling with, but then I just want to get to work alone again.

The presence of a critical, interested audience is valuable as a stimulus, and I'm often inspired by what has happened or been said, but only when I'm alone do I feel free to use it for my own purposes. The time alone is necessary to process and distance myself from direct experience and other sensibilities, and from my reactions to those. That is when I decide what is truly mine.

Gerry Bergstein: There is a point when I need another set of eyes — another heart and another mind. I love working alone, since my work comes from a private space. It arises from an original idea and then a continuous set of discoveries emerge from the process itself. My world is in my head. However, there is always an assumption — a hope — that the work is a way of sharing this world and my discoveries. The tension comes when my bubble is burst — when my beautiful, private world proves to be not deeply enough explored. Art is still a form of communication. It does not necessarily make you a better person, but perhaps it can make you a more complex person. One way or another, the viewer is important.

Deborah Weisgall: You both teach — and you both love to teach. Is teaching a way to connect with the world, to try out ideas?

Gail Boyajian: Since I teach architecture, not painting, there is a different benefit. I get enormous satisfaction from guiding the efforts of students and helping them develop skills and ideas without feeling in any way that my own private projects are in any way at stake. Teaching gives me a chance to use skills and knowledge I developed earlier in my life and to share my passion for the subject. With architecture, I feel confident in a way that I may never feel with painting, which is always an exploration for me.

Gerry Bergstein: Teaching certainly is a way to connect. My style of teaching involves sharing what I know and letting students respond with what they know and what interests them. I

continually discover new artists and ideas. I also get to experience how successive generations explore perennial issues — power, mortality, ideology, aesthetics — with new languages. This certainly affects my work; it deals with the ideological struggles of art as a metaphor for wider human struggles. In fact, teaching may have generated this idea in my work.

Deborah Weisgall: Do you ever think about growing — establishing a workshop, the way Renaissance painters did, and the way many artists are doing again now?

I love working alone, since my work comes from a private place. My world is in my head. *Gerry Bergstein*

Gail Boyajian: The way I work has partly evolved because I don't farm any part of it out to others. I discover things as I do the repetitive parts, such as foliage or sky. If production were important for a large-scale project, it would be necessary to figure that out, but I work small partly so that I can do things myself.

Gerry Bergstein: Murakami, Jeff Koons, Damien Hirst, Matthew Barney — these are some artists who have workshops of their own or who hire craftsmen to execute their designs. I see nothing wrong with this at all; I don't think art is necessarily the product of a solitary genius. But too much of my work comes from daydreaming, discovery through the act of working itself. My studio is chaos — a luxury which I enjoy and even get ideas from.

Gerry Bergstein is the head of the painting department of the School of the Museum of Fine Arts, Boston. One of Boston's most important painters, he also graduated from the school. His paintings, with their masterly draftsmanship, are dense with references to art history and to popular culture; Bergstein is working out his place — the artist's place, and sometimes it's very small — in the world and in time. He has shown in galleries throughout the United States and Europe, and his work is in numerous museum collections, including the Museum of Fine Arts, Boston; the DeCordova Museum; the Davis Museum at Wellesley College; and the Rose Art Museum. He is married to Gail Boyajian.

BERGSTEIN



CHASSÉ

A landscape architect with a special expertise in historical landscapes, Patrick Chassé's work has ranged from renovations to the Rockefeller Gardens, the Azalea Gardens, and the Thuya Gardens in Northeast Harbor, Maine, to projects for the New York Botanical Society and the Institute for Advanced Study in Princeton, New Jersey. He has also designed numerous private landscapes and gardens, as far away as Istanbul. Born and raised in Aroostook County in northern Maine, he has taught at the Harvard Graduate School of Design. Recently he spearheaded the effort to preserve Garland Farm, the last garden designed by Beatrix Farrand. He is also curator of landscape at the Isabella Stewart Gardner Museum.

Deborah Weisgall: Even though you work alone, and conceive of the idea, design the bones, and then put together the puzzles of plants in a landscape, it is very much a collaboration. How do the good interactions work?

Patrick Chassé: My favorite collaborations are with clients who are more interested in ideas than in flowers. They can appreciate an idea or a concept for its relationship to the larger culture, and then they really understand how it gets translated into a built landscape. The same concept can be translated in different ways or in different media, but if the idea is strong, the result will have a kind of soul or power that transcends the collection of plants and materials from which it is composed. The client-collaborators who appreciate the concept will often give fairly free rein on how that idea is translated. There are often likes and dislikes in terms of types of plants and materials, but the broad strokes can dominate the composition. What I don't like is the fussiness of trying to include one of everything in the garden.

Deborah Weisgall: Over the years you have experimented with expanding your practice.

Patrick Chassé: Collaborating with young staff has been challenging. The inexperience of young designers is sometimes magnified by a natural impatience to develop a style and an identity. I use up energy keeping traditional procedures and techniques from being supplanted or ignored, and the management time required to enforce design standards — and reduce design liabilities — is considerable, and for me highly unsatisfying. I know what will work, what will hold, and what will collapse; my father had a construction business and I learned to drive his earth-movers when I was a kid. I currently work alone, with full responsibility for all phases of the design process. I can accommodate fewer projects, but I find them more satisfying and more consistent in spirit and form from conception to completion.

Deborah Weisgall: What are some of the advantages and constraints of your chosen medium?

Patrick Chassé: The end product in landscape design often has a functional requirement that adds considerable complexity to the creative challenges. If a garden is primarily a viewing garden — some sort of tableau or stroll-through composition — the creative process and the client interactions of collaboration are freer and more open-ended. When a given or proposed space has to be functional — a driveway, outdoor living area, sculpture gallery, play area — the creative chess game literally becomes more three-dimensional. The difficulties of creating a balanced design that satisfies the complicated list of requirements and also allows for what nature will tolerate seem to increase exponentially.

Deborah Weisgall: It seems that landscape design has something in common with herding cats — there are so many variables to take into consideration.



Portrait photo by R. Gordon Manchester. Above: Nymphaeum, South Salem, New York. Right: Lotus Bridge, Cortlandt Manor, New York; both photos by Patrick Chassé ASLA.



Patrick Chassé: I've worked in a number of media in previous lives as an artist — paint, printing, clay, glass, and precious metals. Working in landscape has two major differences. First, one doesn't produce a piece of work independently and find a client/buyer who fits the work, and second, one usually doesn't actually make or build the complete work. That means that the realization of these landscapes of the mind depends on the skills and sensitivity of a team of contractors: builders, masons, earthmovers, stonecutters, plant nurseries, irrigation experts, electricians, plumbers, and woodworkers. It's more like putting together an orchestra to produce a single important concert. The timing, sequencing, and virtuosity must be in balance for a sublime result. The Rockefeller Gardens, for instance, are designed to be at their peak for a period of six weeks every summer. To achieve the effect, we installed more than 600 different types of plants — for only six weeks.

Natural and unnatural delays can throw the whole thing off, and of course there's a deadline for completion — a *Curtains up!* The landscape medium is not a hands-on means of expression, like watercolor or ceramics, and the degree to which the vision is realized depends a great deal on the cooperation and understanding of others. This causes much of the work I do to miss the mark — for me, though few others would perceive any shortcomings. Often a contractor will make a change, or several changes without consultation, and it's impractical and expensive to redo. And since landscape must incorporate change, clients



are sometimes not shy about making their own changes. But this precariousness makes the successful translation of terrain into landscape heady triumphs that trump any joy from selling a piece of art in a gallery. It's an amazing high — and I'm hooked.

beborah Weisgall: What are some of the elements that contribute to a triumph? In other words, what would be your ideal circumstances for designing a landscape?

I currently work alone, with full responsibility for all phases of the design process. I can accommodate fewer projects, but I find them more satisfying and more consistent in spirit and form. *Patrick Chassé*

Patrick Chassé: There's really no such thing as *carte blanche*. Big budgets can help — they keep options open, but ultimately space/ size and physical or cultural context become the controlling parameters for fleshing out landscape ideas. And then there's gravity.

Client consistency — at the conceptual level — is a must. The only times I've found this to be a problem is with the dual personalities of a husband-and-wife client team — what I call the "wishbone design process." Who gets the longer part of an idea can cause wild gyrations and fluctuations on the path to the garden — if the garden is built at all. A few years after I graduated from the design school at Harvard, I received an alumni questionnaire asking for suggestions for courses that should have been offered in the design curriculum. I suggested "Marriage Counseling 101." We're trained for office and liability management, but not client management.

And then there is landscape management. In the long term, the maintenance and tuning of a landscape are critical to its sustainability as a living work of art. This doesn't mean just mowing the grass; it's more like making sure that all the members of an orchestra keep practicing. So that's a big part of the client relationship: owner responsibility.

Forget smart phones and smart cars – smart particles are at the cutting edge of really smart technology.

Nanotechnology Materializes

Simartice

During the late 19th century, George Parsons Lathrop was in the enviable position of engaging Thomas Edison in a number of conversations, which he described in a delightful account in the February 1890 issue of *Harper's New Monthly Magazine*. His "Talks with Edison" article was written with the intention of preserving their exchanges; however, Lathrop also proved a graceful listener, "learning from [Edison's] own lips some of those things which tend to give one at least a more vivid perception of how an inventor invents."

Edison considered atoms to be intelligent particles, as corroborated by their ability to form, disassociate, and reform with other elements. One day at dinner, Lathrop recounts, Edison marveled at the possibilities, and personal gratification, that would emerge if humans could gain complete control of all of their constituent atoms. Edison explained, "then I could say to one particular atom in me — call it atom No. 4320 — 'Go and be part of a rose for a while.' All the atoms could be sent off to become parts of different minerals, plants, and other substances. Then, if by just pressing a little push button they could be called together again, they would bring back their experiences while they were parts of those different substances, and I should have the benefit of the knowledge."

Had a nutritionist joined the two friends for dinner,

Edison of course would have been reminded that he was already benefiting, at least in part, from experiences offered by the minerals, plants, and other substances that nourished him. Edison's ruminations on anthropomorphically charged atoms and his dominion over them often come to mind in the course of my research into the architectural implications of nanotechnology. Consider, for example, this excerpt from "Molecular Manufacturing: Societal Implications of Advanced Nanotechnology," a presentation by Christie Peterson before the US House of Representatives Committee on Science in 2003: "Humanity's drive to improve our control of the physical world is intrinsic to our species and has been in progress for millennia. A vast international economic and military momentum pushes us toward the ultimate goal of nanotechnology: complete control of the physical structure of matter, all the way down to the atomic level."

Nanotechnology is the study and fabrication of small molecular structures that measure between one nanometer and 100 nanometers in at least one dimension. Due to this dimensional definition, the field of nanotechnology has a very broad scope and can be thought of as a territory within which a range of disciplines converge, including chemistry, physics, materials science and engineering, medicine,

biology, and systems architecture for computing. Imagine defining architecture as a structure wherein at least one of its dimensions is between one and 100 meters! Imagine the number of disciplines that could lay claim to such creations! The dimensions matter, however, as nanotechnology would otherwise be difficult to identify. Like biotechnology, nanotechnology is not a single technology; rather, it is multiple technologies. Generally speaking, nanotech is concerned with single molecules. But this, too, can be cause for some confusion, as some single-molecule structures are much larger than the 100-nm ceiling that helps define nanoscale science and engineering.

Often the last to arrive at the party and occasionally the last to leave, architecture has been slow to embrace and participate in the development of nanotech innovations. The paucity of architectural publications that have been devoted to the subject over the past two decades suggests that most of us can likely be counted among the 70 percent of Americans who know little, or nothing at all, about nanotechnology. This is beginning to change and, as it was with the last industrial revolution, architecture is awakening to a new industrial revolution that is already substantial. Nanotechnology fundamentally alters our relationship to matter; it has already produced a variety of Image: nBots by Peter Yeadon. A detail of three carbon nanotube "fingers" and a molecular bearing "wrist" for the nBots. The project is being developed with HyperChem and NanoENGINEER advanced molecular modeling suites, which can simulate atomic reactions. (See cover and caption, page 1.) materials with novel properties, and it offers new approaches to making that will undoubtedly affect the fabrication of architecture in the future.

Two recent books, one by John M. Johansen and the other by Sylvia Leydecker, begin to address the vast implications of nanotechnology in terms of materials and making. Johansen's *Nanoarchitecture: A New Species of Architecture* (Princeton Architectural Press, 2002) was likely one of the first books to introduce many of us to the topic of nanotechnology in architecture. Although it contains an assortment of uninspiring projects by Johansen with dubious connections to nanotech (and he doesn't actually get around to mentioning molecular nanotechnology until page 151), he was one of the earliest architects to identify the emergence of nanotechnology as the dawn of a new epoch. Johansen borrowed heavily from K. Eric Drexler's *Engines of Creation* (Anchor, 1987) to proffer a vision of post-fabrication architecture, in which architecture is self-assembled and can grow like a seed in a vat of nutrients.

Leydecker's Nano Materials in Architecture, Interior Architecture and Design (Birkhäuser, 2008) surveys a number of projects that incorporate nano-engineered materials. Most of these are coatings that are self-cleaning, anti-fogging, anti-graffiti, or antibacterial, but Leydecker also includes nanomaterials that provide enhanced thermal insulation or fire-resistance. These technologies demonstrate how nanotech Architecture has been slow to embrace

nanotech innovations, but this is beginning to change, and architecture is awakening to a new industrial revolution.

is discreetly infiltrating architectural systems, lying dormant but ready to perform.

To expand upon Leydecker's list, the products of nanotechnology are generally of two types: existing products that have been optimized and enhanced by nanotechnology, and an entirely new class of materials and products that have heretofore never existed. Composite materials are a ready example of the first type, whether they are stronger industrial plastics that can biodegrade, or have been reinforced by the unsurpassed strength of carbon nanotubes. Many sensors and smart materials, too, have had their properties improved by nanotechnology, including thermoelectric and piezoelectric materials, and second- and third-generation thin film photovoltaics.

Of the entirely new products, many are focused on energy abundance, efficiency, storage, and conservation. Products like nanoantenna photovoltaics that continue to work at night, and quantum dots that efficiently luminesce in a bright, visible spectrum of light, might eventually play a significant role in architecture. They are also good examples of recent advancements in optics/photonics research, which



has also produced metamaterials that guide light around cloaked objects. But the most striking new products are the biomimetic nanomaterials wherein our knowledge is finally able to benefit from plants and other organisms that have developed a number of remarkable mechanisms for sustaining their existence over millennia. These include super-adhesives that mimic the byssal threads of mussels and can stick to nearly anything, tapes that emulate the van der Waals forces found in the setae of a gecko's foot, anti-reflective materials that mimic the structure of a moth's eye, synthetic membranes that efficiently filter water in the same way as kidneys, selfhealing synthetic systems that sense damage and then mend the defect, "nastic materials" that respond to external stimuli, and strong, stretchy nanocomposites that have the desirable properties of spider silk.

It is interesting to reflect on the six short years that have passed between these two publications, one visionary (even if lacking substance) and the other a review of commercially available material technologies. The evolution of nanotechnology has followed a similar trajectory. Nanotech funding is increasingly shifting toward achievable near-term applications and is wicking away from the kind of scientific research that has remained unsullied by industry and commerce during the past 10 years, as the field itself migrates away from the visionary roots set down 20 years ago in Drexler's *Engines of Creation*.

One of Drexler's central tenets was that nanotechnology would eventually enable us to create molecular machines that could replicate themselves, and might then be reprogrammed to carry out useful tasks by assembling products from the bottom-up, atom-by-atom, molecule-by-molecule, from a reservoir stock of elements. Twenty years ago, Drexler's critics were undermined by his adroit analogies to living organisms that self-replicate — for example, a potato, and you and me. Even today, Drexler's nanofactories might seem fanciful, but a variety of molecular machines have already been developed. Single-molecule couriers have been created at the University of California that can transport other molecules on a surface, a nanocar was built at Rice University that has its own molecular motor, and an array of programmable DNA robots were self-assembled at NYU that can grab molecules from a solution and fuse them into finished materials.

Thomas Edison would have been delighted.

Peter Yeadon AIA, RIBA, is a principal at Decker Yeadon in New York City. He is an associate professor at the Rhode Island School of Design, where he teaches courses on smart materials and nanotechnology. Yeadon currently serves as chief editor of *Nanoarchitecture.net*.







BRINGING DOWN THE HOUSE

Publishers and designers have joined forces to make small houses big business.

by James McCown

When Connecticut-based Taunton Press accepted a proposal by architect Sarah Susanka in the mid-1990s for a book entitled *The Not So Big House*, editor Peter Chapman thought it would take its place next to the rest of the "shelter" titles and rack up respectable, but unspectacular, sales.

That was six books ago. Susanka now presides over what could be called, depending on your tolerance for puns or oxymorons, a "cottage industry" or a "mini-empire." The Not So Big House brand includes a full calendar of speaking engagements by Susanka around the country, frequent television appearances, and a very successful website with paid listings of real estate brokers and architects who "embrace the philosophy of designing and building Not So Big."

"She just hit the national mood at the right time," says Chapman. Susanka is even blurring the line between designer and therapist with her latest work, *The Not So Big Life*, just published by Random House, in which she mixes design advice with New Age wisdom, urging readers to "make room for what really matters."

While full shelves in bookstores feature the small-house subject, there is no correspondingly high number of Americans opting to live in such abodes. The Web and television have played their part, but the success of the idea is a remarkable example of the enduring power of the world of publishing yes, to paraphrase Mark Twain, the demise of the printed word has been greatly exaggerated.

Whether influenced by books or blogs, most design professionals need little convincing of the advantages of building small. Despite the relatively recent presence of McMansions in the landscape — and the scorn heaped upon

them by most architects - architectural anti-gigantism has a long history. The 18th-century monk Abbé Marc-Antoine Laugier tapped into the primordial human need to build shelter, and sanctified the small: "Man wants a dwelling which will house, not bury him. Some branches are broken off... He chooses four of the strongest and raises them perpendicular to the ground to form a square." New Englanders such as Henry David Thoreau and Ralph Waldo Emerson often praised smallscale shelter, and early 20th-century architects Bruno Taut and Frank Lloyd Wright had sojourns in Japan, returning with a reverence for that island nation's seemingly magical use of small living space. In the late 1950s, the French architectural theorist Gaston Bachelard summarized a growing ethos: "The cleverer I am at miniaturizing the world, the better I possess it ... values become condensed and enriched in miniature." In the mid-1970s, in his seminal A Pattern Language, Christopher Alexander wrote that small "does not preclude richness of form. The trick is to intensify and overlay; to compress the patterns ... to make every inch count double."

For those outside the design professions, small was more like a temporary penance, a stage from which to advance. In the suburban expanses of the 1950s, General Motors promised upwardly-mobile families a natural progression from Chevrolet to Buick to Cadillac. In much the same way, the small Cape or Levittown-style house was a necessary way station on the route toward the inevitably larger and grander place on the horizon.

What seems to be pervasive now is a belief in small for its own sake, regardless of location or means. A growing number of advocates are touting the small-is-beautiful gospel around the country, well beyond urban centers such as New York and Boston, where tiny apartments and houses are often more of an economic necessity than a conscious choice.

"I recently went to a city in Indiana, where you wouldn't think there would be much interest in small houses, and after my talk, people were standing in line asking where they could find local architects," says Susanka, who began her practice in Minnesota and is now based in North Carolina. "I pointed to a corner with the AIA members who had invited me to speak. It was like the two groups didn't know each other existed." Susanka firmly believes that nurturing appreciation of smaller spaces and homes is expanding the demand for architectural services. "We're trying to increase appreciation of the kind of detailing — built-in furniture, custom storage — that architects can design best," she says.

Susanka's design mantras are far from revolutionary, but she expresses them eloquently and without professional jargon: Careful framing of small spaces can make them seem large; formal, separate living and dining rooms are long outmoded vestiges of Edwardian stuffiness; the commercial homebuilder's focus on square footage yields big, ugly, and cold rooms; restrained size is the natural ally of familial harmony ... and on and on.

Predictably, her success is attracting others, who are staking their own claims. Writer Shay Salomon and photographer Nigel Valdez, a couple based in Tucson, are operating under the moniker of their book *Little House on a Small Planet*. Like Susanka, they are in demand on the speaker circuit. But their

Small-House Lit: A Not So Short List

25 Houses Under 1500 Square Feet by James Grayson Trulove (Collins Design, 2004)

The Big Book of Small Houses: 75 Award-Winning Plans for Your Dream House by Don Metz (Black Dog & Leventhal Publishers, 2004)

Big Ideas for Small Spaces by David Lansing and JoAnne Liebeler (Sunset Publishing Corporation, 2006)

Compact Houses: Architecture for the Environment by Cristina Del Valle (Universe, 2005)

How to Live in Small Spaces by Terence Conran (Conran, 2007)

Little Boxes: Architecture of the Classic Mid-Century Suburb by Rob Keil (Advection Media, 2006)

Little House on a Small Planet by Shay Salomon and Nigel Valdez (The Lyons Press, 2006)

Living Large in Small Spaces: Expressing Personal Style in 100 to 1,000 Square Feet by Marisa Bartolucci and Radek Kurzaj (Harry N. Abrams, 2003)

Micro: Very Small Buildings by Ruth Slavid (Laurence King, 2007)

Mini Casas by Josep M. Minguet (Monsa, 2007)

Mini House Now by Àgata Losantos (Collins Design, 2006)

Mini House Style by Rico Komanoya (Harper Design International, 2004)

The Not So Big House by Sarah Susanka (Taunton Press, 1998, 2001)

Small Brick Houses of the Twenties by Ralph P. Stoddard (Dover Publications, 2005)

Small Buildings, Small Gardens: Creating Gardens Around Structures by Gordon Hayward and Peter Harrison (Gibbs Smith, 2007)

Small Bungalows by Christian Gladu and Ross Chandler (Gibbs Smith, 2007)

Small Environments by Yenna Chan (Rockport Publishers, 2007)

The Small House Book by Jay Shafer (Tumbleweed Tiny House Company, 2006)

Small House Tokyo: How the Japanese Live Well in Small Spaces by Brett Bull (DH Publishing, 2008)

Small Houses: Contemporary Residential Architecture by Nicolas Pople (Universe, 2003)

The Smaller Home: Creating the Perfect Fit by Dan F. Sater II (Collins Design, 2006)

Smart Approach to Small Space Living by Susan Boyle Hillstrom and Glee Barre (Creative Homeowner, 2007)

The Very Small Home: Japanese Ideas for Living in Limited Space by Azby Brown (Kodansha International, 2005)

The Wright-Sized House: Frank Lloyd Wright's Solutions for Making Small Houses Look Big by Diane Maddex (Harry N. Abrams, 2003)

XS: Small Structures, Green Architecture by Phyllis Richardson (Universe, 2007) book and website are aimed more at the crunchy-granola/ Birkenstock crowd, overtly linking smaller houses with sustainable and social ideals. The Salomon/Valdez book rails at "house lust" and the "equating of the single-family house with equality and democracy." Chapters have titles like "Build a Glove, Not a Warehouse," "Three Generations Under One Roof," and a pithy call to anti-status seeking — "Quit Jonesing!"

"People continue to project onto their houses things that houses cannot provide," says Salomon, who trained as a carpenter and builder before helping to found the Small House Society (www.smallhousesociety.org) and publishing her book in 2006. "There is this idea of selling a 'home' rather than a 'house,' but that is completely phony. I've seen people's dream 'homes' balloon into unimaginable giants, and looked for new options that could lead people to simpler, happier houses."

The small-house movement has spawned its own crop of extremists, hipsters, and idealists. In the extremist camp, California-based Jay Shafer is pushing — or is it shrinking? the envelope of how small a residence can be. Author of *The Small House Book* and proprietor of the Tumbleweed Tiny House Company (www.tumbleweedhouses.com), Shafer himself lives in a 100-square-foot house in Sebastopol, north of San Francisco.

"A human being can only take up 12 square feet of space at a time," Shafer states on his website. His tiny houses are known for their humor, their architectural detail, and their portability — many can easily be placed on a trailer and towed behind a car, without the "Caution Wide Load" signs.

In the hipster category, St. Paul-based Alchemy Architects offers both pre-fabricated and built-on-site "weeHouses" (www.weehouse.com) that begin at about 350 square feet and that the firm says can cost as little as \$60,000 to build, exclusive of land and site preparation costs. The designs definitely err on the Modernist side and seem aimed at urban trendies who want a second home away from the city, or the otherwise wellheeled in search of "writer's cottages" and outbuildings and guest houses as part of a larger property.

More about help than hip, Katrina Cottages (www.katrinacottagehousing.org) present housing alternatives to those displaced by the 2005 hurricane. The program has a Solomonic simplicity. Just days after the storm, architects in Mississippi began working with the Mississippi Governor's office, the Congress for the New Urbanism, and fellow designers to provide simple plans that draw on centuries of Gulf Coast architectural tradition. They also arranged a variety of "delivery" options — the cottages can either be built on site or pre-fabricated to various stages and assembled on site. Home-improvement giant Lowe's even offers pre-specified materials and extensive assistance for the build-it-yourselfers.

Katrina Cottages combine time-tested and beloved Southern vernacular architecture — front porches, pediments, white columns — with the ruthless cost-saving logic of building small. But further, the program taps into the natural altruism of many architects. The cottages range from one-room "Tiny" models of about 300 square feet to "Double" cottages of as much as 1,500 square feet. For as little as \$70,000 — about the cost to the Federal Emergency Management Agency (FEMA) to keep someone in an undignified and dangerous trailer for 18 months — these miniature southern manses offer the displaced hurricane victim a deep sense of connection to place and tradition — and the real possibility of home ownership.

Because of the sheer number of small-house books, and the way the movement has been covered with breathless enthusiasm by the shelter/lifestyle magazines like *Dwell* and *Real Simple*, the whole enterprise has a whiff of elitism to it — from which even the Katrina Cottages aren't entirely exempt.

"It's not a movement about people claiming to be 'tinier than thou," insists the Small House Society website. Or is it? The American suburb, as it is, might actually not be quite as cold and soulless as people in Cambridge, Massachusetts and Berkeley, California presume it to be. And are we really ready to completely give up interior spaces like dining rooms and living rooms, which for generations have had profound cultural meaning for millions in the American middle class?

What seems to be pervasive now is a belief in small for its own sake, regardless of location or means.

Centuries ago, Marie-Antoinette had her architects build a small farmhouse near Versailles so she could pretend to be a shepherdess. A modern-day royal, Prince Charles, no stranger to architectural criticism, has over the past few years spoken about "the beauty of the small house" — an interesting stance for a man who grew up in a house with 78 bathrooms.

"There is a real aspect of class to it," says Yale University architectural historian Sandy Isenstadt, author of *The Modern American House: Spaciousness and Middle-Class Identity.* "After all, it takes a lot of money to live an elegantly simple life. I think with a lot of small houses, it's almost like yacht design, extracting the maximum pleasure and utility from the minimum space."

Isenstadt, who grew up in Levittown, New York, is interested in the psychological and cultural manifestations of housing size and spaciousness. The 1950s were unique, he says, in that it was the first time the idea of spaciousness was internalized and that "there was a desire for a perception of space that was greater than the space itself."

The environmental benefits of small houses are hard to dispute. But, despite the wide coverage of the small-house movement in the media, most Americans prefer to live in houses considerably larger than those espoused by Susanka *et al.* Maybe there is a fascination and longing for expansiveness that exists within our national soul.

In the end, the small-house movement speaks to a deep need for appropriateness and authenticity. Within this frame, both small and large houses have their place. Advocates for small houses are at their best when, eschewing the usual scolding about Americans' putative wastefulness, they speak to the idea of restrained interior spaces as being humane, intimate, and familial.

That may be the biggest idea of all.

James McCown is director of communications at Sasaki Associates in Watertown, Massachusetts.

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Material Photographs and text by Ron Sturm

There is one thing I truly know about myself: I am fascinated by patterns in nature. From my early childhood as a sun-baked, crew-cut little boy loading my pockets with rocks, fossils, and odd things, to my adult occupation as a scientist, I have found my interest in nature and the internal structure of things to be one of my driving curiosities in life. Whether it's the concentric banding of growth rings in a fallen 100-year-old tree trunk, the swirl of leaves in a stream, the never-repeating forms of snowflakes, or the internal chambers of an ancient nautilus, my curiosity has guided me through a science-based curriculum, a degree in geology, early years as an environmental scientist, and to my present career as a microscopist.

Through these years, I also found an aesthetic side of nature that fed a growing interest in photography. My first camera followed me through my college years, a summer in the mountains of Wyoming, and to my uncertain, early years after graduation. I enjoyed the view through the lens so much that I began to contemplate a career in the arts. But because of the responsibilities of early adulthood, and a need to make a living, the camera was pushed aside and delegated to part-time hobby, to be enjoyed on weekends and vacations. Never quite ready to give up on artistic expression, I continued to study photography, mostly on my own. Inspired by the works of Edward Weston, Ansel Adams, David and Marc Muench, Art Wolfe, and others, I became more fascinated by nature photography.

My growing career as a materials scientist, however, gave me an opportunity to see a side of nature experienced by few. I once saw patterns through the lens of a camera; I now see them through the lens of a microscope. What started as a compromise between artistic ambition and my professional skills has developed into a new fascination, that of the microscopic world.

Photomicrography is photography of microscopic objects. Photomicrographs can be taken with the simplest compound microscope (with some jury-rigging of adapters) or the highestpower electron microscope, which can see the minute hairs on the wings of a fly. Useful to scientists ranging from microbiologists to geologists to forensic scientists, photomicrography is an invaluable part of my work, documenting telltale evidence of features in building materials. As a concrete petrographer, I apply microscopy to the study of concrete and other hydraulic-cement based materials. Whether it is mortar in masonry walls of historic national monuments, the remains of a structure damaged by an earthquake, or the deterioration of a backyard concrete patio after a hard winter, the microstructure of such mundane materials may hold the clues to why seemingly indestructible materials fail. Such analysis is also used in research to find new and better ways to repair and restore our infrastructure, and in court cases to assign culpability for premature or unexpected failure.

Microscopy also provides a view of an unseen world filled with beauty and incredible complexity. It can show the intergrowth of crystals formed in billion-year-old stone formed well before dinosaurs walked on earth; the skeletal remains of an ancient sea micro-organism fossilized in limestone, still showing both form and function; or the play of colors seen when light passes through crystals formed in a drop of chemical solution. Patterns of nature can be observed in a myriad of things both seen and unseen by the human eye. I have had the chance to see such beauty in many ways that others have not, and I have found a little bit of balance in my life as a scientist and artist. The photomicrographs presented here give just a glimpse of the world I see on a daily basis.

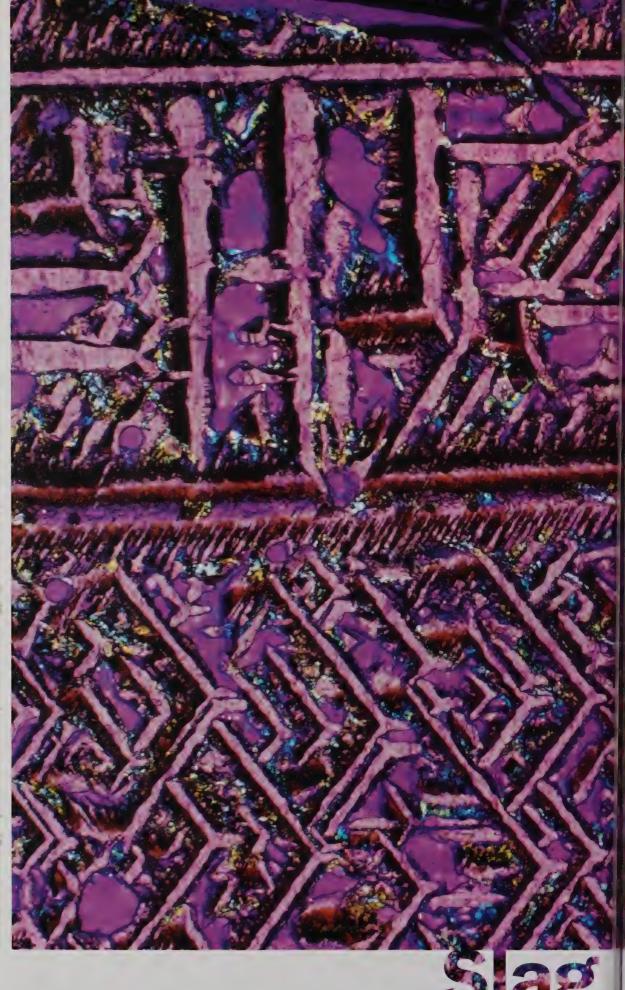
Ron Sturm is a senior microscopist and concrete petrographer at CTLGroup, engineering and construction technology consultants in Skokie, Illinois. His photographs have been widely published and have won several awards in Nikon's annual *Small World* exhibition.

Editor's note: *Small World* will be on display at the Marine Bio Lab, Wood's Hole, Massachusetts from July 25–August 30, 2008 (www.nikonsmallworld.com).





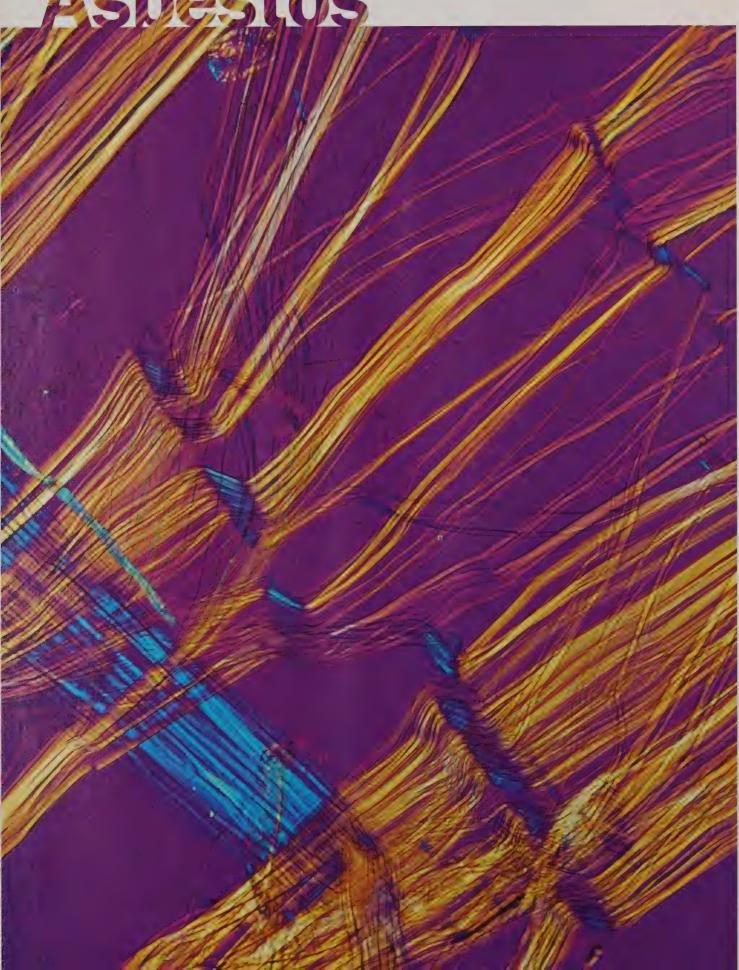




Steel blast furnace slag (recycled waste from steel production used as aggregate in concrete) (field width 3mm), 2002.



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Seth Godin is a bestselling author of business books and a successful entrepreneur. whose 10 books include Unleashing the Ideavirus: Permission Marketing; All Marketers Are Liars; Survival Is Not Enough; and Meatball Sundae. A nationally recognized speaker on marketing and new media, he was the founder of Yoyodyne, a leading interactive directmarketing company acquired by Yahoo! and, more recently, is the founder of Squidoo.com. His popular blog can be found at www.sethgodin.com.

Jeff Stein AIA is the head of the School of Architecture and dean of the Boston Architectural College and is the architecture critic for Banker & Tradesman.





Seth Godin talks with Jeff Stein AIA

Jeff Stein: Your recent book *Small is the New Big* is written rather like a blog, one riff after another revolving around the world of business and new media. In the physical world of architecture, small is indeed the new big, in terms of cost savings and energy savings. In the world of technology, we see it everywhere: the handheld iPhone does what a roomful of computer equipment did 50 years ago. But you're not talking about the physical reality of being small.

Seth Godin: Actually, my point is that thinking small is more important than being small.

Jeff Stein: Which might, for example, have an effect on how people are treated: personal service, the kind of attention that used to be available to customers only if they were dealing with a mom-and-pop small business. But new technology has made it possible for large businesses and institutions to act as if they were small. Is that it? **Seth Godin:** Exactly. Big companies used to search for insulation. Now, the challenge is to search for exposure. Friction. Context. Interaction.

Jeff Stein: In one of your books, you write that in the course of simply doing your job, you inadvertently became a bestselling author of marketing advice for what is euphemistically called "the new economy." How did that happen?

Seth Godin: It wasn't an organized plan as much as it was a decision to refuse to make something that's mediocre. And to avoid going to meetings. I found I could use that freed-up time to engage with people, discover what they were wrestling with, and try to help them think about the world in a different way.

Jeff Stein: How did that outlook come to you? You graduated from Tufts University here in Massachusetts in 1982, with a degree in computer science and philosophy. Then you went to

the other edge of the United States, to Stanford for an MBA. Did those experiences introduce you to this particular way of thinking and of relating to the world?

Seth Godin: I learned two things about myself at both institutions. First, I learned that I am impatient and unable to sit still for long periods of time. Second, I learned that mastering the canon of an established field is not as interesting to me as provoking discussion about a new one. While sitting in advanced physics or engineering classes, learning that there were many miles to go before I could be considered an expert, it struck me that my ability to contribute to those fields was going to be very limited. Some people are quite good at adding that one last little nit to something that's been accepted for a really long time, but I found instead that my skill was in looking at a clean sheet of paper and saying, "Why are we starting here? Why don't we start there?"

Being afraid gets in the way of being remarkable.

there are lots of places to hide. It's easy to look at something Frank Gehry does and criticize it — to say it's not rational or that it won't hold up. There are always lots of ways to argue for the status quo in a field. But it turns out, paradoxically, that the older a field is, the more opportunities there are to stand out by challenging the status quo.

Jeff Stein: There used to be more places to hide than there are now. The profession of architecture is a shrinking one. There are about 101,000 registered architects in the US; and for the last decade or so, that number has been going down by about 3,000 a year. People are dying off or simply leaving the profession for other things. And of the nearly 5,000 graduates of architecture schools around the country, only about 1,200 of them are sitting for the licensing exam. So the profession is shrinking, and right now there's a perfect storm of sorts in the building industry: there's the low value of the dollar, the housing crisis,

The way most people deal with fear is by coloring within the lines, because if you color within the lines, you are beyond criticism.

Seth Godin

Jeff Stein: You're talking now to someone who represents that other end of the spectrum: I'm an architect, someone working within an established canon.

Seth Godin: And architects are the perfect example of my point. If we look at the happiest and, by some measures, the most successful architects, they are not the people who are designing the same buildings they designed six years ago. There is a glut of that sort of architect out there, and they are not rewarded for their efforts or their expertise, because they're a commodity. They are replaceable cogs who are doing the same work that 20 other people could do.

When I talked with Michael Graves a few months ago about his career, it was clear that, from the beginning, he was restless and unsatisfied with the status quo. And that is why he is happy and successful, because he refused to see the field as one where he needed to do what everyone else was doing, and understood that by being the best in the world at what he set out to do, he could command the respect of a larger group.

Jeff Stein: I had a teacher once who said, "If you're not willing to do what it takes to be remarkable, then I can't be of much help to you."

Seth Godin: Right. The thing about established fields is that

inflation, and of course there's the price of oil, which almost overnight has made every building that exists obsolete.

Seth Godin: But there's never been a better time in history to be an architect than right now. It's almost beyond argument. Everything that you just listed is a reason why it's good to be an architect. The opportunity for the struggling architects I know is to realize that the problem is internal, not marketbased. And the internal problem is that you're afraid. Being afraid gets in the way of being remarkable. The way most people deal with fear is by coloring within the lines, because if you color within the lines, you are beyond criticism. I guess the challenge that I propose to someone reading this is, what did you do yesterday for which you could be criticized? If you're not regularly doing work for which you can be criticized, why are you surprised that people aren't seeking you out?

Jeff Stein: In the talks that you give, do you have ways of inciting bravery in your audiences?

Seth Godin: I think that you can't rationalize your way out of fear; you have to emotionalize your way out of it. And the way that people do that is by falling in love with the goal. If you can fall in love with the outcome, if you can see the light, then you will be able to tell yourself a story that will get you

through the tunnel. What I do for a living, because I don't do any consulting, is to try to paint a picture of what it's like on the other side. I try to tell heroic stories of people who have overcome fear, however irrational it might be, and then went on to build something remarkable, whether they're in the sock business or the architecture business or the consulting business. There are examples everywhere.

Jeff Stein: Another of your books, *The Dip*, teaches the reader when to quit and when to stick. In it, you chart the dip on an X-Y axis, where the vertical axis is results and the horizontal axis is efforts. At the beginning of undertaking pretty much anything, results are usually good. Then, after quite a bit of effort, there is a dip where the results diminish. If you can somehow get through this dip, the results are often terrific.

Seth Godin: A great example is becoming a doctor. In order to become a doctor, first you have to be pre-med — you tell your grandmother and she's all excited, so there's positive feedback. Then you have to take organic chemistry. Organic chemistry is the dip. Organic chemistry exists for a reason: to get pre-med students to quit. And that's a good thing, because some pre-med students make it through and end up being doctors. And if you end up being a doctor, you make a good living because doctors are relatively scarce. In fact, the dip is your friend because it creates value. The architecture licensing board is another example of a dip.

Quitting is, unfortunately, underrated. Our culture thinks quitting is a bad thing, that quitting is for chickens, for people who don't have what it takes. But in fact, sometimes the smartest thing you can do is quit before you start. Quit something when you know how big the dip is and before you get stuck in it. Don't even start if you can't make it through that dip. So if your goal is to be an architect who builds the tallest building in the world, there's a pretty big dip you're going to have to get through before you end up there. If you evaluate that quest up front and realize how big the dip really is, you might decide not to go down that road. But the worst thing is to invest all the time, all the energy, to make it halfway, then get stuck in the dip and give up, which is what most people do. Most people do what they think they're supposed to do, which is put in every last bit of effort. Then, when they can't give it enough, they quit. If you can look at your career upfront and say, "I have a choice. I can either chart a path where I can get through the dip and be the Frank Gehry or the Michael Graves that people seek out, or I can quit right now"and then choose one or the other - you'll be fine.

Jeff Stein: You also point out that most of us have been the victims of bad advice, some of it in school. You cite one piece of advice as being particularly bad: that it's really important to be well-rounded.

Seth Godin: When you think about where you go for dinner, or who you decide to marry, or where you decide to work or live, you realize you never pick anything because it's pretty good at lots of things. If you're going out for pizza, you don't care if

the place also makes pretty good eggplant parmesan, because your goal is pizza. And if I'm hiring an architect to design my house, I don't care that she makes a pretty good office building. I want a good house; that's what I want right now.

Jeff Stein: You point out that the list of what's scarce and what adds value has changed pretty radically over the course of this generation. One of the things that's on the list now is time.

Seth Godin: That's right. Spare time. There used to be something called pastimes. You could go to a store to buy stuff to while away the hours. It's inconceivable to us now that we need more stuff to fill our time. What we want is things to save our time. That's a shift. It used to be that energy was cheap and plentiful and you designed a building without even thinking about energy. Now the opposite is true. So if you go down the list of the things that you are doing for people and compare it to the things that are scarce, that people really need, you may discover that you are spending a lot of your time and a lot of your activities solving a problem that your customers don't have. And the people who are winning today are the ones who are embracing the new scarcity and taking advantage of the fact that plenty of other things that used to be scarce are now plentiful. I'll give you a simple example. There's a whole generation of tax accountants who have discovered that they can send those shoeboxes filled with receipts they get from their clients to people in India who, for three dollars an hour, lay them all out in beautiful spreadsheets. So the accountant instead gets to spend time working with clients and doing high-leverage stuff.

Jeff Stein: There's a sense of this in the recent Hollywood writers' strike. The writer Michael Wolff pointed out that what you have now is a population of writers trained to write for a medium that no longer exists.

Seth Godin: That's exactly right. All strikes are unfortunate. This one was doubly unfortunate because it solved the wrong issue. The reason that TV shows used to be 30 minutes long is only because it was important that people be able to remember what time the show was on. You couldn't broadcast the show at 7:54, because people wouldn't remember it. Once you get rid of live broadcast, and everything can be recorded so it's on whenever you want it to be on, there's no reason for shows to be half-an-hour long any more. Suddenly the art of writing a two-minute bit is just as important as the art of writing something that's an hour long. Suddenly it doesn't matter that you have really high production values; now what matters is that it's quick and it's funny and it's free.

Jeff Stein: You point out that there are seven million videos on YouTube that are on average five minutes long and that are watched for an average of 10 seconds.

Seth Godin: Exactly. Business models are changing, and the way people approach problems is changing. I think that architects

need to be honest with themselves and realize that they have an opportunity. Sure, fewer houses are going to get built, but the ones that are going to get built are for people who don't want to live in a house just like every other one that's already been done. If I am trying to build a green house or a waterfront house or whatever, Google enables me to find the best people in the world to do it, no matter where they live. And if they're easy to find and easy to work with, they're much more likely to get my business than if they just went to the right cocktail party. That's not the way things get done anymore.

Jeff Stein: In your latest book, *Meatball Sundae*, you suggest that what many businesses do, and architecture is among these, is make meatballs. Yet, when they look at new marketing opportunities through the Internet and new media, they're in effect putting whipped cream and cherries on top of these meatballs.

Seth Godin: Right. If you're an ordinary architect doing ordinary work for an ordinary client, why do you think a website is going to help you?

Jeff Stein: Well, because you've heard that that's true.

Seth Godin: But in fact, the Web is your enemy. The Web is helping people who are doing extraordinary work for extraordinary clients and charging extraordinary fees if

necessary. The Web rewards the outliers, the edges, the people who are worth talking about, and it punishes the average folks in the middle.

Jeff Stein: So we're not worried so much about brand management any more; as you point out, the next model is tribal management.

Seth Godin: That's exactly it. If you don't have a tribe of people who adore you and follow you and are interested in what you're doing, then I suggest you go find one.

Jeff Stein: What the Internet has fostered is that sort of social network. It's the relationships between people and objects, rather than the objects themselves, that are important now.

Seth Godin: Exactly. And architecture as an edifice, as a souvenir, as a process, can be right in the center of that, creating spaces that connect people as opposed to spaces that isolate.

Jeff Stein: In all your work, you push for change — in favor of success, authenticity, the remarkable. "I dare you," you say in *Small is the New Big*, "to read any 10 of these essays and still be comfortable settling for what you've got."

Seth Godin: Architects who settle are unhappy architects.



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| Periodical Roundup

Covering the Issues

BY GRETCHEN SCHNEIDER, ASSOC. AIA

Design Business... Harvard Business **Review** offers a couple of articles that may help to enhance your bottom line. In "Design Thinking" (June 2008), Ideo chief Tim Brown explains the team-based iterative process that designers typically employ and suggests ways for designers to involve clients and users along the way. Venturing into less familiar territory, Harvard Business School professor Frances X. Frei explains "Four Things a Service Business Must Get Right" (April 2008). Working from the premise that service businesses (such as architecture) differ from product-based companies, Frei argues that different tools are needed. Success depends, for example, on finding creative ways to fund time-intensive research, hiring for aptitude and attitude, effectively managing clients, and even deciding which services not to do wellsometimes excelling in one area means not competing in another, such as price. At first glance, the specific examples of Progressive Insurance or Cleveland Clinic may seem to belong to a different world, but listen to Frei's larger message and let the ideas percolate. You may see your business in a new light.

Good medicine... Most medical clinics, doctors' offices, and hospital rooms feel "like a Hyatt [hotel] from the early '80s" laments Virginia Postrel in The Atlantic Monthly (April 2008). In "The Art of Healing," Postrel points out that good medicine doesn't need to come with bad design. Even though the big bucks fund the high-tech equipment and salaries for first-rate medical talent, paying attention to relatively low-cost, small-scale design elements such as materials or room orientation can have enormous influence on the quality of patient care and rate of recovery, too. Postrel cites the 2006 AIA "guidelines" that call for single rooms, for example, as a positive step. The evidence is out there. Patients with views of trees or in rooms with natural light suffer less anxiety, request less pain medication, and enjoy shorter hospital stays. And then there's also the Starbucks effect, which shouldn't go unnoticed in competitive medical markets: add better interior design to excellent service and more customers will come.

Forget green. Go orange... If you, too, are growing weary of all the green-washing out there, skip those colored covers and turn to *Wired*'s fluorescent orange one instead (June 2008). "Screw Organic. Go Nuclear. Live Urban. Crank the A/C." write the editors, in their cover story on "Inconvenient Truths" about climate change. All that really matters is dramatically reducing our carbon footprint. You may not agree with every directive here — Alex Steffen certainly doesn't in his companion piece, "It's Not Just the Carbon, Stupid"-though they'll definitely get you thinking. For instance, is it really better to heat (as we New Englanders do) from zero degrees to 70, than to cool (as those in Phoenix do) from 110? After all, they only have 40 degrees to change...

Designing minds... Seed takes a very different tack as it, too, explores relationships between design and science in its Design Issue (March/April 2008). Coinciding with the "Design and the Elastic Mind" exhibition at the Museum of Modern Art, the issue springs from discussions among scientists, architects, curators, and designers at MoMA as they developed the show over an 18-month period. Features include a conversation between curator Paola Antonelli and mathematician Benoit Mandelbrot, while a series of short spots highlight innovative thinking, forms, and products that come from science/architecture collaborations.



Dubai, Dubai, Dubai... If you (like me) are one of the few Boston designers not working in Dubai right now, and even more importantly, if you are, check out Joe Saddi, Karim Sabbagh, and Richard Shediac's cover story on the new "Oasis Economies" in Strategy+Business (Spring 2008). Our news headlines, with their focus on political tensions, largely ignore the extraordinary economic shift and subsequent physical transformation underway in the Middle East. As Dubai's manmade Palm Islands rise from the sea and Abu Dhabi plans for \$200 billion in construction over the next decade, the authors ask: "Is this a fertile, sustainable oasis --- or the deceitful promise of a mirage?" As they explain, they clearly believe that the Middle East's transformation is real, stable, exciting, and very much here to stay.

Gretchen Schneider, Assoc. AIA, is the principal of Schneider Studio in Boston.

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MORE THOUGHTS ON SMALL



THE ART OF SMALL THINGS By John Mack Harvard University Press, 2008

John Mack's inviting new publication,

The Art of Small Things, explores the allure and meaning of diminutive objects. This "extended ethnographic essay" follows Mack's 2003 publication, The Museum of the Mind: Art and Memory in World Cultures, and, like that earlier publication, is globally expansive.

Currently professor of World Art Studies at the University of East Anglia, Mack was formerly a curator at the British Museum. He wears his vast knowledge casually, moving easily from European miniature paintings, to architectural models, Egyptian amulets, microscopic books, South African divining bowls, medieval maps, Roman gems, and Asante fertility dolls. More cautious scholars might have been reluctant to incorporate such diversity in one short volume.

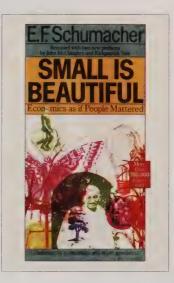
Mack notes that we measure the world through our own bodies — early measurements were intimately tied to the human form, a "foot" perhaps being the only term still in common usage. He argues that the miniature is compelling both for its relationship to the scale of the body and for the perceived skill inherent in its manufacture. But size and technical prowess alone cannot account for the power accorded diminutive objects across many cultures. Mack suggests that "small is beautiful" because these works function as microcosms of the world. Microcosms embody the essence of the larger worlds they represent and consequently, they are proportionally more potent.

Small works are often perceived to have spiritual and talismanic qualities. Reliquaries were necessary to consecrate early Christian churches. Mack also poignantly illustrates a 10th-century silver medallion struck to commemorate the re-establishment of order in the city of Baghdad. Often designed to be carried on the body or held in the palm of one's hand, small works of art are also inherently intimate. Queen Elizabeth I, when discovering a concealed portrait of Cecil, one of her own favorites, around the neck of a lady at court, snatched it to wear upon her shoe. By publically exposing this private token, the queen appropriated and negated its power.

The Art of Small Things is profusely illustrated with objects from the British Museum's collections. Each image is annotated and, collectively, the illustrations form a secondary essay in tandem with the main text. However, Mack spends considerable time writing on objects that are not in the British Museum's collection and are therefore not illustrated. Some of them — Joseph Cornell's box constructions — can be conjured in the mind's eye with ease, but other more obscure examples are harder to recall. This divergence between illustration and text can be disconcerting at times, but it also encourages multiple and nonlinear readings.

Although not a miniature book itself, the volume is small — slim and slight, it fit neatly into my bag and I carried it around with me for a week, savoring each chapter as a delicious morsel.

Karina H. Corrigan is the associate curator of Asian Export Art at the Peabody Essex Museum in Salem, Massachusetts.



SMALL IS BEAUTIFUL: ECONOMICS AS IF PEOPLE MATTERED By E.F. Schumacher Harper Perennial, 1973

One of the most influential books of the past century, *Small Is Beautiful* is simultaneously a manifesto and a mentality. Even those who have never heard of E.F. Schumacher or his little book recognize in his title an argument in favor of elegance over the tacit veneration of bigger-fastermore-more-more. Its 1973 publication thrust a counterculture mindset into a mainstream debate over what costs we as a society should and should not be willing to pay in the Faustian commitment to "growth at all costs" — a debate that has since heated up along with global temperatures.

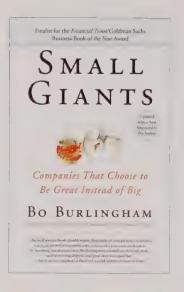
Schumacher offers an empowering language for the point-blank critique of the continuous and limitless material exploitation of a finite world that still passes for business as usual. These are not simply shortcomings in our technical and social systems, but a metaphysical crisis. In place of the dehumanization of work in servitude to per-capita gross domestic product, Schumacher calls for a humanization of productive relationships in support of a higher quality of life. Transcending any blanket condemnation of capitalism or socialism, Schumacher's ideas gained currency across the political and social spectrum from the *Harvard Business Review* to *The Whole Earth Catalog* by identifying scale itself as a key factor in the success or failure of systems. New technologies will continue to require us to revise what we consider "small," but the essential considerations of human scale identified by Schumacher show no signs of change.

Schumacher's controversial statements on the inevitability of energy scarcity proved prescient on the eve of the 1970s oil crisis. Moving beyond simply identifying the "logical absurdities" embedded in our systems, Schumacher provided some of the first examples of pragmatic measures intended to displace self-destructive global behaviors with local cultures of stewardship. He pioneered the notion of "intermediate" or "appropriate" technology paving the way for everything from solar ovens and mosquito-net programs to hundred-dollar laptops and microfinance.

One wonders what Schumacher, who died during a lecture tour in 1977, would have added to his already prodigious

insights on our present condition. The most significant contributors to a new metaphysics of sustainability have explicitly built on the Schumacher legacy. Notably, Schumacher's "natural capital" is the basis of Paul Hawken's book Natural Capitalism. Had Schumacher survived, he would no doubt find resonance in the novel ways in which critical thinkers such as Ulrich Beck have used the characteristics of "reflexivity" to identify self-regulating biological, technological, economic, and social systems, the key attribute of what some have postulated as a potential "second modernity." The beauty of smallness derives from the elegance of this reflexive self-regulation. For demonstrating what it might look like to respond to the metaphysical crisis of modernity, Schumacher has earned the mantle of "godfather of sustainability."

Robert Cowherd, PhD, Assoc. AIA, is associate professor of architecture at Wentworth Institute of Technology in Boston.



SMALL GIANTS: COMPANIES THAT CHOOSE TO BE GREAT INSTEAD OF BIG By Bo Burlingham Portfolio, 2005 (hardcover); Penguin, 2007 (paperback)

In today's highly competitive business environment, the conventional wisdom is that bigger is always better. Indeed, size is often synonymous with success,



whether measured by the number of widgets produced, people employed, or profits generated. Yet we all know that bigness does not necessarily equal greatness, and there is a sneaking suspicion that size and quality may actually be incompatible in some fundamental way. Ironically, some really great companies have failed because of their success - too much growth too fast can indeed be fatal. Yet the pressure to expand is inexorable, and it comes from many sources, including customers, suppliers, employees, and stockholders, all of whom have a vested interest in growth for growth's sake.

Small Giants, by Bo Burlingham, tells the stories of several companies that have survived and prospered by taking exactly the opposite tack — by deliberately staying small and focusing on their niche markets. Each is highly successful in its own right, boasting loyal customers, dedicated staff, and sustained profitability. Some of these companies deal in products, others in services. All are unique, but they do have something in common ---dubbed mojo by Burlingham ---- that makes them outstanding performers in their chosen fields. The founders tend to be people of great imagination and vision, with enormous energy and personal commitment to the business, who can motivate others to achieve a common goal. They excel at creating a special bond among their customers, suppliers, and staff, based on a strong shared value system that drives the enterprise. Not surprisingly, words like "passion," "intimacy," and "trust" are used liberally throughout the book. Burlingham clearly believes that business is something of an art, with spiritual as well as economic aspects.

These "small giants" are transformative in nature; they have re-conceptualized their markets and in some cases redefined whole industries. And while profitability is essential, money is not all that matters. Extraordinary customer service is key, as is "soul." They are deeply rooted in their communities (a quality Burlingham calls *terroir*), with an impact that transcends the bottom line:

Businesses are the building blocks, not just of an economy but of a whole way of life. What they do and how they do it have an impact that extends far beyond the economic sphere. They shape the communities we live in and the values we live by and the quality of the lives we lead. If businesses don't hold themselves to a high standard, the entire society suffers.

Small Giants is an enjoyable read, though a bit repetitive in spots. By telling the personal stories of the founders of these enterprises, Burlingham draws the reader right into the action; it's an effective way to get the point across. Those who believe that small is beautiful will find much comfort in Burlingham's thesis.

Scott Simpson FAIA, LEED AP is managing director of KlingStubbins in Cambridge, Massachusetts.



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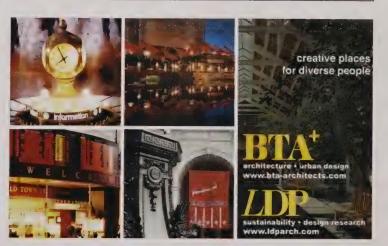


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The Kitchen Cupboard

v Photo illustration by Mary Ross.

Every evening our teenage daughter, Becky, sets the table — that is, if we've remembered to leave the clean dishes in the dishwasher. If they're in the cupboard, she won't be able to reach them.

When the phone rings, she steps up onto a stool so she can grab the receiver. If she needs something from the freezer, she moves her stool over to the refrigerator. And at breakfast time, she knows where she'll be able to find the boxes of cereal: on the floor.

She can barely reach the sink, either at home or at school. She navigates stairs as though they were boulders from Stonehenge. When she starts to drive, she'll need pedal-extenders so she can manipulate the gas and the brake.

Becky was born with achondroplasia, the most common form of dwarfism, and these are just a few of the obstacles with which she must contend. At four feet, she's as tall as she's ever going to get.

Legally speaking, she has a disability, and we have the handicapped-parking placard to prove it. But dwarfism doesn't look like a disability in the ordinary sense. People with dwarfism can experience more than their share of orthopedic woes, but many do not. Becky is healthy in every way. Her arms and legs, though disproportionately short, work just fine. She walks, she swims. She enjoys life just like any 15-year-old.

Thus dwarfism is primarily a socially constructed disability — a disability arising from the fact that much of the built environment was designed for people between five and six feet tall. Think of it this way: If a little person gets stuck in the elevator because he can't reach the buttons, then he has a disability. But if the buttons are low enough for him to reach, then he doesn't.

One night nearly six years ago, I was sharing a late dinner at a restaurant in suburban Baltimore with Dror Paley, a surgeon who performs a procedure known



as extended limb-lengthening, or ELL. I'd spent the day making the rounds with him at Sinai Hospital, meeting kids and their parents, and observing some rather gruesome-looking practices. ELL involves breaking the bones of the arms and legs and stretching them with metal frames that are inserted into the limbs. You can gain a foot or more in height, but complications admittedly rare in the hands of a gifted surgeon like Paley — can include infection, nerve damage, even death.

Paley pointed to a corner of the restaurant near the door. "That coat hanger right there is almost inaccessible to most dwarfs," he said. "But who designed it to be that way? If we were all three feet tall, it wouldn't be that high, would it? The position of that handle on the door is not designed for a dwarf. It will hit him in the forehead. So he has to reach up here" — he gestured with his hand — "to hold that handle. The door knob, the light switches — it's a fact of life."

Paley's philosophy — that people with dwarfism should be able to choose surgery in order to fit into that built environment — is not wrong. But it's wrong for Becky, who wants nothing to do with surgery, and is improvising her own methods of navigating a world made for what must seem to her like giants. And if it's wrong for Becky, then it's wrong for us.

In recent years, disability-rights activists have succeeded in lowering ATMs, gas pumps, and the like, benefiting not just people with dwarfism but wheelchair-users and others. Still, it's unreasonable to expect that society will lower all of its barriers when we haven't even been able to remove them from our home.

But Becky is not someone who is broken and must be fixed. There's value to difference. Respecting and accommodating that difference, ultimately, will lead us all to a much better place.

Dan Kennedy is an assistant professor of journalism at Northeastern University. His critically acclaimed book, *Little People: A Father Reflects on His Daughter's Dwarfism* — and What It Means to Be Different, is now available in a free online edition at www.littlepeoplethebook.com.

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Cover image: adapted from "Angle Movements of Body Components" illustration, *The Measure of Man & Woman*. Original illustration courtesy Henry Dreyfuss Associates (5 Research Drive, Ann Arbor, Michigan).

This page: Equal Measure measuring cup. Concept by Harry White Design. Produced by Fred & Friends (courtesy photo).

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From the Editor

It Figures

n the last few months, with gas prices hovering around \$4 a gallon, a lot of people have done a simple calculation. They've figured out what it costs to drive one mile. Suddenly, in addition to their daily commutes, they look at everyday car use in a different way: driving to the mall, to daycare, to the grocery store has a price tag. And, logically, they are limiting or combining some of those trips.

The familiar EPA miles-per-gallon statistics — a slightly different way at looking at fuel consumption — offer a terrific way to compare vehicles, but have little effect on consumer behavior. Not only are mpg ratings somewhat more abstract, but they also have a built-in bias: they assume that those miles will be driven. Introducing a different measure — cost per mile — more directly influences a key aspect of energy policy: consumer control of usage.

The questions of how, what, and why we measure have profound influence on how we make decisions and, consequently, on our ability to address some of the most pressing problems of our time. Public attitudes and policies and ultimately laws, codes, and regulations — are often shaped by numbers.

And yet we live with a postmodern suspicion of numbers and measures and with the knowledge that the phrase "hard data" is often an oxymoron, that data are often shockingly fluid. Increasingly, we understand the subjectivity of how we measure: An election year reminds us that polls and survey questions can contain bias and assumptions. Local debates about public education focus on the usefulness of MCAS (Massachusetts Comprehensive Assessment System) scores as a measure of quality, with the accusation that schools "teach to the test." The venerable College Board SAT exams have faced charges of class-based and ethnic bias. Similarly, new information and research constantly challenge the what and why of measurement: Concerned by obesity rates and an increase in the pre-diabetes condition known as metabolic syndrome, the Japanese government recently mandated annual waistline measurements to ensure that adults between the ages of 40 and 74 comply with national standards derived from guidelines from the International Diabetes Federation.

Perhaps no one is more aware of the value of good measurement and the dilemma of how, what, and why to measure than the design professionals and consumers who are committed to sustainability and green design. As Alex Wilson and Jeff Stein AIA discuss in this issue (see page 42), competing rating systems confuse as much as they illuminate. New thinking suggests the value of different kinds of measures. And in the meantime, skepticism grows when certification standards defy common sense — as when bloated McMansions claim to be green.

Architect Mark Bartos, commenting on Martin John Brown's story "Debunking the Green Building Myth" on *AlterNet.org*, notes that "the most green thing that someone can do is to live in a house that already exists and that is sized properly to the family." He is right, but we have no means of measuring and rewarding the choice *not* to build. Bartos proposes that rating systems include a square-foot-peroccupant limitation before buildings can qualify for green

We live with a postmodern suspicion of numbers and measures and with the knowledge that the phrase "hard data" is often an oxymoron, that data are often shockingly fluid.

certification. Even more intriguing, because it more directly measures desired outcomes, is the suggestion that houses be rated on the basis of energy-use per occupant — both yearly energy use and the building's embodied energy (the energy used to build it). The appeal of this measure is that it aligns with our experience of the world: the frugal family living in a large older wood-framed house without significant appliances probably has a smaller carbon footprint than the family who builds a smaller concrete-and-steel, air-conditioned house filled with appliances and electronics.

We embrace measures because of their presumed objectivity. But behind the science of measurement lies a good deal of art — the instinct to challenge assumptions and the creativity to invent yardsticks that will tell us what we really need to know.

Elizabeth S. Padjen FAIA Editor

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Letters Letters Letters

We enjoyed the exploration of perceptions and ideas about "small" in your July/ August 2008 issue, and we were pleased to see attention to the small person in Dan Kennedy's essay "The Kitchen Cupboard," reflecting on the experience of design for his daughter Becky.

But Becky's challenges in the family home mystified us. Cereal boxes on the floor? A stool to get to the phone or the freezer? In her own home? The design changes that would eliminate those barriers for Becky are not complicated. Move the cereal. Shift the phone jack lower. Consider a side-by-side refrigerator that everyone can access more comfortably.

We will never achieve perfect usability for everyone everywhere through legal requirements or even best practice in inclusive design. We can find a reasonable balance that anticipates a wide range of human diversity. It is fine to acknowledge that there will always be some gaps to bridge. We can aspire to make those gaps infrequent and small in the places that many people use. But at home? There we should be able to eliminate the disabling aspects of design.

Marie Trottier President (and a small person with achondroplasia) Valerie Fletcher Executive Director Adaptive Environments Center/ The Institute for Human Centered Design Boston

When Crystal Carrington on the '80s TV show Dynasty picks up a then state-of-theart cellphone that has the size and grace of a World War II walkie-talkie, we crack up. When Will Farrell, as a cooler-than-thou fashion dolt in a Saturday Night Live skit picks up a cellphone the size of an afterdinner mint, it kills us. Our reactions to the actual size of anything are not objective they are exquisitely subjective.

The last decade saw housing consumers terrified that unless there was enough space around their lifestyles, they would be forever "pinched." Houses in America grew like Topsy during that time — and now heating and cooling costs, real estate taxes, and a few years of normal homeowners' maintenance woes have opened the eyes of all those who bought a pre-bust bloat house to the reality that what was "right" is now "massive."

When I wrote *The Small House* for McGraw-Hill in 1985, I "scooped" my friend Sarah Susanka by about a decade. While that book sold very well for what it was, its tiny fraction of sales in relationship to Sarah's *Not So Big*... juggernaut underscored not only my obvious deficiencies as a writer, but the fact that the word "right" not only applies to house size, but also to timing. Although I had just built myself an 1,100-square-foot, one-bedroom, onebath house, the idea for the book was from a gifted editor at McGraw-Hill, not some forward-looking young architect.

As the New Age religion of Green sweeps the country, imposing upon us a checklist of moral judgments, the positive karma of "small," or the negative aura of the "McMansion" should best be seen in the light of their context: houses are not so much "big" or "small" as they "fit" or don't.

> *Duo Dickinson AIA* Madison, Connecticut

I relished the theme of your "Small" issue. I appreciated the effort to reconcile ecomorality with scale through the justification of creativity (small is beautiful, practical, clever, innovative) and you made an interesting bridge to the creative with the feature "Solo." I loved Deborah Weisgall's exploration of this idea of working alone and its rewards. Although I would disagree with her that all creativity and "work involving the mind depends on inventing something from nothing," I agree that it depends on "blank time and space for an idea—a concept, a vision— to coalesce."

In my psychotherapy practice, I have been more aware than ever lately that without solitude for reflection, a depth of awareness and perception is entirely missed. Thought — like full vision, hearing, and comprehension — requires multiple levels of personal attention. Distillation is the slower process to get to the essence of things. We are thrilled by flashes of brilliant insight and connection, but without the counterpart of extended contemplation and exploration, integration tends not to occur as fully, thereby foreclosing maximum creativity.

The common desire of the artists Deborah spoke with and of the people with whom I work is, as she says, "to maintain a consistency and thoroughness of thought and inquiry and an intensity that cannot be diluted." I like the way she put that. It is also the essence of worthwhile psychotherapy and the true pleasure and ideal of psychoanalysis. As with creativity, it is precarious to sustain.

Oscillation between the control and contentment possible in the realm of privacy and intimacy and the excitement and stimulation derived from exposure and risk is a poetic balancing act. It may be "small," but it seems convincingly essential.

> *Kyra Montagu* Brookline, Massachusetts

Thank you for drawing attention to design's contribution to the economy ["Design and the Reinvented City," May/ June 2008]. Massachusetts College of Art and Design was founded by 19th-century industrialists who realized that their business success depended on the availability of a local workforce of skilled designers. As the only publicly funded independent art college in the nation, MassArt is committed not only to educating young designers, but also to retaining them and their skills within the Commonwealth. Our students work with local companies on real-life design challenges and, in the process, educate local employers about the value that design can add to their products and companies.

With the recent appointment of a statewide Creative Economy Director and the passage of House legislation authorizing a Creative Economy Council, the time is right to promote design as a leading industry in Massachusetts. We all have a part to play: young people need to be introduced at an early age to design education and careers; companies can make greater use of the wealth of local design talent and skills; and the public sector can integrate high-quality design into everything from schools and bridges to branding and marketing materials.

Through our "Designing an Industry" initiative, MassArt is working to advance all aspects of the design industry in Massachusetts. I believe that the opportunities are boundless. As a designer at one of our recent programs said, "Design isn't just an industry — it's a way of thinking."

Kay Sloan President Massachusetts College of Art and Design Boston

The discussion of the creative economy

by your distinguished roundtable participants in "Design and the Reinvented City" was most informative.

Your readers might be interested in learning about the Creative Economy Initiative on the North Shore. The first statewide conference on the creative economysponsored by The Salem Partnership, the Enterprise Center at Salem State College, the Massachusetts Technology Collaborative, and the Massachusetts Cultural Council — was held in Salem in May 2006. An action plan was the outcome of the conference, and the state legislature is using its recommendations to create a Creative Economy Council. This will be the first statewide initiative and is an important step for the Commonwealth.

In April 2008, a North Shore Creative Economy Market Analysis was commissioned (available at www.salempartnership. org or www.enterprisectr.org). Design businesses are ranked first among creativeeconomy enterprises on the North Shore, representing almost 18 percent of all creative-economy establishments; architecture, considered a separate industry, was sixth, with almost 7 percent. Together, design and architecture represent close to 25 percent of the creative-economy establishments on the North Shore.

Other key findings were that over 2,200 creative-economy enterprises are located on the North Shore, employing close to 20,000 people. The creative economy

represents close to 12 percent of the North Shore's total private sector employment. And finally, the North Shore creativeeconomy enterprises conservatively contribute over \$3 billion in annual sales.

This state-funded report is a major breakthrough as it provides the information and the strategies needed to grow this economic sector on the North Shore. Furthermore, it is the intent of the stakeholders throughout the region to use the report's action plan as the prototype for the Commonwealth.

> Patricia H. Zaido **Executive Director** The Salem Partnership Salem, Massachusetts

As editor Elizabeth Padjen noted in the November/December 2007 "Clients" issue, "It's (not) all about you" - nor is it always about architecture.

I loved seeing ArchitectureBoston begin to expand readers' thinking about clients and stakeholders --- who are they and how they weigh in. Shepherding groups through an animated dialogue and disparate opinions can be the most rewarding and productive phase of any project, if done well.

Serving as midwife to the client's truth and vision can reveal a broad spectrum of possibilities. Giving voice to those who are often unheard and helping to define the client's objectives without a myopic rush into "architecture or building" as the only solution, or only objective, is where the true creative process can flourish.

The measure of success will be valued most by those who have helped enrich and advance the process and are witness to many new outcomes and interdependent relationships as a result.

> John M. Rossi, Assoc. AIA John Rossi Company Medford, Massachusetts

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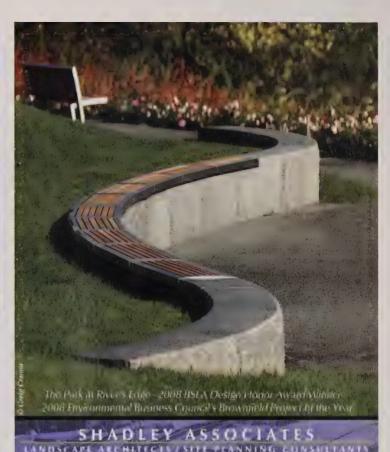
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Left: Savoy vase. Alvar Aalto, ca. 1936. Photo by John White. Right: Teakettle and stand. Joseph Richardson, Sr., 1745–55. Photo courtesy Yale University Art Gallery, Mabel Brady Garvan Collection.

Rococo: The Continuing Curve, 1730–2008

Cooper-Hewitt, National Design Museum, New York City March 7–July 6, 2008

"Rococo design — exuberant, opulent, theatrical and sensuous..." begins the notes provided for *Rococo: The Continuing Curve*. If voluptuous liveliness, often expressed through whimsical asymmetry, was the essence of Rococo, the objects from its first flowering (roughly 1730– 1780) succeed admirably. A Meissonnier tureen, a French console table, ironwork commissioned by Stanislaus for Nancy, a Ballin candelabrum, an Italian writing desk are triumphs.

Rococo fell out of favor during the Neoclassical revival and the birth of the Empire style, only to experience a renaissance in the 19th century in England, the United States, and France. Through the Arts and Crafts movement, it contributed to the development of Jugendstil/ Art Nouveau, which shares a vocabulary of organic, sinuous, enfolding forms with Rococo, but also represents an evolution in expression and meaning.

The exhibition includes pieces from the last 50 years, striking for what nearly all of

them lack: the spirit that defined Rococo. Works by Cindy Sherman and Jeff Koons are statements, not celebrations. The furniture is an uneven mix, and a sconce by Dale Chihuly may appear organic, but in a biological sense of spermatozoa swarming.

The exception might be four concert posters from the psychedelic era by Wes Wilson and others. Had the exhibition organizers been interested in the evolution of styles, there might have been an interesting progression from Rococo to Art Nouveau to the psychedelic era. However, the modern pieces end up confusing the intention of the exhibition. Most of them either imitate Rococo forms directly or are so tenuously linked to Rococo that one begins to tire of justifying their presence. As the attentive visitor learns, Rococo was more than an "s" curve.

Dominic Barth, a former journalist and book editor, is a graduate student at Columbia University School of Architecture, Planning, and Preservation.

Parti Wall, Hanging Green

90 Wareham Street, Boston May 16–July 8, 2008

On a brick wall in Boston's South End hangs "Parti Wall, Hanging Green." This temporary installation --- like a green roof that's been cut up to hang on its side ---is promoted as an experiment into the viability of such vertical gardens in Boston. Artists and architects have proved that vertical gardens can thrive in Europe; can they do so in our environmental, economic, and cultural climate, too? "Why not?" asks the Young Architects Boston Group, the name given to the team of 10 young design firms that created this work ---- which served as a focal point for one of the AIA National Convention's liveliest parties. Nearly two months after the convention left town and several weeks after it was slated to come down, "Parti Wall, Hanging Green" is still both hanging and green. Let's hope this serves as a catalyst for more --- more vertical gardens, more collaborations, more visibility for young firms, more innovative public art. (For more information: www.pinkcomma.com and www.yaboston.org.)

Gretchen Schneider, Assoc. AIA, is the principal of Schneider Studio in Boston.

v Photo courtesy Young Architects Boston Group.



CITIES & CLIMATE CHANGE SYMPOSIUM

Symposium II: June 9, 2008

The concluding session of this two-part symposium on climate change took place on an auspiciously hot and muggy day. Sponsored by the BSA and MIT, the program examined the role that cities play in the complex problem of climate change, with a goal of formulating a design and policy agenda for the Boston region. Symposium II, entitled *Energy and Mobility in the Green City*, focused on transportation impacts and possibilities.

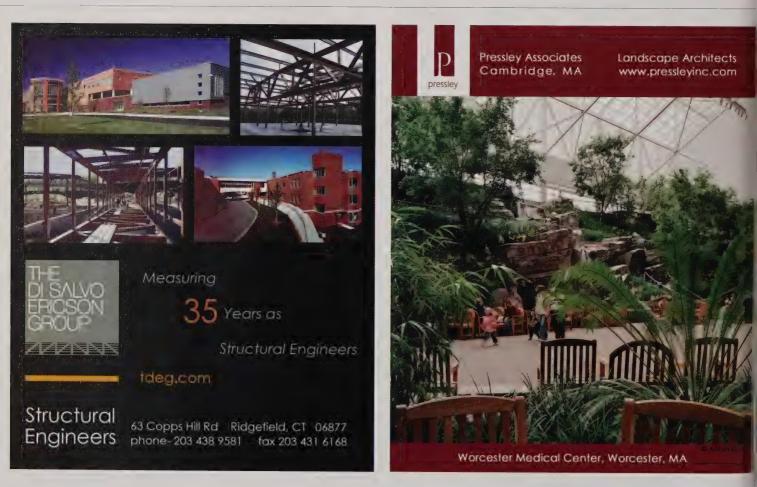
Symposium II began in a cautiously optimistic tone, as representatives of cities including New York, Chicago, Winnipeg, Toronto, and London shared best practices that are making measurable differences. Keynote speaker Nicky Gavron, former deputy mayor of London, described recent measures implemented in London as examples of what is possible. Aggressive policies under a Labour mayor, notably including "congestion pricing," which levies a charge on all vehicles entering central London, have cut carbon emissions significantly in the past six years. Initial public resistance has melted away; she noted that there are "pin-stripe suits on buses now." Noting the staggering rate of urbanization in the world — two-thirds of the planet's population will reside in cities by 2050 — she emphasized that urban sustainability can enhance quality of life and improve regional economies, too.

The economic value of sustainable urban development was a common theme. Several speakers urged a focus on economic benefits rather than moral or aesthetic ones to combat NIMBYism and "green fatigue" and to convince political leadership. The president of corporate sponsor Holcim noted that business interests are beating the sustainability drum, waiting for political leadership to fall in step. He argued that businesses want clarity, and regulation can help.

Another theme: technological advances are very promising but political will and human behavioral patterns lag behind. Cleaner, more efficient modes of transportation, such as plug in-hybrids, are available today; folding electric cars promise cleaner alternatives; hydrogen fuel cells are viable in buses and automobiles; and existing low-tech technologies like "work bikes" for short-distance/light-duty hauling can dramatically reduce energy consumption.

What happens next? Co-organizer (and former BSA president) Hubert Murray AIA, RIBA says the proceedings will be published and welcomes suggestions for next steps. Reaching the goal of transforming Boston into a leader in urban sustainability may ultimately be a test more of our civic leadership than of sustainability.

Tom Parks AIA is an architect in Boston and director of the Distance Master of Architecture program at the Boston Architectural College.



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by JOAN WICKERSHAM I The Lurker

Honey, I Hate It

The place: The IKEA store in Stoughton, Massachusetts. No matter what preconception you have of how big it is, it's bigger. Its address is One Ikea Way; its phone number is 344-IKEA; it flies its own flags out front. It is not so much a retail store as it is a small, pleasant independent republic — one with humane social services, nicely designed recreational facilities, and a government founded on the principle that people like to buy stuff.

10:01 Two parents with a baby and a toddler cast a wistful glance at Småland, the daycare center located just inside the store entrance. Småland's admission criteria — which these kids clearly don't meet — are spelled out on signs: "ALL CHILDREN BETWEEN 37" AND 54" ARE WELCOME TO PLAY HERE!" and "ONLY POTTY TRAINED CHILDREN ADMITTED TO SMÅLAND."

10:04 Three women stand at the top of the escalator, puzzling over a store map and talking past one another. "We take a left and then we go down this way — "

"But what floor are we on?"

"Is the floor we came in on the ground floor?"

"So are we on two?"

"Because I want to go downstairs, eventually."

The map resembles a board game (the game of "Life," actually), with a circulation path curving back and forth within a square labyrinth. Despite a few shortcuts indicated on the floor plan, you have to journey past pretty much everything in the store in order to find your way out again.

10:10 A couple in their 30s walk into a living-room vignette where a TV is playing an IKEA informational video in Spanish. The bookshelf is full of books in Swedish. It's cozy and small, and there's a price tag on everything. The man sits on a white couch, and the woman lies down,

puts her feet in his lap, and says, "What do you think?"

10:11 The video is now offering helpful shopping hints in English. *Browse all you want. Try things out. Enjoy shopping on your own. No pressure.*

The woman's cell phone rings. She answers it and talks on the phone for a while, holding the man's hand and occasionally kissing it.

10:17 Having finished her phone call and checked her messages, the woman takes her feet off the man's lap and stands up. They begin looking at the couch more critically, pulling off the cushions and peering at the construction. The man checks the price tag. "Three-ninety-nine."

"That's a steal," the woman says. "But we don't want white." She plucks a literature sheet from the display on the coffee table. "Oh, look, sweetie, it comes in other colors."

The video continues to play, with its soothing soundtrack: *It's OK to change your mind*.

10:20 In the living-room vignette across the way, another couple has settled on a couch, the woman drinking coffee and the man typing with his thumbs on a BlackBerry.

10:27 In a section devoted to chairs and couches, a woman and her pre-teen



A Photo by Joan Wickersham.

daughter are looking at cushion covers.

"These are kind of nice," the mother says. "They're boring," the daughter says coldly, walking away.

The mother looks after her. "They have to be interesting?"

10:30 "I have a business and I'd be ordering a large number of these loveseats," a woman tells a store employee. "Is there a discount if you buy over a certain amount?"

"No," the salesperson says, polite but unapologetic.

10:32 A large vignette, with "WELCOME TO MY HOME" lettered above the opening. Inside is a compressed simulacrum of a whole house: living room, kitchen with dining area, bathroom, and bedroom, including a baby's crib and changing table. Again, everything has a price tag, from the furniture and appliances to the towels in the bathroom and the hooks they hang from. A woman slumps on a leather sofa. "What do you think of the seat, hon?"

"Too long. Slippery," her husband answers.

Posted on the wall is a small sign specifying the paint color and the floor tiles.

Wandering shoppers peer around in a way that is at once dazed and frantic, like children beginning an Easter-egg hunt.

10:44 Downstairs in housewares a woman pushing a cart that contains a rubber cutting mat, some wooden hangers, and a small desk lamp pauses and asks her husband: "You want dish towels?"

"No, I don't want dish towels."

10:47 Two men with two small children are making their way through the kitchen section. "Eli, did I say you could push the cart in here?"

"No," the little boy says.

"Then don't push the cart, OK? We'll be out of the breakables section pretty soon, OK?"

Stopping in front of a display, the other man asks, "Can you think of any good reason why we'd need a rolling storage box?"

11:10 In bedding, a mother with a teenage son is holding a packaged sheet and reading the label. "One Twin Top

Sheet.' Is that what we're assuming these beds are going to be? Regular twin? Or do we need 'Long'?"

"I don't know what a top sheet is," the boy says.

11:16 An announcement over the store's PA system: "Carts are available at the foot of the stairs. Grab one there ... because you are going to need it."

11:27 A man and woman fingering small bathroom rugs. "I'd rather just have carpet," he says.

"Carpet? What do you mean, carpet?" He thinks, then says: "I don't know. I

guess, just, carpet." "In a *bathroom*?"

He's apparently made some sort of gaffe, but doesn't understand what it is. Valiantly, uncertainly, he sticks to his guns. "Yeah."

She shrugs. "Then *you* find it. *You* pick it out."

She walks away. He lingers, not sure whether he's won or lost.

11:38 The aisles are more crowded now. Wandering shoppers, carrying big empty yellow bags from bins labeled "BORROW A BIG YELLOW BAG" peer around in a way that is at once dazed and frantic, like children beginning an Easter-egg hunt.

11:50 The ladies' room is immaculate and enormous. Lots of stalls, and no line. At the end of a long row of sinks, a miniature washbowl is mounted about 18 inches from the floor, where a little girl slowly washes her hands while her mother diapers the baby on an adjacent changing table. "Go easy on the soap, Jenna." "But I like soap."

12:12 As in the rest of the store, the cafeteria's aesthetic is bright, unfancy, modern. The menu nods to the store's Scandinavian origin without belaboring it: along with some basic American choices, you can order Swedish meatballs with lingonberries. There's also a kids' menu,



play area, and baby food warming station, with a microwave, bibs, high chairs, and brightly colored plastic cups and dishes, all items for sale elsewhere in the store.

1:15 The place is jammed with people speaking in many different languages.

1:20 A series of loud, rhythmic bangs. A young boy whose parents are looking at a model kitchen is systematically opening and closing every single drawer in a pair of twelve-drawer sideboards.

1:29 In another model kitchen, a woman opens cabinets and exclaims over the interior fittings. "I like this!"

"A rack," her husband says, willing to recognize a feature but drawing the line at expressing an opinion.

"Nice!" She goes on to the next cupboard. "And look — these slide out." "A pantry," he says.

"I like it!"

1:40 A middle-aged couple stands in a dark, glamorous model kitchen whose

sandblasted glass cabinet doors glow softly blue from within. "See, we could do this but have the stove over here and then put the sink over there," he says.

"And then this counter would be next to the door into the dining room," she says, sharing the same intent vision of this kitchen superimposed on what they currently have at home.

This particular vignette, with four small round tables, and plentiful racks for glassware and wine bottles, resembles a small café or bar. A sign on the counter reads: "SMALL BUSINESS OWNER! LET YOUR COMPANY SHINE WITH LIGHTING FROM IKEA!"

2:05 People mill around an area featuring all the components of kitchen design — an array of cabinet interiors, doors, and legs; countertops; sinks; hoods; and appliances. There is also a bin of aprons, which some laughing teenagers are throwing at each other. Planning tables with computers allow shoppers to lay out a kitchen floor plan; convert it to a 3-D perspective; and then, in a kind of retail version of BIM,

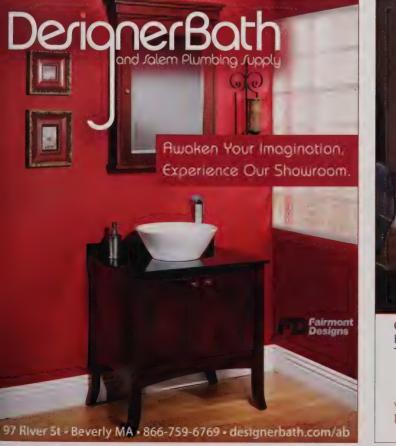
price out the ramifications of various choices and changes. One couple stands at a computer working through the program with a saleswoman; but most people are just drifting through. A woman trails her hand along a piece of reddish granite countertop. "I think this is what Jane has."

2:20 Lines of people wait for the elevators with full carts, bulging yellow bags, and restless children. Everyone is exhausted. They're headed downstairs to pick up flat-packed furniture from the massive warehouse, or to buy elderflower drink or herring or gingersnaps in the Swedish food market.

Two women collapse on a red leather sofa nearby. "So next let's see about replacing that chandelier. Have I told you how much I hate that chandelier?"

"Oh, yes," the other laughs. "You've told me." \blacksquare

Joan Wickersham is a writer in Cambridge, Massachusetts. Her new book is *The Suicide Index: Putting My Father's Death in Order* (Harcourt).





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MEASURING STATA

Determining the success of a building is like an architectural Rashemon it all depends on who's speaking.

Stata Stats:

Design: 1989 (initial study) to 2004 Construction: 2000 to 2004 Opened: March 2004 720,000 square-foot complex 700-car parking garage Office space for 1,000 occupants 7 classrooms 760 classroom seats Childcare center for 70 children Fitness center Multiple food service areas \$300 million project cost

The Ray and Maria Stata Center for Computer, Information, and Intelligence Sciences at MIT is often misunderstood.

With Frank Gehry's unique aesthetic, the building has been described as both "liberating" and "a disaster" (from two very different people, obviously). MIT's initial goal of bringing the computer science faculty, staff, and students back onto campus evolved with Gehry's participation into a collaborative investigation of building community and social spaces that would enhance the innovative research taking place in the labs. The 700,000+ square-foot building contains a variety of spaces that support MIT's educational mission — from personal study spaces to group study areas to classrooms to the many amenities such as fitness facilities and food service.

As one of many project managers in the MIT Department of Facilities during the building's design and construction, I have firsthand knowledge of its development. The resulting familiarity with the building has made me unusually attentive to media coverage of Stata --- from stories in the design press at its opening in 2004 to recent news reports of MIT's lawsuit naming Gehry Partners and contractor Skanska USA Building because of leaks, drainage, and snow-and-ice problems. But these extremes in coverage --- from the aesthetic to the technical --- can't tell the entire story of a building and offer a limited, if traditional, vardstick of success. Four years after the building's opening, it is high time to ask the people who know Stata Center best to get their take on the building. What is their perception of the building? What works? What doesn't? Measuring a building's success (or failure) is about more than the numbers and media coverage. It's most importantly about the experiences of the people who live with it.

— David Silverman AIA

Participants:

Chris Terman is a senior lecturer and researcher for the Computer Science and Artificial Intelligence Laboratory (CSAIL) at MIT, and served as a representative of Stata's future occupants during the design and construction of the building. **Gary Saffie** is the Stata Center building manager and worked with the MIT project management team during the building's construction.

Debi Kedian is the campus activity complex manager at the Stata Center and has managed all events in the public spaces since the building opened in 2004.

Mitchell Peabody is a PhD candidate at CSAIL and has worked in the Stata Center since its opening.

Interviews conducted by **David Silverman AIA**, principal of map-lab inc., an architecture, owner's rep, and project management firm in Boston (www.map-lab.com). He was previously a senior project manager in the MIT Department of Facilities, where he served on the team overseeing the design of the Stata Center.

Photos by Alex Budnitz unless labeled otherwise.

∧ Photo by Peter Vanderwarker.

THE ACADEMIC: Chris Terman

David Silverman: What is the perception of Stata from colleagues who visit you from other universities?

Chris Terman: I think a lot of people like a building that's not just another building. But there's a surprisingly large "John Silber contingent" who wonder "where the hell the adult supervision was," and how we were allowed to do this.

David Silverman: Do you think the building helps attract faculty and students?

Chris Terman: I find that a very hard question. MIT has not had a substantial recruiting problem. And I don't see a drastic change in the quality of the applicants as a result of having built this. You can put a print you purchased at Target up on your wall, or you can buy an original Matisse and put it up — has your life changed? Working here is like having a piece of art that you're living in, that represents you. I don't think MIT will be ill-served by this building. Inside, it works, and outside, it's a topic of conversation.

David Silverman: One of the reasons for building Stata was to bring the Laboratory for Computer Science, the Artificial Intelligence Laboratory, and other folks back onto the MIT central campus as part of the Electrical Engineering and Computer Science Department [EECS].

Chris Terman: That's working very successfully. Of course you could argue that any building would have done that. But I think EECS is much more obviously a combined department than it was. Connections used to be much more tenuous. Now there are a lot of joint seminars and lunches — things that certainly could have happened before, but now seem much more accessible.

David Silverman: Stata was built on the site of Building 20, a building that was famous for its flexibility, which was largely a byproduct of its lack of design intention — it was built in 1943 as a temporary wartime structure, but wasn't demolished until 1998. Stata of course is just the opposite — lots of design intention. Do you feel it offers the same flexibility? Have you done any office renovations yet?

Chris Terman: Conceptually we feel that we have the flexibility of Building 20 — it's just the execution that requires a little expertise. We've been in the building now for four years and we're about to start reshaping some spaces. We have done some very modest temporary build-out of some of the open-plan spaces. The openplan spaces are a continuing experiment, because we're not really sure how best to use them.

David Silverman: How are the double-height spaces working out?

The idea was that by stacking work areas vertically around doubleheight spaces with stairs, you could create "neighborhoods."

Chris Terman: I'm not sure that's worked. Whether for psychological reasons or whatever, people simply don't view upstairs and downstairs spaces as being closer together than spaces that are down the hall. Faculty think, "I'm here, and my students are upstairs" — most people would rather have them on the same floor, even if it means they're actually much farther away. For some reason, floors are still considered substantial barriers — even though there is a visual connection.

And then there's the question of actual use. Double-height is great above public spaces, because there is a feeling of spaciousness and connection between floors. But, for example, sometimes inappropriate things are said on the floor above a working space, because no one thinks to look down in the pit to see if their loud joke is being appreciated by more people than intended.

David Silverman: How are some of the other social aspects of the building working?

Chris Terman: Some people have complained that our attempt to build cozy environments for departmental work groups has led to more insularity. Previously, and in a more traditional building, we would have all been spread along a long hallway. Instead, a small

Working here is like having a piece of art that you're living in, that represents you. *Chris Terman*





A typical building might take a year or so to get the bugs out. A building like this takes longer — it certainly took at least a couple of years. *Gary Saffie*

THE BUILDING MANAGER: Gary Saffie

cadre of us is nestled into the South pod, and a different group is nestled into the East pod, and we have another set of groups that are nestled into the North pod. Somebody I would have seen in the hallway every day, I hardly see at all now, unless our schedules happen to bring us to the elevators at the same time. That's interesting because the building was meant to create a cozy environment, and I think it has. But maybe the cozier it is "at home," in your pod, the less you go out.

David Silverman: The building also includes other kinds of spaces to encourage people to connect — such as the study spaces and lounges on the upper research floors. Have they been successful?

Chris Terman: The success of the lounges is that they are nicely unallocated. I find that having a lot of desks that don't belong to anybody and aren't very far from everybody, works out well, particularly for the undergraduates who don't have assigned spaces in the building. You often find small groups of students in there working or socializing or meeting to work on group projects of which we're having an increasingly large number.

David Silverman: What do you think of the public reaction to the building?

Chris Terman: I'm puzzled why some people want to make architecture like this into an albatross if they can. That puzzles me, and it wears on me — maybe because in some sense I had more to do with this than the average Joe, and so I feel vaguely responsible. But over time, I've decided that people who feel that way are just wrong. They're wrong on their evaluation of the facts. There's a big debate about whether a building like this should only be functional: you can put some Victorian decoration on it if you want, and that's acceptable. But we can't do anything big with the shape of the thing? There are so few buildings that are free to do this and do it effectively. This building actually encloses a huge amount of functionality within a fun envelope. And it really does fulfill its purpose pretty well. **David Silverman:** Generally speaking, what's your analysis of the maintenance requirements of the building?

Gary Saffie: Overall? No more difficult than anywhere else. It requires maintenance, like any building. Provided you do your maintenance, and you do the right thing, you'll be OK. We understand the things that we are supposed to do from a preventative standpoint. A typical building might take a year or so to get the bugs out. A building like this takes longer — it certainly took at least a couple of years until we really felt comfortable with the building itself.

David Silverman: What have been some of the biggest maintenance or management headaches that were not anticipated?

Gary Saffie: The elevators were a huge issue when we moved in. One mistake was not bringing the elevators all the way up to the roof. In order to bring large equipment up there, everything has to be carried up the stairs. Eventually we will probably have to hire a crane and riggers to bring large equipment to the roof.

David Silverman: Stata has an innovative raised-floor system that is unique in the US — it includes floor boxes for HVAC distribution and is intended to give the building flexibility with respect to power, data, and air distribution needs. Has that been successful?

Gary Saffie: It's working very well. It is so easy to change locations of the air discharge in offices — in fact, we've done this hundreds of times to satisfy the occupants. It didn't work perfectly at the start and it took us a while to figure out the temperature settings for different seasons. For the most part, people are pretty happy with that part of it. Overall the spaces feel nicer without a two-byfour or two-by-two ceiling tile with overhead air.

David Silverman: An early concern was maintenance issues with spills or food in the floor boxes.



Gary Saffie: That hasn't been a huge problem. More so in areas like the childcare center, where little kids run around with food; it just has to be part of your maintenance program to keep those clean. The building custodians make it a point to vacuum those floor boxes out regularly.

David Silverman: Have you also had to reconfigure power and data under the floor?

Gary Saffie: All the plug-and-play is as advertised — it's that simple. In fact, in most cases my staff doesn't really get involved too much, because the occupants have their own facilities group that does most of this work. I know they're pleased with the flexibility.

David Silverman: The Stata Center has a higher ratio of exterior surface to interior space than most buildings. The upside is that the occupants get lots of windows in their offices — but the downside is that there is a lot more surface area to worry about in terms of maintenance.

Gary Saffie: Yes, we are not without leaks because there are so many different angles and different surfaces. This is a building that will probably always need attention to those issues. We know that with the change of seasons, things expand, things move, and the building moves. Every spring we wait to see what issues will present themselves. The first heavy rain storm of the spring will tell us what we have to deal with. As of this past December, we have been leak-free for the first time since the building opened. We have the right people in place now who understand the building.

David Silverman: I had a conversation with Rogelio Diaz, the facilities manager of the Guggenheim in Bilbao, a few years after that building opened. I asked him if the building leaked; he responded enthusiastically that it did, and that he knew where the two or three leaks were. He was proud that they knew where to put the buckets. He loved the building and felt that it was successful despite the leaks.

Gary Saffie: The occupants of the Stata Center were not initially happy at all. They did not expect a brand new building to leak.

think we are probably in a good position to take care of problems more quickly, now that we understand what's going on.

David Silverman: One of the building's features that gets a lot of press is the storm-water retention system. I noticed some new signs explaining how this system is used for flushing toilets.

Gary Saffie: That system has been good but not great, because there is maintenance involved with it — filters, pumps, and sand filters. We rarely need to switch to city water because we are out of water, although it happened earlier this year, after a somewhat dry winter and spring. One issue we have is that the water regularly looks dirty. But those signs help — the occupants now understand why the water looks dirty and that this is a good system for the environment.

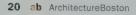
David Silverman: One of the design features of the building is the number of high spaces with high volumes. Maintaining those spaces, and especially the lighting, must be a challenge.

Gary Saffie: I think the lighting is dramatic and looks wonderful, but it's very difficult to maintain, especially in the Student Street. We are probably one of the few buildings that have a 40-foot lift so we can service the lighting. Generally I think the lighting is kind of poor from a maintenance point of view — we wind up changing lamps three or four times a year on the Student Street. We're looking at changing fixtures to increase the life of the lamps and cut down on our labor.

David Silverman: What do you think of the architecture?

Gary Saffie: The building really is stunning. It really is. You come down Vassar Street and you see these funky-looking awnings — everybody knows the building. This has to be the most photographed building on campus by far. If it was MIT's idea to make a statement to grab people's attention, I think they've done a good

job. The third-floor outdoor space is really great and has attracted all sorts of wildlife from birds to squirrels. In fact, we had a turkey up there!



People are drawn to the Student Street because of the natural light and also the oddness. It's not just a corridor. It's not just a box. It's unique. *Debi Kedian*

Debi Kedian

David Silverman: How would you describe your role at the Stata Center?

Debi Kedian: I manage all the activities that happen in common areas, including the first floor space that is called the Student Street.

David Silverman: What I've always found interesting about the Student Street is that it's got these really wide spots where it's not just a corridor — it's something more.

Debi Kedian: The Student Street is the only place on this side of campus where you can get food and beverage during the day Monday through Friday, and it offers dinner Monday through Thursday during the semester. The space is constantly being reconfigured to accommodate the various needs of the community. But a lot of what happens there is independent study — people are attracted to it because it's quiet. I'm quite surprised sometimes when it's not so quiet — especially outside the fitness center. There's something about that area of the Student Street that buffers the sound.

David Silverman: That area also has less natural light than some of the other areas.

Debi Kedian: Quite a bit less. And some of that has to do with the paint color on the wall — it's a green color. We have added light boxes and then put some art work in them, so they also function as outreach spaces for the Student Art Association, the hobby shop, and the MIT Museum.

David Silverman: The name "Student Street" was based on the

idea that the students would "own" the space. Do you think that the students feel they own it? That they can do things with it?

Debi Kedian: I'm not sure of that. There is ownership in the sense that it's available to them. It's a very welcoming space to stay in after they have class. They get their food and stay to eat or to work on projects. Students come to Stata at night to work on projects. There is a definite population that appreciates the Student Street.

David Silverman: It sounds like once they're exposed to Stata, they learn about the spaces and where they can hang out to study at night or off-hours.

Debi Kedian: Yes. The undergraduate students are most attracted to the Student Street. The graduate students have offices, so they're not the ones who are hanging out. And there are particular student groups that seek out the space — for example, the Association of Taiwanese Students loves having the *Straight to Taiwan* event there every year because they're actually able to recreate an Asian street market. Part of that is because of the design — you have the natural light, you have the concrete flooring which is like a street, and you have these alley-like spaces that come into it. It feels like a street market. People are drawn to the Student Street because of the natural light and also the oddness. It's not just a corridor. It's not just a box. It's unique. We've been able to accommodate a lot of different kinds of events in the Student Street from poster sessions, to professional events, to Earth Day.

THE STUDENT: Mitchell Peabody



Photo by Public Varian warden

David Silverman: The building is almost like a small city — people can work there, study, eat, teach, probably even sleep there.

Debi Kedian: I've had days when there have been three or four different events happening on the Student Street. There is a great deal of community interaction that happens in Stata that doesn't happen at the MIT Student Center because that building is more segmented. But on the Student Street, you're in an environment where the areas outside the classrooms feel like you're hanging outside your house in your front yard. Interactions that might not happen in other locations on campus happen at Stata.

A good example is the MIT Enterprise Forum; it sponsored an event that included iRobot and other technology companies. A guy from iRobot brought a mine-finding robot that people passing by could operate. The little kids came out of the daycare, and he allowed them to try it. Of course, they didn't need to know it was for finding mines. A little boy picked up his lunchbox with it and drove it around, and then was trying to help the robot see his lunchbox. It's those kinds of interactions that are amazing. It's amazing for everyone. **David Silverman:** How does Stata compare to your previous office in Building NE43?

Mitchell Peabody: It's a heck of a lot better. Stata has a confusing layout, but once you get used to it, it's a great building. NE43 was kind of claustrophobic in a lot of respects — there was so much stuff around and the offices were pretty cramped.

David Silverman: That was probably an accumulation of artifacts that had been researched and studied over the years.

Mitchell Peabody: Yes. And I'm sure the same thing will probably happen with the Stata Center. I shared my old office with four students and it was a fairly tight squeeze. We had a stack of data tapes in the office — not cartridge tapes, but reel-to-reel tapes from old lab experiments.

David Silverman: And of course you didn't want to throw them out.

Mitchell Peabody: I kept two of them for nostalgia purposes.

David Silverman: What else about Stata is different?

Mitchell Peabody: The positives of Stata are that it feels a lot more airy and it's very well lit. NE43 was kind of depressing because it has fluorescent lighting and it was a dreary place to work. Stata has a more lively feel to it. And the mix of offices and open space is nice. For our group, which has a large contingent of people who rotate through on a yearly basis, it's pretty nice.

There are two negatives I can point out. The first is the obvious one, which is always pointed out: the leaks. The other is some of the more technical mundane things; I remember one night after the building first opened up — a pipe containing some sort of green coolant burst open at two in the morning. But I think those problems have largely been addressed and fixed.

David Silverman: What about the aesthetic of the building?

Mitchell Peabody: One of the complaints when we first moved in was that it looked unfinished. Yet it was clear that this was intentional — it was supposed to have a warehouse feel.

David Silverman: The design of the building features a number of open spaces, including double-height spaces. What is your experience of them?

Mitchell Peabody: There are two issues. One is distraction. There

have been times, usually after hours, when there are many students around who can get pretty noisy. That's not a huge deal. It's just an annoyance. The other issue is where to secure belongings. The Stata Center currently provides a storage drawer in a communal cabinet for students. There are also lockers for students, but there is no regulation of the lockers, so it is first come, first served.

David Silverman: You probably weren't expecting many outside visitors at the Stata Center.

Mitchell Peabody: When the building first opened, a lot of tours came through. Not just the regular MIT campus tours — although I think a few of those came through — but architectural tours. Lots of architecture students. And those could be distracting. But it also made people here a little leery of leaving their stuff around. The lockers were added a couple of months after we moved in.

The building suits the personalities. There are interesting people who decide to come to MIT and do research. The building reflects their spirit. *Mitchell Peabody*

David Silverman: I've heard that a number of hacks [pranks] have happened in the Stata Center. But it was anticipated that hacks were going to happen. I know you're not at liberty to tell, even if you do know people that do those pranks.

Mitchell Peabody: I'll just say that there's better hacking going on.

David Silverman: Can you talk about the overall spirit of the place? The character of the building?

Mitchell Peabody: I think it suits the personalities. There are interesting people who decide to come to MIT and do research. The building reflects their spirit, especially of the more geeky computer science, electrical engineering crowd. I think people like working in a place that's distinguishable. When people come to visit me, I tell them to find the funky-looking building. People look at it and say "Wow, that's really weird and kind of cool."

David Silverman: There are plenty of naysayers, too. It's easy to be critical of Stata, because it's unusual.

Mitchell Peabody: Yes. It's not a traditional building. It looks odd. And if you're not used to it, it's difficult to navigate. I usually meet first-time visitors at the elevator, because if they're not familiar with the building, it takes them a while to find my office.

David Silverman: Do you take advantage of any of the amenities of the Stata Center? What's a typical day for you?

Mitchell Peabody: I walk to work, because I live pretty close by, so

I don't use the underground parking. I use the fitness center almost daily; I'm a huge fan of lifting weights. I get coffee and a bagel at the coffee shop pretty regularly. I know that the "book drop" book exchange exists — but I haven't really used it beyond donating a couple of books to it. The information kiosk sells movie tickets and other student-discounted items — it's pretty convenient. The daycare center is neat. If I had a kid, it would be awesome, although I've heard that the waiting list for it is extremely long.

David Silverman: The first floor of the building was dubbed the "Student Street" by the provost and senior administration. The thinking was that it would become a space that students "owned" and a place where they could study, eat, and get together to meet people. Do you think students feel ownership of it in any way?

Mitchell Peabody: I'm not so sure about the ownership aspect of it. It seems that the first floor got taken over pretty rapidly by the café and the cafeteria, which were planned, and the information kiosk. There's also the multitude of tours that pass through. I do see students studying and congregating there — so I guess from that point of view, they do own the Street. I don't know if there is any mechanism for making the Student Street reflective of student tastes. It now mostly features artwork that is provided by the Lab and, I think, the administration.

David Silverman: What's been your sense from other students — do they like the building?



Mitchell Peabody: When we moved in, the students talked a lot about it — how odd it is and how neat it is. There were issues with the prox card readers, with people navigating their way around the building, and, of course, issues with all the leaks. But I've been at MIT for six years and in the Stata Center for four years; it just feels familiar to me. I now know all the nifty little shortcuts and stuff. It's worked out, and I think it's become a really, really nice building.



CONTEMPORARY

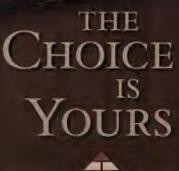
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t's All an Illusion

by Douglas Hubbard

The perception that many things are immeasurable is common — it's also an illusion.

Architects, like many professionals,

must find some measurements difficult or impossible. Many measurements they deal with seem straightforward enough, such as the dimensions of a room or the static load on a support. But can project risk, customer satisfaction, or the quality of a design be measured? Absolutely.

It is common to perceive many things as immeasurable, and all of the reasons for this perception fall into just three basic categories:

- The concept of measurement: The meaning of measurement, as it is used in most of the empirical sciences, is widely misunderstood.
- The object of measurement: The thing being measured is often ambiguously defined.
- The methods of measurement: Even basic empirical and statistical methods that would address a variety of common measurement problems are not widely understood.

Think of these collectively as the ".com" rule (concept, object, and method) of measurement. Once we understand why each of these objections to measurement is based on misconception and imprecise thinking, we will understand why nothing we thought was immeasurable really was immeasurable,

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The Concept of Measurement

Although this may seem a paradox, all exact science is based on the idea of approximation. — BERTRAND RUSSELL, MATHEMATICIAN AND PHILOSOPHER

There is a good chance that what you think "measurement" means probably does not at all resemble its typical usage by scientists, statisticians, or actuaries. When I ask people what measurement means, I usually get answers like "to quantify something," "to compute an exact value," "to reduce to a single number," or "to choose a representative amount." Implicit or explicit in all of these answers is that measurement is certainty — an exact quantity with no room for error. If that were really what the term means, then, indeed, very few things would be measurable.

But when scientists, actuaries, or statisticians perform a measurement, they seem to be using a different *de facto* definition. For all practical purposes, the scientific crowd treats measurement as a set of *observations that reduce uncertainty where the result is expressed as a quantity*. A mere reduction, not necessarily elimination, of uncertainty will suffice for a measurement. All measurements start with some prior state of knowledge. You have *some* idea of the future occupancy of a proposed building, or you wouldn't have proposed it. You can put some reasonable range on it, say, 50 percent to 85 percent in the first year. But if you conduct a market survey that turns out to be favorable, you might be able to reduce the width of this range, and a statistician might calculate that the range is more like 65 percent to 80 percent.

Real scientific methods report numbers in "confidence intervals," such as "the average yield of corn farms using this new seed increased between 10 percent and 18 percent [95 percent confidence interval]." Depending on what decision you need to make, even marginal reductions in uncertainty can be useful as a measurement. If the investor's breakeven for the building above was an occupancy rate of 60 percent, then the new measurement would be sufficient to make the investment conclusive. If you find out more than you knew before, then you have performed a measurement in the strictest scientific sense.

The Object of Measurement

A problem well stated is a problem half solved. — CHARLES KETTERING, INVENTOR

Sometimes the obstacle to measuring an unknown is simply the lack of a specific definition. That is, we haven't clarified the object of measurement. If someone asks how to measure "strategic alignment" or "flexibility" or "customer satisfaction," I simply ask: "What do you mean, exactly?" It is interesting how often people further refine their use of the term in a way that almost answers the measurement question by itself.

I often ask audiences at my seminars to challenge me with difficult or seemingly impossible measurements. In one case, a participant offered "mentorship" as something difficult to measure. I said, "Having mentors sounds like a good thing. I can see people investing in ways to improve it, so I can understand why someone might want to measure it. So, what do *you* mean by 'mentorship'?" The person almost immediately responded, "I don't think I know," to which I said, "Well, then maybe that's why it seems hard to measure to you. You have to figure out what it is first."

When confronted with a similar ambiguity, I would ask the person to clarify the following questions:

- What do you mean exactly? Can you describe any specific, observable consequences you would expect from increasing or decreasing this thing?
- Why do you care? What decisions would be different if this measurement turned out to be higher or lower than expected?
- How much do you know about it now? Is there any rational, finite range you could put on its possible values?

The clarification of the question and the precise definition of terms is the beginning of any scientific inquiry. Once you can figure out how to articulate what a proposed measure is all about in observable terms, you are half-way to measuring it.

The Methods of Measurement

It's amazing what you can see when you look. — YOGI BERRA

Finally, a measurement may seem impossible for no other reason than that the basic empirical methods for measuring that very item are obscure — at least to the person confronted with the measurement problem. But there is a great, documented history of clever (and often simpler than expected) measurement methods applied to all sorts of problems. For example:

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In each of these cases we can imagine someone reacting with the question "How could they possibly measure *that*?" And yet they did. Success with these measures didn't always require There is a great, documented history of clever (and often simpler than expected) measurement methods applied to all sorts of problems.

esoteric PhDs (Emily Rosa, of course, was in elementary school). What was required was a different approach to thinking about the problem — the people who performed these measurements seemed to lack the defeatist assumptions many other people might make on similar problems.

Let's take two of these common assumptions and reverse them. First, instead of assuming something has never been measured before, assume that your measurement problem is not as unique as you first thought. It's likely that what you are trying to measure has been measured many times, has been the subject of many dissertations, and may, in fact, be routinely solved by professionals in another industry. Spend some time on Google or with a research librarian to avoid reinventing the wheel.

Second, reverse another major assumption by assuming you have or can get all the data you need. The amount of data you need, what can be derived from a set of data, and even what type of data is needed are all discovered through specific statistical analysis calculations. If people tell you "we don't have sufficient data to measure that," it's a virtual



certainty that their assertion was not based on any kind of mathematical calculation. The truth is they just don't know what data or how much data is needed. They also implicitly assume that you can't get the data. Most of the examples listed above involved *acquiring* the needed data with new empirical observations. And whenever I compute how much data I need to reduce uncertainty, most people are surprised at how little is required.

You can begin to measure anything by taking a simple step: ignore the naysayers (or demand they show you their math). Somewhere there is a relevant measurement method for your problem.

Douglas Hubbard is the author of *How to Measure Anything: Finding the Value of Intangibles in Business* (John Wiley, 2007), from which portions of this article were excerpted. He is the principal of Hubbard Decision Research in Glen Ellyn, Illinois and lectures widely on measurement systems.



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RUNNING THE NUMBERS: AN AMERICAN SELF-PORTRAIT

Photographs and text by Chris Jordan

The images in this series look at contemporary American culture through the austere lens of statistics. Each image portrays a specific quantity of something: 1.14 million paper supermarket bags (the number used every hour in the US); 106,000 aluminum cans (30 seconds of can consumption) and so on. My hope is that images representing these quantities might have a different effect than the raw numbers alone, such as we find daily in articles and books. Statistics can feel abstract and anesthetizing, making it difficult to connect with and make meaning of 3.6 million SUV sales in one year, for example, or 2.3 million Americans in prison, or 426,000 cellphones retired every day. This project visually examines these vast and bizarre measures of our society in large, intricately detailed prints assembled from thousands of smaller photographs.

Chris Jordan is an internationally acclaimed photographic artist in Seattle, Washington (www.chrisjordan.com).

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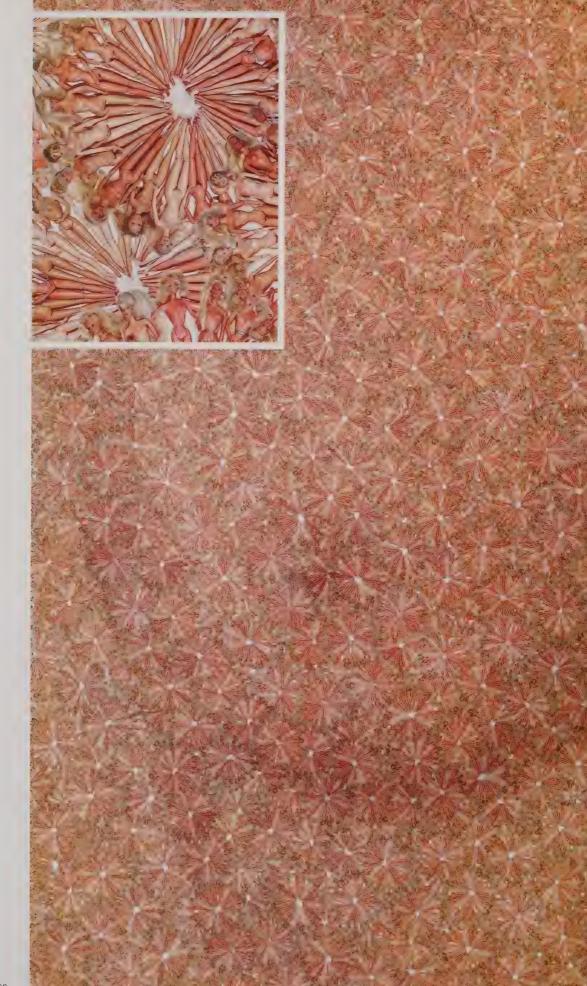
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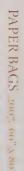
CICIARETTES 2007, 60" X 51 Sepicts 65,000 cigarettes, equal to the number of American techniques under age 18 who become addicted to cigarettes every month.

BARBELOULS may be solved. Cepicts 32,000 Brabies, equal to the number of elective breast augmentation surgeries performed monthly in the US in 2006.









Depicts 1.14 million brown paper supermarket bags, the number used in the US every hour.



SHIPPING CONTAINERS 2007, 60" x 120"

Depicts 38,000 shipping containers, the number of containers processed through American ports every twelve hours.





Taking the here of the here of

A visit from the National Architectural Accrediting Board is as much an assessment of the profession as it is of a design school.

On a recent episode of *House*, television's addictively bratty medical drama, a patient was admitted to the hospital with a mysterious disease. No news there. But in addition to the usual plot points — toxins, delirium, misdiagnoses

leading to administration of the wrong drugs leading to the patient's near death — this episode featured another hazard: an accreditation visit. The accreditor (there was only one) was an annoying little stickler with a clipboard who had to be herded from one falsely calm venue to the next, like a suspicious greataunt in a Feydeau farce, while the staff ran around saving lives.

Nobody would claim that *House* is anything but an outlandish, if entertaining, caricature of medicine. But what about its portrayal of the accreditor as the enemy — a bean-counter who must be placated with evidence of compliance to meaningless regulations so the institution can continue to carry out its important mission? How does accreditation really work? Is it actually a useful measuring instrument? And when it comes to architecture, where graduating from an accredited program is a prerequisite for licensure, what exactly is accreditation seeking to measure?

First, a brief introduction to architectural accreditation. It's the purview of the National Architectural Accrediting Board (NAAB), an organization whose constituencies include: the AIA; the National Council of Architectural Registration Boards (NCARB), which also administers the IDP program and the Architectural Registration Exam; the Association of Collegiate Schools of Architecture (ACSA); the American Institute of Architecture Students (AIAS); and the public.

Every year the NAAB sends out visiting teams --- in some

by Joan Wickersham

Photos 1 and 6 by Anita Kan; courtesy Harvard University Graduate School of Design. Photo 2 courtesy Wentworth Institute of Technology. Photos 3, 4, and 5 by Liz Linder; courtesy the Boston Architectural College. How complete and accurate a picture can a visiting team hope to get in a few days?

years, as many as two dozen — to assess architecture schools seeking to earn or extend a term of accreditation. Between their arrival Saturday night and departure at noon on Wednesday, team members immerse themselves, with charrette-like focus and energy, in the school: its curriculum, its resources, its culture, and the work produced by its students. They meet formally and informally with students, administrators, faculty, staff, and alumni; they visit the studios; and they comb through syllabi and exhibits of student work.

By Wednesday morning, they've pulled together a draft of their report to present in a school-wide meeting, detailing which of NAAB's accreditation conditions have been met and which haven't. They've also already voted on a recommended term of accreditation (generally three or six years), but the school won't learn the result until after NAAB's summer meeting, when board members will discuss each report before voting to accept or modify the team's recommendation.

So how complete and accurate a picture can a visiting team hope to get in a few days?

"It's amazing how much you learn," says Marilys Nepomechie FAIA, who as a faculty member and past graduate program director at Florida International University and also a frequent team chair for NAAB, has been on both ends of the accreditation process. "Schools spend at least a year and a half preparing for the visit, writing their self-assessment, and collecting the evidence to mount an exhibit that represents their program. So before you visit a school, you read their self-

Is it possible — or desirable — to quantify the quality of an education? assessment very carefully. You're trying to get a sense of how this particular place educates architects, and then when you arrive you're looking at the evidence. Everything is a comparison between what's claimed and what's actually there."

Such a system, which relies on both written data and eyewitness evaluation, is both objective and subjective, reflecting the current national debate about accreditation and higher education in general. Is it possible — or desirable — to quantify the quality of an education? It also reflects the nature of architecture itself. Is a "good" architect one who designs a beautiful building, or simply one whose building is structurally sound? And how deeply should accreditors be involved in deciding what goes into the education of a good architect? Should architectural accreditation reflect a prescriptive approach to pedagogy; or, as disciplines such as engineering do, should it focus on measuring student performance outcomes? In other words, do we look at what is taught, or at what is being learned, or both?

Ken Lambla AIA, who is dean of the College of Arts and Architecture at the University of North Carolina at Charlotte, and has also chaired many NAAB teams, believes accreditation addresses the need to measure student performance. "This is especially important in a public university: we are accountable to our public constituencies. We need to show that we are meeting qualitative standards in terms of student outcomes." At the same time, Lambla recognizes, "Architectural education isn't as quantifiable as other disciplines."

Stephen Schreiber FAIA, head of the newly accredited architecture program at the University of Massachusetts Amherst and also a veteran NAAB team chair, says "Accreditation assures the public, students, and future employers that there's a consistency among programs. It's proof that your school conforms to some agreed-upon rules, that what the school is doing isn't completely capricious. Beyond that, accreditation doesn't tie the hands of programs; they have the flexibility to shape the kind of program they want. But it ensures there won't be big issues missing."

If the bottom-line reason we accredit architecture programs is to produce graduates qualified to take the licensing exam, then in theory accreditors could just make sure that schools are "teaching to the test." But many people take the position reflected in NAAB's current conditions for accreditation — that accreditors have a more active role in advocating for certain unquantifiable values such as "studio culture," a recent addition to the conditions (lobbied for by architecture students) that requires a school to demonstrate that it is "a positive and respectful learning environment."

Changing ideas about architectural education will be aired in October 2008, when NAAB and its varied constituencies meet for the Accreditation Review Conference (ARC). Held every five years, the ARC will ultimately lead to a revised set of conditions and procedures. Issues such as globalization, climate change and sustainability, new technologies and practice models, and distance learning have become increasingly important since the last ARC was held in 2003. Such changes inevitably raise new questions about what — and how — accreditors should be measuring.

Whatever the results from the ARC, it is unlikely that architectural accreditation will ever turn into the adversarial, us-versus-them conflict that *House* caricatures. Each visit will still involve professionals on both sides who care deeply about architecture, in a relationship that is both respectful and tense. The school will try to show itself at its best; and the accreditors, many of whom are educators who have prepared their own schools for visits, will probe deeply to assure themselves that the program meets the standards of the profession.

At UNC Charlotte, the faculty have already begun preparing for the program's next accreditation visit, which won't take place until 2010. Ken Lambla acknowledges that this preparation is "expensive in terms of money and time, especially now when the faculty labor market is so competitive and specialized faculty members have many amazing projects to work on in the private sector." Still, Lambla says, "the faculty find the accreditation process incredibly useful. We are alert to change, and respond within our context. At the same time, like all architecture programs, we protect our identity with great vigor."

Marilys Nepomechie also sees the accreditation cycle as a continuous process. "It's an ongoing story, a narrative. A team arrives and leaves at a certain point. But programs and contextual cultures are always changing, as is the profession. Accreditation is the external agent that forces self-examination and questioning. Where are we now and where are we going?"

For more information on architectural accreditation, go to www.naab.org.

Joan Wickersham, who writes "The Lurker" column for this magazine, is a public member of the NAAB board. Her new book is *The Suicide Index: Putting My Father's Death in Order* (Harcourt).

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What Do You Think You're Doing?

Thinking green isn't necessarily the same as being green.

Alex Wilson talks with Jeff Stein AIA



Alex Wilson is president of BuildingGreen, Inc., the Brattleboro, Vermont publisher of *Environmental Building News (EBN)*; *GreenSpec Directory*; and *BuildingGreen Suite*, an integrated online resource (www.buildinggreen.com). The executive editor of *EBN*, he is the author of *Your Green Home* (New Society Publishers, 2006); coauthor of *Green Development: Integrating*

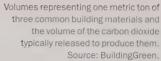
Ecology and Real Estate (John Wiley & Sons, 1998); coauthor of *Consumer Guide to Home Energy Savings* (New Society Publishers, 9th Edition, 2007); and editor of *Greening Federal Facilities* (FEMP, 2001). He served on the board of the US Green Building Council from 2000 through 2005. BuildingGreen is a partner with the Boston Architectural College in the development of the BAC's Sustainable Design Certificate Program, the nation's first architecture school certificate program on sustainable design.

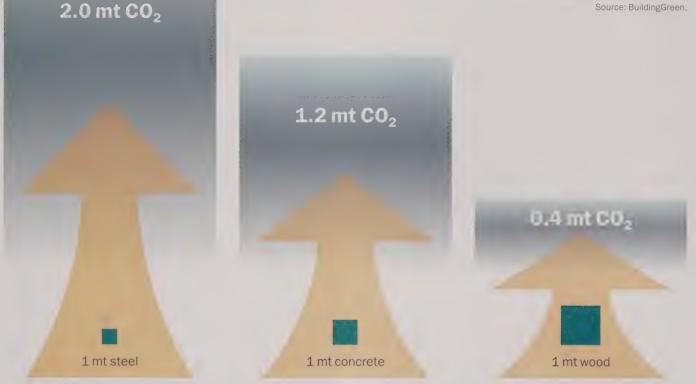


Jeff Stein AIA is head of the School of Architecture and dean of the Boston Architectural College and is the architecture critic for *Banker & Tradesman*. Jeff Stein: Designers, builders, and clients increasingly want to know how green their building solutions really are; we all want to be able to measure the level to which green solutions are making a difference in our buildings and our lives. But how do you measure what is really green?

Alex Wilson: The key to green building is information. Designers and builders need to know how to achieve the low-energy, environmentally responsible buildings that clients are asking for. A big part of this is measurement of performance — that's what the US Green Building Council's LEED [Leadership in Energy and Environmental Design] rating system is all about. Rating systems for green buildings — and certification systems for green building products — are attempts to independently attest to performance. Our company tries to help architects and others in the building profession understand what green building is, figure out the priorities with green design, and sort out the hype from the reality.

Jeff Stein: Here's a snapshot of the current complexity of the situation: In the US, we have Energy Star ratings for appliances and the LEED standards for individual buildings, which will soon cover landscapes and neighborhood design, too. LEED is dominant but it's not the only one --- the American Institute of Architects just released a study of three rating systems: LEED, Green Globes for New Construction, and SBTool 07. In Abu Dhabi, there is the Estidama Program. The UK has a Code for Sustainable Homes; there are also the Edinburgh Standards for Sustainable Building (ESSB) and BREEAM, the Building Research Establishment Environmental Assessment Method. And the European Union, through E-CORE, the European Construction Research Network, has developed various standards with acronyms like PeBBu (Performance Based Building Network), ENERBUILD (Energy in the Built Environment), CRISP (Construction and City Related Sustainability Indicators), and PRESCO (Practical Recommendations for Sustainable Construction).





Alex Wilson: There is tremendous confusion among manufacturers. They want to do the right thing and certify their products, just as building owners are increasingly interested in certifying their buildings, but there are so many different certifications that companies don't know what to do — which programs to go with. Our company, BuildingGreen, is trying to help solve this confusion by objectively explaining and comparing the many programs [see "Beyond the Logos: Understanding Green Product Certifications," *EBN*, January 1, 2008]. Building certification seems to be a little less confusing, because LEED has been so dominant in the market, but it's certainly still an issue.

Jeff Stein: And of course, measuring greenness — energy use, material extraction, component manufacture, transportation requirements, what happens at the end of a building's or product's useful life — is extremely complicated. I know someone whose nephew works in Shanghai for a company that produces blades for wind turbines. That sounds as if it's a green job. But then, most of these Chinese-manufactured blades are shipped to California. What's more, they are made from an oil-based resin that is transported from Germany to China in the first place. Can this really make sense?

Alex Wilson: A lot of people worry about the embodied energy in the transportation of so-called green products. My feeling is that even though those products may be made far away, if demand grows adequately, then manufacturing will eventually move closer

to the point of use. As the price of energy goes up, the threshold at which local manufacturing becomes feasible is lowered. So I'm in favor of specifying green products, wherever they are made.

Jeff Stein: A new term has entered the vocabulary recently: greenwashing. How would you define it?

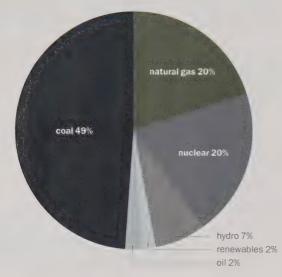
Alex Wilson: Greenwashing refers to the exaggeration of the environmental benefits of a particular product or service, and it's become a very significant issue in the green building movement. Green is popular, green is selling products today, and every manufacturing company out there is touting its products as green, whether they are or not. It really calls for third-party certification to verify claims.

Jeff Stein: But even when green building products are certified by a third party, what exactly does it mean to be green? Nothing is truly green — none of these buildings, for example, is actually producing oxygen.

Alex Wilson: When we started our newsletter, *Environmental Building News*, we debated what our subtitle should be. "Sustainable building" was an obvious option, but we decided against it, because there really is no such thing as a sustainable building. We don't actually know what a sustainable building would be, what it would look like, what it would do.

I think of "green building" as a general term that doesn't

US National Average Fuel Mix for Generating Electricity



Source: BuildingGreen (from Energy Information Administration, US Department of Energy, 2006 data).

Comparison of Transportation and Operating Energy Use for an Office Building

Average US commute distance (one way)	12.2 miles
US average vehicle fuel economy 2006	21.0 miles per gallon
Work days	235 days per year
Annual fuel consumption	273 gallons per year
Annual fuel consumption per automobile commuter	33,900 kBtu per year
Transportation energy use per employee	27,700 kBtu per year
Average office building occupancy	230 sf per person
Transportation energy use for average office building	121 kBtu per sf
Operating energy use for average office building	92.9 kBtu per sf per year
Operating energy use for code-compliant office building	51.0 kBtu per sf per year
Percent transportation energy use exceeds operation energy use for an average office building	30.2%
Percent transportation energy use exceeds operation energy use for an office building built to ASHRAE 90.1-2004 code	137%

Source: BuildingGreen.

necessarily imply that a building has no impacts on the environment — because every building has impacts on the environment — but that it's moving in the right direction. It may use less energy and less water; it may be healthier to occupy; it may have less impact during its life cycle and the life cycle of the materials going into it. But a green building isn't by definition sustainable. We have a long way to go before we're really able to call a building sustainable.

Jeff Stein: What are the steps we would have to take — both physically and politically — to get there?

Alex Wilson: I've actually been focusing a lot of my attention recently on that, looking at the big picture. One of the things I've been looking at is transportation, which has been a very underrepresented issue in the green building community so far.

Jeff Stein: What do you mean by underrepresented? Transportation seems to be the only thing most people speak about when they talk about environmental issues. The fact that you can now buy a car that gets 35 miles per gallon instead of 25 seems to most people to be real progress. Yet we now know that about half of all the energy consumed in the US is used to construct and operate buildings, and only about a quarter of it is used by the entire transportation sector.

Alex Wilson: Yes, but if you look at what I've called the "transportation energy intensity" of buildings, we find some very interesting things. Simply getting to and from the average US office building uses roughly 30 percent more energy than the building itself uses. If instead of an average building you look at a code-compliant building — that is, a building that meets the ASHRAE 90.1-2004 energy code - the differential is of course even greater: the transportation energy associated with that building is more like 2.4 times the building energy use. This is significant because the LEED rating system that is most commonly used in the US to rate green buildings has 69 potential points, of which only a half-dozen specifically relate to location and transportation. Yet the energy use associated with getting to and from buildings is very high. So we need to look at these as part of a bigger picture and re-allocate points in the LEED rating system, as well as reorder priorities in the green building industry.

Jeff Stein: Is some of that about to happen with the new LEED neighborhood standards?

Alex Wilson: I think it is. Certainly LEED for neighborhoods addresses location very effectively. But there's also change going on within the LEED rating system that's going to result in a re-prioritization of points.

Jeff Stein: It sounds as if urban design will be increasingly important in the coming era.

Alex Wilson: It's absolutely critical, because that's how you get at the transportation energy intensity issue of buildings, by looking

at where we're building, how densely we're building — all the issues that fall under the rubric of urban planning.

Water is another important issue. There's been a tremendous focus on energy over the last few years, and a growing focus with the price of oil spiraling out of control. But water may be an even more significant issue in the coming decade or two.

Jeff Stein: It's not used very resourcefully in buildings now, in that all of the fresh water that comes into a building, regardless of how it's used, leaves as sewage and goes to a treatment plant where it's mixed with other wastewater and caustic chemicals, then put directly into wetlands or rivers or, in Boston's case, the Atlantic Ocean.

Alex Wilson: It's a pretty dumb process, and the wastewater management issue is a key part of it. In most of the country, we're using the same-quality water for drinking that we're using for flushing toilets and washing sidewalks; so there are tremendous opportunities for having two separate plumbing networks in buildings, one potable and one non-potable, and to allow alternative sources to supply the non-potable network, that could be used for toilet flushing, landscape irrigation, and refilling cooling-system water supplies.

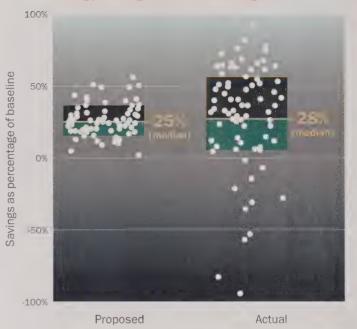
Jeff Stein: Are you optimistic about reversing, or at least mitigating, global climate change? It seems that we in the US are starting to recognize the impact of our development practices, and trying to make changes. But can one country make enough of a difference without there being some sort of global consensus and effort?

Alex Wilson: Global climate change is unquestionably one of the biggest challenges facing humanity. And I won't pretend that it's not going to be difficult to deal with these issues. But wherever there is a problem, there are opportunities. The need to dramatically change the way we are designing and building structures creates huge opportunities for smart architects and smart builders. The buildings that most of us have been creating for the last hundred years are going to be obsolete very quickly. They're going to need to be either significantly modified, retrofitted with a much higher level of insulation, or torn down and replaced. That affords opportunities for forward-thinking architects who can recognize what the needs are and learn how to address them.

Jeff Stein: The AIA is proposing as a professional standard that architects in practice must be able to offer green alternatives to their clients, which suggests that in three or four years, if you're not designing green buildings, you're not going to be designing buildings at all.

Alex Wilson: But we also need to start thinking more creatively about what those alternatives might be. One example is the concept of passive survivability. For several years now, the green building community has been talking in terms of incremental improvements in energy performance and the goal of halving the energy consumption of homes. But if we frame these issues as life-safety issues, we can interest code officials in incorporating these practices, essentially zero-net-energy design practices, into building codes. I

Energy Savings in LEED Buildings



The actual savings vary much more widely than the proposed savings that were predicted in the LEED submissions — with some projects actually showing negative savings (usage that exceeds their base case). The boxes show the quartiles (25% of projects) above and below each median. Note that LEED assigns energy points for predicted energy cost savings, which do not always correspond to predicted energy savings. Source: BuildingGreen (from USGBC/NBI).

believe that climate change, risks of future terrorism, and potential energy-supply problems are going to argue for designing buildings, particularly homes and apartment buildings, that maintain livable conditions in the event of an extended loss of power, loss of heating fuel, or even loss of water. It's really a life-safety issue.

For example, imagine if there were a major heat wave coincident with a major drought, where water levels drop to the point that cooling water intakes for coal-fired and nuclear power plants fall too low, and those plants have to be turned off. There could be a massive power outage in the western US. People in Phoenix and Denver and Las Vegas may have trouble staying alive in a massive, widespread outage.

So we need to begin thinking about mandating that all new homes meet this design criterion of passive survivability. What would achieve that? A very well-insulated envelope — for a northern climate, that would mean R40 walls, R60 ceilings, triple-glazed windows. It would require cooling-load avoidance strategies, and natural-ventilation strategies. For many of these, we could go back and look at the vernacular architecture in hot climates. One hundred years ago, New Orleans homes all had wrap-around porches designed for natural ventilation. These are aspects of passive survivability that we need to begin building back into our homes. And we need to do that by mandating them in building codes.

Jeff Stein: It's interesting that passive survivability doesn't require exotic technologies, but rather a clear understanding of how we

used to do things, using building techniques that are available to us right now and aren't particularly expensive. It just requires us to ask more of architecture in terms of building performance.

Alex Wilson: There's also a great deal that we can draw from the tremendous advances that were made in design and building in the early '70s with the first fuel embargo — the whole passive solar movement, the super-insulation movement. Many architects became very familiar with the concepts and worked with them for a while, but then let them drop off the radar screen. Those need to come back. I was surprised to learn that Sweden's building code has required triple-glazed windows since 1976. In this country, if you ask manufacturers about triple-glazed windows, they look at you like you're from outer space.

Jeff Stein: How did you find your way into this field?

Alex Wilson: My training is in environmental biology. I first got the environmental bug back in the mid-'60s — I decided in junior high school to become an environmentalist and try to make the world a better place. I imagined myself as an ecologist, or maybe an aquatic biologist. But somewhere along the line, I decided that solving some of the environmental problems that were harming ecosystems around the world would be more rewarding, and to do that, I needed to focus on what was causing the problems. And because buildings are responsible for a huge percentage of our overall environmental burdens, I made a conscious decision to shift my focus from natural ecosystem studies to the built environment. I've stuck pretty close to that personal agenda, much to my surprise, and it translated into my business, BuildingGreen, which has a corporate mission to make the building industry more environmentally responsible.

Jeff Stein: You once said that at the very beginning, it was a struggle to make this business work, but now, years later, it's a struggle to keep up with how the rest of the culture is working with the notion of green building.

Alex Wilson: Yes, it's been exciting to see the growth in interest in the last five or ten years. I started the company in 1985, and launched our newsletter, *Environmental Building News*, in '92. We're often mistaken for a nonprofit entity, but we're a for-profit company although a very mission-driven one. We used to have to knock down doors to get anyone to pay attention. Now we're trying to keep the door closed enough so that we can get our work done.

Jeff Stein: It always seemed to me that you were out ahead of the culture, which is a tough place for a for-profit company to be.

Alex Wilson: Maybe we should have been a nonprofit, in that a lot of what we do has come before a market for it has existed. But we went the route of being for-profit, and had some lean years. But we're doing well now.

Jeff Stein: Has your experience running a business affected the way you think about green solutions?

Alex Wilson: One problem we're facing as a culture is our failure to look at the long term. I think this is especially a failure in our business world, where we define success in publicly traded companies by the next quarter's performance. Similarly, we look at the economic performance of a building in terms of its payback three or four years out; when we're looking at energy improvements, we rarely look much beyond that. We need to be looking at the long term.

Jeff Stein: How long term?

Alex Wilson: Generations. The Native Americans consider the impacts of their actions seven generations forward. If you look at all of the oil that's been consumed since the dawn of the petroleum age in 1859, when it was first pumped in Pennsylvania, 94 percent of that has been consumed since I was born in 1955. There's a lot of debate today about whether we've reached a peak in oil consumption, but nobody really knows. There's some evidence that that's happening this year, but it might still be a decade or two away. The fact is that we're fairly close to the midway point in our consumption of the world's oil resources, and we've arrived there in the span of one person's lifetime. The human species has existed for tens of thousands of years, yet in this instant of geologic time we've taken a very concentrated energy resource that took hundreds of millions of years to accumulate and we've burned it up and released that carbon into the atmosphere as carbon dioxide, wreaking havoc in terms of climate change.

Jeff Stein: How smart does one have to be to make informed decisions in the green building arena?

Alex Wilson: One doesn't have to be smart, but one has to be wise enough to know where to turn for advice and information. There are a lot of very smart people involved in the life-cycle assessment of building materials and figuring out what the criteria for LEED and other building certifications should be. The better a job the developers of these standards do, the easier it is for us — architects, specifiers, builders, and developers — to use that information effectively in our decision-making. That said, staying up-to-date with green building is very important. Design firms should budget time for their employees to get up-to-speed about green building and stay there. Attending conferences, reading magazines, and monitoring green building listserves should not be relegated to employees' own time during evenings and weekends; it's a key part of doing business today.

Jeff Stein: Oil really makes us stupid, doesn't it? Not just because when you burn it and breathe the carbon monoxide it destroys brain cells. But the very use of it allows you to overlook other ways to deal with your relationship to your surroundings and to other people.

Alex Wilson: One of the tragedies, I think, is that those of us who were pushing these ideas 20 and 30 years ago were widely accused of being alarmist Chicken Littles. Now that we're faced with four-dollar-a-gallon gasoline, people are saying, why didn't we take action when we had the opportunity?



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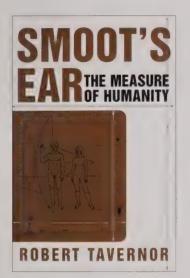
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MORE THOUGHTS ON MEASURE



SMOOT'S EAR: THE MEASURE OF HUMANITY By Robert Tavernor Yale University Press, 2007

In the late 1700s, the streets of Paris filled with blood and riot as the Terror raged throughout France, gnashing its insatiable guillotine jaws while in distant Barcelona, Pierre Méchain, a French gentleman-scientist, prepared to take a secret to the grave: his measure of the earth's circumference was flawed by his own mechanical error, his life's work thus compromised and the great universal measure for all nations, the metric system, rendered arbitrary.

This is just a fraction of the trouble that plagued the metric system, as Robert Tavernor details in a lively 192 pages. It seems everyone has had an opinion on measure: Newton, Boullée, Pythagoras, Duchamp, ancient Egyptians, Heidegger, Le Corbusier, and Einstein have all weighed in. In a sense, this is the kind of book that is a joy not to read, each new page laced with references that send fingertips scuttling across keyboards, the kind of book that is responsible for server overloads at Wikipedia and revenue spikes at Google. The side reading is not essential, however, as the author provides clear summaries and insights. Tavernor investigates the very significance of mensural systems and

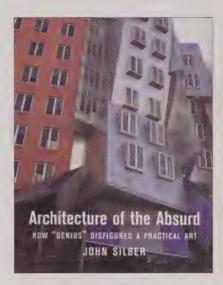
uncovers surprising meaning in the units we choose.

How can human activity be specified, the experience of space be quantified? Whether expressed in feet, meters, or modulors, measure is the linchpin between the amorphous, subjective experience of space and its quantified description — the Panama Canal between the twin oceans of mind and world. Measure is language, the fundamental tool of architecture.

Tavernor contrasts the unexpectedly uniform history of anthropomorphic measures (give or take a few inches) over the course of Western civilization with the convoluted birth of the meter, which was conceived as pure abstraction apart from any reference to any one human (read: king). We follow the sweaty-palmed grasping for universal certainty that characterized the search for a natural length on which to base the meter: past permutations of the seconds pendulum (whose full swing takes two seconds), and through poles, meridians, and latitudes (variously examined for their ease of measure and decimalization), each new candidate proving as flawed as the last, until we at last come to the aptly named Uncertainty Principle and the eventual adoption in 1983 of a standard based on the distance light travels in a vacuum.

The book is not about the smoots and ears that measure the Harvard Bridge spanning the Charles River (a calculation based on MIT student Oliver Smoot, determined to be 364.4 smoots, plus or minus an ear). Instead, it is about the triumph of obstinacy, the irrationality of reason, and the reason for irrationality. It is about the subjectivity and usefulness of measures, and even more so, about the humility of trying to know what we don't. If this book persuades you, you will be proud to measure your creativity in smoots and ears, draw your buildings in feet and inches, and revel in the fact that the US stands tall with Liberia and Myanmar in withstanding the onslaught of the metric system.

Conor MacDonald is a writer in Boston.



ARCHITECTURE OF THE ABSURD: HOW "GENIUS" DISFIGURED A PRACTICAL ART By John Silber Quantuck Lane, 2007

Over the years, John Silber, who holds a doctorate in philosophy, has used his bully pulpit as president and chancellor of Boston University and as a candidate for Massachusetts governor to declaim on whatever subjects engage his withering attention. Most recently this has been architecture, a discipline he first absorbed at the knee of his father, a Beaux-Arts-trained architect, and then apparently mastered at BU, where he oversaw 13,729,143 square feet of new construction. (He evidently kept close track.)

Silber believes architecture has succumbed to the avant-garde fallacy that "all great art is shocking," which he believes is particularly unfortunate because it mistakes the practical art of architecture for a fine art. He ascribes this to the "genius worship" instigated by Siegfried Giedion, who suggested that certain seminal Modern architects have access to special shaman-like knowledge. Like Ayn Rand's fictional Howard Roark, such architects have come to believe they are above criticism and "owe nothing to their clients or the public beyond the gift of their genius."

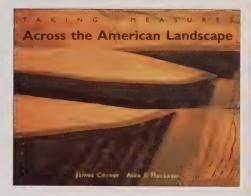
Among those Silber singles out for

scorn are Le Corbusier, for his hubristic dictum that "the plan must rule"; Josep Lluís Sert, whose BU buildings Silber found repetitive and problematic to maintain; I.M. Pei, whose Louvre pyramid creates a "constant disturbing tension ... with the courtyard surrounding it"; Daniel Libeskind, whose Denver Art Museum resembles "a carcass of a crashed space shuttle"; and of course, Frank Gehry, whose Stata Center at MIT reflects "contempt for the interests of clients and ... narrow dedication to his sculptural conception."

Silber has his favorites — Gaudí, Gropius, Calitrava, Utzon, and Fay Jones. And herein lies the problem: Silber's screed is in search of an underlying theory. Much of the book simply proclaims his aesthetic judgments which, based on the unremarkable buildings built during his BU tenure, are not infallible. He does not probe the broader social or technological forces shaping contemporary architecture, nor does he attempt to address why the trend toward architectural astonishment has gained such cultural currency, preferring to belittle the practitioners and their clients and champions instead. For a philosopher, Silber has written a surprisingly unreflective book. (One is tempted to conclude he actually favors genius worship as long as he can choose its subjects.)

It's a shame this is not a more thoughtful book, because we could use one. Has "starchitecture" become too noisy, disorienting, and wasteful? Are we witnessing an episode of iconoclasm that presages a new order, or has architecture been permanently liberated from "style"? Will this profusion of experiments lead to breakthroughs for the next generation of architects to refine? Is it possible to sustain such profligate expressionism in the face of looming climate change and the resulting imperative toward resource efficiency? These questions seem worth examining. Let's hope someone more insightful than John Silber will attempt to address them soon.

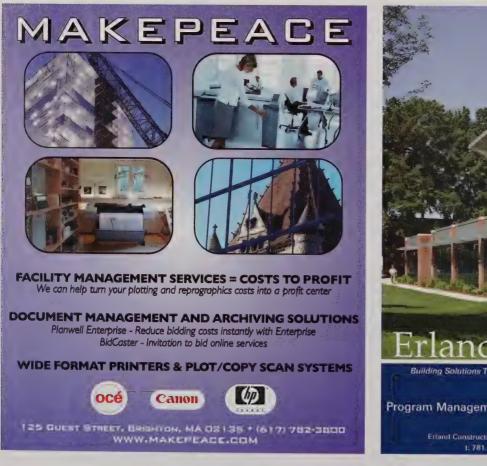
Matthew J. Kiefer is a land-use attorney at Goulston & Storrs in Boston. He teaches in the urban planning program at the Harvard Graduate School of Design.

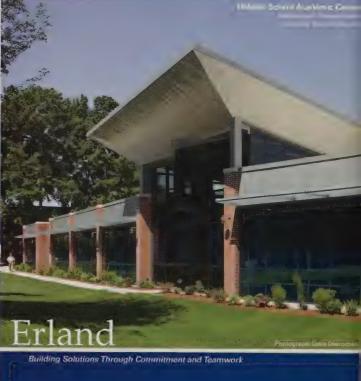


TAKING MEASURES ACROSS THE AMERICAN LANDSCAPE

By James Corner and Alex S. MacLean Yale University Press, 1996

Decoding the landscape to better understand American culture has long been in the cultural geographer's province. But the tools of measure — maps, surveys, aerial views — are often disengaged from metaphorical meanings. Cultural geography entails enriched data but less sophisticated visual thinking than is called for by design professions. Yet, landscape architects are easily seduced





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Erland Construction, Inc. | 83 Second Avenue | Burlington, Massachusetts 01803 1: 781.272.9440 | e: rtang serland.com | www.erland.com into picture-making, dragging their 18thcentury predecessors' views on romantic scenerv into their work.

In this book, James Corner, a landscape architect and principal of the design firm Field Operations in New York City, and Alex MacLean, the Boston photographer celebrated for his aerial landscape images, propose fresh revelations through their interweaving of text, map-drawing, and aerial photography. Corner's narrative, juxtaposed with MacLean's images, examines the ironies and ambiguities that are idiosyncratic to the American landscape, especially when topographical lines meet and violate the authority of the grid. The authors are intrigued by the working landscape (the agrarian Midwest with its lines of contour plowing and the southwesterly irrigation designs) and by engineered landscapes (canals, dams, networks of rail lines, terminals, and highways) — a presentation of landscape as process rather than as pictures or, as Corner succinctly puts it, "landscape as a densely measured construction site."

This book includes a key essay by

Denis Cosgrove, the late British-trained cultural geographer based at UCLA. Having long been engaged in the cultural politics of the American landscape, Cosgrove reflects on the history of "taking measure" in American life. He pays homage to Thomas Jefferson and the National Land Survey that laid the anonymous, indifferent grid on the Midwest. He focuses as well on the United States Geological Survey and its ubiquitous maps that form the base of large-scale planning projects. His overview engages such engineering wonders as Grand Coulee Dam and the Tennessee Valley project. He speculates on noteworthy differences between European settlement patterns and the overwhelming scale of the American landscape with its inevitable issues of control and individual freedom.

A dense thinker and original writer, Corner draws on French literary theory, German philosophy, and American earthworks artists to enrich his ideas, but never allows the narrative to drift off from the land. Alternatively, MacLean draws on geometry that's implicit in modern art. To disagree somewhat with Corner, who says that MacLean's photographs are documentation, "showing the land as it is," anyone can see that his images of landscape patterns are artfully framed composed, color-saturated, aestheticised images meant to surprise and enthrall the viewer.

To the authors' credit, their work is speculative, not prescriptive. They open broad windows onto the landscape, free from the simplistic pieties of environmentalism or the professional language of designers. Their book persuades planners and designers to expand the territory of their investigations and engage the synoptic view — the view of the bird.

Phyllis Andersen is a landscape historian and author of a forthcoming book on pleasure gardens.

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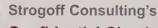
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Earth and Air

One of my first childhood ambitions was to be an architect. Why? Was it that my cousin's husband in Cleveland was an architect and a kind of role model for me? Was it that one of the few other Lloyds I'd heard of was Frank Lloyd Wright? Or was it that I grew up in New York, where I was continually astonished by the skyscrapers? I could see them from the BMT train as we crossed the Williamsburg Bridge from Brooklyn into "The City." I could look up at them from Times Square or Macy's or the 42nd Street Library. When my family moved to Queens, our house was on the last street in that development and for years - until a new neighborhood sprang up on the empty lot — we had an unobstructed view from our back porch of the Manhattan skyline (my Emerald City). I loved buildings the way I later got to love painting. And now that I write about music, I find myself using the term "architecture" a lot, as a way of describing and measuring structure - structures shapes, patterns. Measures.

But I've never gotten over my early passion for buildings themselves.

Surely behind this passion is the exhilaration that's triggered by the tension between weight and buoyancy. (This is true in music, too --- a cliché about Bruckner symphonies, for example, is comparing these big "heavy" works to vast "cathedrals of sound.") One of my favorite buildings is H.H. Richardson's train station in North Easton, Massachusetts. What could weigh more than those piles of heavy brown stones? Yet, with all the open space created by those expansive, interlocking arches ----arches within arches — the station seems to be floating. Not unlike the way the Chrysler and Empire State Buildings seem to be lifting off. Soaring. Mies van der Rohe had a similarly fascinating trick. From the ground up, for the first couple of stories, his windows increase rather than decrease



in size, doubling then redoubling, as if space keeps opening up and out the higher you go. It's just the opposite of what you might expect and it takes your breath away. Something similar happens with Frank Lloyd Wright's Prairie houses, only the direction is different — space opens up horizontally rather than vertically. It's like Cinerama — the way that small square of movie screen widened out sideways and we were suddenly on the Rockaway roller coaster, gasping!

Whenever I can, I go to places to look at buildings. I grew up with a New Yorker's prejudice against the Midwest until I actually visited Chicago. Just walking through the Loop was like being in a museum of American architectural history — from the austere Monadnock Building to Mies's elegant Lakeshore Drive apartments. In the old Rookery Building, possessing one of Wright's earliest interiors, the glass dome hovering over the central lobby has that mind-bending combination of gravity and airiness.

I found that same mixture of earth and air in Egypt: the temple of Karnak, with the world's most massive columns reaching to the sky; the pyramids dissolving to an otherworldly point. I actually went to a technical high school for one semester to study architecture, but I disliked all the math and graphs. Now I'm convinced that the very idea of mathematical proportions creates a kind of mystic — *musical* numerology. Despite the surrounding marketplace of tourists, hired guides, vendors, and guards, for me the act of looking at these ancient wonders watching Time itself slowly eroding their massive solidity into something precious and fragile — became an experience of spiritual elevation.

v Photo © Innes Ferguson | Dreamstime.com.

Last year, I fulfilled a longstanding dream to see Palladio's villas. Armed with James Ackerman's profound study, I discovered that these buildings — each in its varying state of repair or disrepair, access or lack of access — were not only exquisite in their musical proportions but also deeply moving. Simultaneously welcoming and awe-inspiring, they embodied that sense of balance *measure* — I wish I could achieve in my own life, and keep searching for in the world at large.

Lloyd Schwartz is the Pulitzer Prize-winning classical music critic for *The Boston Phoenix* and a contributor to NPR's *Fresh Air.* He is the Frederick S. Troy Professor of English at the University of Massachusetts Boston. His latest book of poems is *Cairo Traffic* (University of Chicago Press, 2000). VectorWorks Architect

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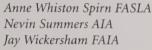


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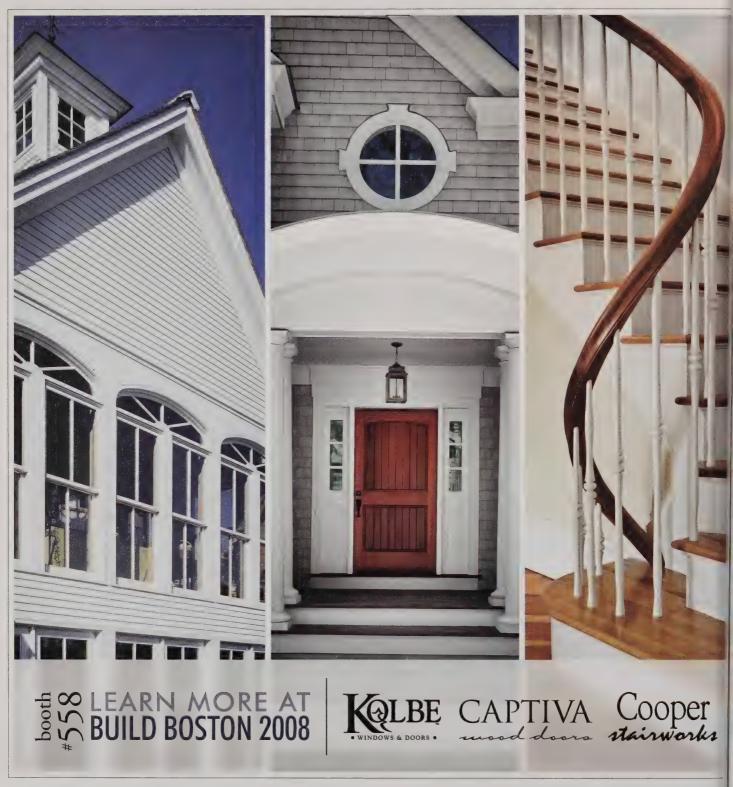
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BY ELIZABETH S. PADJEN FAIA From the Editor

Two Schools of Thought

Swampscott

When the town of Swampscott, Massachusetts, faced a need for both a new high school and a senior center, community leaders faced the dilemma of limited site options and competing constituencies for limited funds. Last year, the town celebrated the opening of the Swampscott High School and Senior Center, two building programs joined under one roof.

What makes this project intriguing is not the idea of a shared roof - after all, Victoria's Secret and McDonald's share plenty of roofs in malls across the country with no redeeming effect. What makes the project worth scrutiny is the attention that was given to the resulting opportunities. The community worked with the architects, Symmes Maini McKee, to identify spaces and functions that might be scheduled for use by both students and elders, such as the gym, weight room, dance studio, computer lab, and ceramics studio - some of which are also available to townspeople after hours (the building is often busy until 10 PM). Today, the building hosts other unplanned synergies: kids give performances for Senior Center clients and help them with computers, e-mail, and cellphones; the hockey team even cleaned windows. The elders reciprocate as volunteers in the school library, cooking-class teachers, speakers in history classes. By combining a school and a senior center, the town has created a hybrid more valuable than either facility individually, an intergenerational community learning center.

Hogwarts

When J.K. Rowling imagined the school that was to be the focus of Harry Potter's adventures, she conceived of a place well-suited to a saga of good versus evil. Hogwarts evokes the familiar literature of English boarding schools; presided over by Albus Dumbledore, himself the product of the late Victorian era, it maintains strict social hierarchies while enforcing a traditional curriculum based on rote learning. Despite the advanced age of some of the faculty and staff, Hogwarts hardly functions as a senior center, any more than it serves as a community center for the larger wizard community. Hogwarts is a place of sharply drawn distinctions: good/evil; inside/outside; Muggle/wizard. Hybridity is an uncomfortable concept in this world — "half-blood" characters never feel as though they fit, which is completely understandable in an environment where a treasured ritual is performed by the Sorting Hat.

Given the choice of the new Swampscott High School and Senior Center or Hogwarts, no doubt many teenagers would jump at the chance to enroll at Hogwarts; spells and potions offer their own form of enchantment. But in doing so, they would miss a more modern form of magic.

Hogwarts is emblematic of a familiar, structured mode of thought: the expansion of knowledge through taxonomy ordered systems of classification. Swampscott is the product of a new kind of thinking: the expansion of knowledge and creativity through hybridity. Examples of hybrids and hybrid thought can be found throughout history, of course, but there is evidence that we are in the midst of a profound cultural and intellectual shift away from the dominance of taxonomic thinking toward the opportunities that come from hybrid approaches that combine dissimilar entities, ideas, or disciplines to create something new.

We are in the midst of a profound cultural and intellectual shift toward the opportunities that come from hybrid approaches.

We are already beginning to see the implications in design. "Hybrid" is the meme of the moment in academic studios and project names; firm names and marketing are soon to follow. More substantively, young designers (and a few adventuresome older ones, too) are exploring truly hybrid approaches to their practices and their processes. As always, architecture reflects the culture that creates it.

Hybridization is often a messy process — the results can be brilliant, disastrous, disappointing, bizarre, or in the case of the mythical jackalope, just plain goofy. The world of the 21st century will be a hybrid world, and the transition — as evidenced in the US presidential campaign and the recent Wall Street upheaval — will be sometimes rancorous. But the potential rewards are great: a whole new frontier of innovation and creativity.

Elizabeth S. Padjen FAIA Editor



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Letters Letters Letters

As someone who has created a company that is focused on the precise measurement of existing buildings, I found your "Measure" issue [September/October 2008] quite interesting.

It is true that most things can be measured, be it a building or business activity. If the proper methods and tools are used, your results should create an accurate representation of the data. However, it should be recognized that with all measurements, certain tolerances must be expected; the idea that an absolute certain value must be derived from measurement data would mean that nothing would truly be measurable. If we understand that the "exact science" of measurement comes with the caveat of a reasonable tolerance, this gives us the freedom to use the data collected. The key question is, how would your study change by working within expected tolerances? We must conclude that a measurement is accurate only when the observer is practiced and sensitive to those tolerances. To quote Aristotle: "It is the mark of an educated mind to rest satisfied with the degree of precision which the nature of the subject admits, and not to seek exactness where only an approximation is possible."

> *Kurt J. Yeghian* Existing Conditions Surveys Inc. Boston

Joan Wickersham's article on measuring academic architecture programs ["Taking the Measure of a School," September/ October 2008] is a clear and accurate snapshot of the current state of architectural accreditation. The Accreditation Review Conference that took place this fall provided an opportunity for people with leadership responsibilities and special expertise to continue an ongoing conversation about the future of architectural practice and of architectural education. Regular occasions like this to hear each other and share different perspectives are at least as valuable as NAAB's work with individual schools. The organizational structure and processes of the NAAB provide the unique,

comprehensive venue in the world of architecture for consideration of where we are and what the future might hold.

When I noticed that one of the recommended websites in "Site Work" in the same issue addressed pass rates by school, I thought it might be helpful to point out that the Architect Registration Examination has consistently been designed to measure the information an intern learns and uses at work. Pass rates depend as much on their professional experience as on any particular academic program completed.

Sharon Carter Matthews AIA New Haven, Connecticut Former executive director of the National Architectural Accrediting Board

The Association of Collegiate Schools of Architecture is circulating draft accreditation recommendations prepared by the National Architectural Accrediting Board. This "Fusion" model synthesizes scores of recommendations from educators and practitioners who have debated for the past two years whether accreditation ought to be more or less prescriptive ("…should all students know Revit, or study preservation principles, and if so, when…?"). No clear trend has emerged, but standards are essential to assure the profession's accountability to the public.

Recent debates have centered on whether design education should be more or less technical, learning-outcomes oriented, client-centered, focused on licensure or the development of analytical and critical thinking skills, or freed of such constraints in order to nurture maximum creativity and innovation. American practitioners have favored prescriptive standards; European practitioners have favored the development of critical thinking skills; American educators have preferred maximum freedom.

The standards currently being developed will be in effect until 2014, when practice and academic demands may be far different than today. The widest possible input is essential from educators and practitioners to help us project what skills our graduates must be able to demonstrate. Particularly given that half the heads of Boston-area design schools will not be the same as when these programs were last accredited, our schools need intense discussion of what we think we need to succeed in our wideranging programs. The new standards will affect how we prepare graduates to design spaces that are serviceable and beautiful, and who will enter a rapidly changing profession that is committed to life-long learning, research, innovation, thoughtful management, diverse client service, and social responsibility to protect our built and natural environments.

Ted Landsmark MEvD, JD, PhD President, Boston Architectural College ACSA representative to the 2008 Accreditation Review Conference

Whether or not there is agreement on the relative merits of the NAAB accreditation process, we can recognize that it has a significant impact on our profession. Before we can become architects, we first must be architecture students in accredited programs. Consequently, NAAB accreditation is a gatekeeper for assuring that our future architects have a minimal competency regarding issues of the public's safety and well-being. We must, therefore, foster a strong reciprocal relationship between academia and the profession. It is in the interest of the profession to support academic programs by serving as jurors for critiques, teaching courses, joining academic advisory boards, and supporting mutually beneficial programs like faculty research, lecture series, internships, and student scholarships.

The onus of moving beyond NAAB's minimal standards sits squarely on the individual architecture schools. Having served on all sides of the accreditation process, I have learned that the greatest value of a NAAB visit is the self-evaluation that occurs when assembling a school's output into a cogent format for the visiting NAAB team. This process demands that a school's mission and pedagogy are agreed upon and clearly articulated among the faculty. While NAAB strives to be nonideological in its assessment, each school can use the accreditation process to stake out its intellectual territory and refine its pedagogy accordingly. If done well, this process can build an ethos of teamwork and collegiality so a school can continually adapt to our ever-changing cultural and professional contexts.

Peter Wiederspahn AIA

Assoc. Professor, Northeastern University Principal, Wiederspahn Architecture LLC Somerville, Massachusetts

Building-performance evaluations or

post-occupancy evaluations, not unlike David Silverman's fascinating "Measuring Stata" [September/October 2008], are sorely missing from the building industry's project-delivery process.

Silverman compares his story to an architectural Rashomon (a tale told from varied perspectives); however, at the risk of making one metaphor too many, I'd suggest this saga be considered more a "whodunit," with Gehry likened to a scientist and the Stata Center to a Petri dish. Imagine a scientist developing a hypothesis (design), and then cleverly assembling an experiment to test it (building); but as soon as his Petri dishes have been cultured (occupancy), he rushes out of the lab without waiting to find out what happens (failure).

Now, metaphorically speaking, should we blame scientist for his experiment's failure? Or for his not bothering to assess it? And, in reality, had Gehry evaluated the Stata Center post occupancy, would it be a better building? Would its users still sue him?

> Simon Hare, Assoc. AIA Placetailor Inc. Roxbury, Massachusetts

I enjoyed Jeff Stein's interview with Alex Wilson of BuildingGreen Inc. ["What Do You Think You're Doing?," September/ October 2008]. I disagree, however, with Alex's opinion that designers need only know the proper resources to achieve good "green" results, and that the "intelligent" people who write the standards can handle the rest. To the contrary, I believe architects need to be exceptionally sharp and critical, especially when it comes to intelligently

engaging environmental standards - and more importantly, surpassing them.

When it comes to thinking "generations" in advance and pursuing truly zero-carbon architecture (a step beyond being "less bad"), we as an industry need to start being critical of our own decision-making processes, and develop robust design methodologies, rather than using green guides as a crutch to limp towards a slower rate of environmental decline. We need to integrate environmental intelligence into our practices in a way that turns the checklists into a formality, rather than a prevailing catalyst for decision-making. We need to create a professional culture that produces designers who ask informed, critical questions; who can assess the complexities of "greenness" within a coherent, intelligent framework; who can identify and resolve the most critical problems; and who can do all this without compromising their design integrity or restricting the creative flexibility our industry needs to thrive. Their environmental skills need to be inseparable from their design skills. In other words, we need to fundamentally change the way we teach and practice architecture.

Sustainability is, by definition, how well an entity withstands the test of time and maintains its expected level of performance. The practice of architecture is fundamentally an industry of knowledge and expertise. It's no more sustainable to outsource our thinking and problem-solving, than it is to outsource the production of wind-turbine blades to the far side of the globe. The manufacture and maintenance of environmental design knowledge and the construction of robust design methodologies also need to move closer to the point of use. As an industry, we need to evolve.

> Lisa Ann Pasquale MSc Candidate, Sustainable **Environmental Design** Architectural Association London

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BURST*008. Architects: Jeremy Edmiston and Douglas Gauthier. Photo by Richard Barnes. © 2008 The Museum of Modern Art.

Home Delivery: Fabricating the Modern Dwelling

Museum of Modern Art, New York City July 20–October 20, 2008

Visitors to Home Delivery: Fabricating the Modern Dwelling were supposed to proceed directly to MoMA's sixth floor for a comprehensive examination of the ready-to-assemble shelter phenomenon, an idea that's engaged architecture's greatest — from Gropius to Breuer, Fuller to Wright.

But really: who could resist first examining the performance-art aspect of an empty 18,000-square-foot lot next door that jauntily displays five actual pre-fab homes?

And that is as it should be, for nothing speaks more to the central idea of the exhibition than actually seeing these tiny abodes scattered about like so many Monopoly houses. A light-as-air version of a Philadelphia rowhouse dominates, crafted of polycarbonate and glass and acrylic by the Philadelphia firm KieranTimberlake. And sitting deadcenter, there's the tiniest of the bunch, an aluminum-clad, 76-square-foot cube by Horden Cherry Lee Architects and Haack & Hopfner Architects of London and Munich. Off to the side, a shotgun house enchants with gingerbread and a wooden porch, courtesy of an MIT team under the direction of associate professor Lawrence Sass. Each home was erected on site, and most (except for the Cube) do a plausible job of convincing us that we could comfortably — if sparingly — live within their confines. Although their estimated costs (\$78,000 to \$400,000) are for the most part not especially cheap, the idea here is more about conservation, energy efficiency, and taking advantage of all that computers can offer the construction process. MoMA has documented this project online with a website www.momahomedelivery.org --- so all can judge for themselves whether the idea has legs.

JoAnn Greco is a freelance journalist in Philadelphia.

Cryptic Providence

North Burial Ground

Providence, Rhode Island June 13–September 28, 2008

Tender, reverent, sometimes playful,

Cryptic Providence's installations and performances — the work of more than 15 visual artists and performers — have a somber elegance somewhere between Frederick Law Olmsted and Edgar Allan Poe.

Tucked among the silent mob of bonegray obelisks and headstones in the historic North Burial Ground, the pieces surprise even when they are sought out. Disintegrating letters make an introductory statement in Justin Pollmann's "We Live." Skull-like ceramic shells appear nearby on a shaggy hill, remnants of Hannah Verlin's pyrotechnic take on our own momentary lives, "Nest Eggs." Organizer Jay Critchley's mummified 1965 Chevy (photo below) waits beneath in an unused mausoleum, maybe a lighthearted response to a brash era's end. Final messages flutter beneath cedars in "Message Board," by artists Rochelle Martin, Valentine Mancini, and Jay McGuire. The sequence of pieces leads to the serenity of Potter's Field, delicately accentuated by handmade bells in "The Bells Ring for Thee" by Rebecca Siemering. Neither grim nor ghoulish, it's all a reminder that cemeteries can honor the living as much as the dead. (For info: www.jaycritchley.com.)

Conor MacDonald is a writer in Boston.

v Photo by Michael Persson.





Dreamland: Architectural Experiments Since the 1970s

Museum of Modern Art, New York City July 23–March 2, 2009

Last March, I traveled with my wife to the Mall in Washington, DC, where we were amused and delighted by the curatorial honesty of two exhibitions: *Small Masterpieces: Whistler Paintings from the 1880s* at the Freer Gallery of Art and, at the National Gallery, *Small French Paintings.* In both shows, no matter what else, the paintings' dimensions were as advertised: small.

It must be difficult to organize and title an exhibition and deliver the goods, but

< The Manhattan Transcripts by Bernard Tschumi, 1980. Courtesy The Museum of Modern Art.

perhaps, taking a cue from the National Gallery and the Freer, one needn't work so hard.

The works on display in Dreamland: Architectural Experiments Since the 1970s are an eclectic collection with little relationship as a group, other than as architecture. And that might be fine, except that the viewer suspects that the curator was counting on more cohesion to glue these works together. They are mostly, but not always, inspired by New York. They don't date "since the 1970s," as MoMA admits in signage - some pieces are older. If one goes further into the literature for the show, the earlier pieces are supposed to have influenced later work. Perhaps. But, for example, the connection between the urban fantasies of Koolhaas, Vriesendorp, Holl, and Rudolph and the country/ suburban homes by Leeser, SHoP, Roy and Ungers is not forthcoming, despite exhibition notes suggesting that the homes represent an antidote to the city. The connections of Dreamland are forced.

Why not focus on the strength of the show: an exhibition of architectural

speculation since 1970 (or whenever)? The drawings by Vriesendorp and Holl are witty and provocative. The life Vriesendorp gives the city in her painting of Manhattan is a unique study in the interaction of structure and urban character, of dweller/ building/megalopolis. Holl's Bridge of Houses, Melbourne/New York, New York series presents an urban fantasy akin to London Bridge and New York's in-progress High Line Park. Pesce's Church of Solitude Project, New York, New York (across the room from a model of World Trade Center *Tower 1*) inspired more than one visitor to wonder aloud why Pesce's church is not being built at "Ground Zero." Eisenman's Max Reinhardt Haus, an early 1990s proposal for Berlin resembling a Möbius strip, is satisfyingly familiar, reborn as Koolhaas's new CCTV building in Beijing. Why not show the dreams and let the viewer recognize what has come of them?

Dominic Barth, a former journalist and book editor, is a graduate student at Columbia University School of Architecture, Planning, and Preservation.



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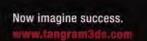
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BY JOAN WICKERSHAM | The Lurker

Old Again

The conservator: Christine Thomson, who has a studio north of Boston where she works, sometimes alone, sometimes with an associate, on the conservation of old furniture and decorative-arts objects from all over the world. Chris began her career 28 years ago as a technician. She learned on the job: the conservator who was her teacher suffered from migraines and would take to his bed, saying to Chris of a particular challenge, "See if you can figure this out."

Some projects in the studio: A Federal mirror whose original gold-leaf was at some point painted over with bronze radiator paint. A 1930s French Art Deco desk, with patches of sun bleaching. A wild 19th-century Anglo-Indian chair, whose dark bracken-like filigree needs repair in several spots. A neoclassical sofa from the 1820s which, unusually, still has its original under-upholstery, of interest to scholars; it needs new upholstery that won't damage the piece and can be easily removed to expose the original surface for any future study.

10:20 Chris is examining an old Japanned bonnet-top high chest. She has already completed a judicious restoration of the piece's fragile, spirit-based-varnish surface, filling in missing applied-gesso ornament but mostly leaving the faux tortoiseshell background alone so the chest won't appear over-restored.

When the chest arrived, the hardware was too big and too Chippendale. Chris has already removed the Chippendale hardware; now she is trying to figure out, by closely examining nail holes and faint marks in the wood, the size and shape of what was there originally.

10:35 Chris holds a piece of tracing paper against a drawer front and gently traces the pattern of nail holes. Then she holds one of the Chippendale escutcheons up to the chest to see which nail holes match it. Any holes in the wood that don't match must be older — and therefore left by the original hardware.

10:40 Removing the drawer and standing it on end, Chris looks closely at the faint imprints left on its surface by both sets of hardware. She repeats this with each

drawer, under incandescent and then ultraviolet light, discerning a curve here, an indentation there.

10:59 She makes a quick tracing of the outline of one of the Chippendale escutcheons, and compares it to the marks on the wood.

Gradually, using the subtle clues provided by the piece itself, the Chippendale hardware she removed, and samples and photographs of Queen Anne-style escutcheons and drawer pulls, Chris is assembling a speculative portrait of what the hardware might have looked like. She will send her sketches to a period-hardware expert in Providence, who will look at them with a historian's eye, saying, "Yes, that shape looks right," or "No, you would never have seen that particular detail in that period." Together they will refine the design and fabricate new pieces that have the right scale and feel for the chest.

11:35 Leaving the chest for the time being, Chris goes to another work table to look at paint samples with a binocular microscope. She is preparing for this afternoon at the Peabody Essex Museum



A Photo by Joan Wickersham.

in Salem, where she is working on an exceptionally rare and beautiful piece: a figurehead by William Rush, a leading early American sculptor and carver. This circa-1800 wooden figure of a woman was painted 28 to 30 times in her seagoing life and the thick layers of paint have obscured the delicate detail of Rush's carving. Chris has made cross-sections of paint samples scraped from the figurehead. Under the microscope, the striated layers of history are visible: many coats of white, some light blue, a period when the figure's dress was green and its shawl was burgundy, and then back to white again. For several months Chris has worked on the project one afternoon a week with PEM conservator Mimi Leveque, and they are as familiar with the striations as an archaeologist would be with the layers of a dig.

11:55 A phone call from Boston's Museum of Fine Arts, inviting Chris to lead a gilding workshop, to tie in with an upcoming exhibition of European decorative arts. She and the MFA curator discuss techniques that might be demonstrated: oil gilding can be applied to any surface, while water gilding is a more complicated process, although it can be burnished to look like gold. "That was the purpose of gilding, when it originated in Egyptian times — to make a lesser material look like gold." They agree on a date for the workshop, after

Affixed to the prow of a ship, this carved woman with the neoclassical face must have appeared strong and graceful. But, lying here, she looks helpless.

Chris checks her calendar to make sure it won't conflict with a workshop she's scheduled to lead at Winterthur.

1:45 In the basement of the Peabody Essex, Chris and Mimi Leveque stop to admire a piece laid out on one of the tables: an Inuit raincoat made of strips of seal intestine, fashioned along the dashing lines of a Russian naval officer's cape. Mimi says the museum will clean it up and repair it as much as possible. "There's a woman I know, just outside of Anchorage, who works with seal intestine, and I'm going to get her to send me some."

1:55 The Rush figurehead is reclining on a table in the museum's mount shop. "There's our girl," Mimi murmurs gently. Affixed to the prow of a ship, this carved woman with the neoclassical face must have appeared strong and graceful. But, lying here, she looks helpless, swooning on the table, clutching her shawl around herself as if for warmth, her surface scraped in some areas, still thickly clotted with paint in others. In every sense of the word, she's distressed.

1:57 The three conservators — Chris, Mimi, and intern Sara Lapham — don white Tyvek coats, rubber gloves, and safety goggles. They gather around the figure and begin coating small areas with a proprietary non-toxic paint remover. They wait a few minutes for the surface to soften, and then use small woodenhandled Japanese carving tools to scrape down the paint. Mimi works above an eyebrow, while Chris and Sara attend to the pleats in the dress.

"Did you get your new iPhone, Chris?" Mimi asks.

"I did. It's almost too nice. My old one I used to just throw around, but this one's like a little treasure. I'll have to get over that." **2:10** Carefully and patiently, scraping tiny areas with the tiny tools. Talk of other conservators, who's working where, which museums are cutting staff.

2:24 More scraping. Talk of airlines: cancelled flights, lost luggage.

2:30 More scraping. Talk of Circus Smirkus: Mimi's daughter has spent the summer touring as an aerialist.

2:50 Sara jumps: her blade has snapped. Matter-of-factly, she changes blades, puts her safety goggles back on, and resumes scraping.

3:05 Mimi vacuums out some paint scrapings from the figure's eye socket. The vacuum-cleaner bags and garbage bags of scrapings swept from the table are full of lead and very heavy. They're taken away periodically and disposed of as toxic waste.

3:12 Two museum curators come in to see how work is going on the figurehead. Mimi



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shows them some photographs of crosssections of paint layers, as well as sketches the conservators have made of how the figure was painted at various stages. "So what we're doing now is really a three-part job: first, analysis of the layers of paint; second, removal; and third, the decision about what to do."

The decision, which ultimately rests with the museum's curator of maritime art, will be whether to leave the figure with a mottled surface, showing some of the different layers of paint; or to apply a clear matte varnish (which could be removed at some future date — reversibility is always a consideration in conservation) that would protect what's there and also heighten existing contrasts; or to paint her — but then which of the three existing color schemes should be re-created?

3:30 More scraping. Talk of the museum's recent acquisition of a Jain temple cart, or howdah, a ceremonial pavilion that would have been mounted on an elephant's back. "It's huge," Mimi tells the other two. "There are these long side pieces, so it could be

drawn by oxen, and then when you got it to the elephant, you put the little house piece up on top."

"What's it made of?" Chris asks. "Rosewood and chased silver. Some leather pieces. And little cymbals on all the wheels. There are some bits missing, which we'll have fabricated in India. But it's mostly just a monster cleaning job."

3:40 Mimi goes off to meet with one of the museum's curators about an object upstairs. Chris and Sara continue scraping. Chris asks Sara about her coursework; she is taking classes and racking up work hours, preparing to apply to conservator programs. She tells Chris she got an A-minus in chemistry.

"Yay! Who was in the course? A lot of nurses? When I took it, it was a lot of nurses."

3:44 Peering at the figure's flank, Chris says, "I think I just ran into a chunk of metal here." X-rays have shown that the figure has some buckshot in her — at some point, someone must have taken pot shots

at her. The conservators believe the shot is made of lead, making it difficult to date: steel shot is more easily dated because of its carbon content.

4:05 Mimi comes back and puts on her white gown again. "Job for Chris upstairs." "What?"

"A Hawaiian cabinet with a warped door."

"Sadly, you can't do that much about warping," Chris says. "You can sometimes reset the hinges and make it look less warped, but..."

"I know," Mimi agrees.

4:15 More scraping. Mimi twists around to get at a tricky spot. "Hmm. I need to have her move her arm. Do you think she'd do that for me?"

Chris says, "I bet she would, if you asked her."

Joan Wickersham is a writer in Cambridge, Massachusetts. Her new book is *The Suicide Index: Putting My Father's Death in Order* (Harcourt).



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Lynda Hartigan is the chief curator of the Peabody Essex Museum in Salem, Massachusetts and the curator and author of *Joseph Cornell: Navigating the Imagination* (Yale University Press, 2007).

Sheila Kennedy AIA is a principal of Kennedy & Violich Architecture in Boston, and the founder of MATx, the materials research unit of KVA. The Portable Light Project, a nonprofit initiative of MATx (see page 54), has been recognized as a 2008 Tech Museum Laureate, one of 25 global innovations that benefits humanity. The author of *Material Misuse* (Architectural Association/ Princeton Architectural Press, 2004), she is a professor in the department of architecture at MIT.

Hybrids are gaining traction in the design world.

Elizabeth Padjen FAIA is the editor of ArchitectureBoston.

Vigor

Anne Whiston Spirn FASLA is a professor of landscape architecture at MIT. A photographer and writer, she is the author of *The Granite Garden: Urban Nature and Human Design* (Basic Books, 1984); *The Language of Landscape* (Yale University Press, 1998); and, most recently, of *Daring to Look: Dorothea Lange's Photographs and Reports from the Field* (University of Chicago Press, 2008).

Nevin Summers AIA is the president of Novation in Cambridge, Massachusetts, a biotechnology consulting firm, and the director of corporate development for the Biomedical Enterprise Program in the Harvard-MIT Division of Health Sciences and Technology. He holds degrees in molecular biology, architecture, and management of technology. He is a co-founder of the MIT Center for Biomedical Innovation and has served as life-sciences specialist to the MIT Sloan School of Management and as an advisor and grant reviewer to the MIT Deshpande Center for Technological Innovation and the Massachusetts Technology Transfer Center.

Jay Wickersham FAIA is a partner of Noble & Wickersham in Cambridge, Massachusetts, an environmental and construction law firm. Formerly a practicing architect, he was assistant secretary of environmental affairs for the Commonwealth of Massachusetts and director of the Massachusetts Environmental Policy Act office from 1998 to 2002. He is a lecturer at the Harvard Graduate School of Design. **Elizabeth Padjen:** Every century or so, there seems to be a radical shift in thinking, in the way that we approach the world. Consider the Victorian era: a lot of intellectual effort went into the task of classifying, categorizing, and simply naming things. The goal seemed to be to impose an order of sorts upon the world.

We now live in a time that seems to have set that kind of thinking aside. We much more readily embrace blurriness and complexity. In the last several years, the word "hybrid" meaning something new that has been created by combining dissimilar entities --- has become increasingly common in popular culture, and the hybrid car has made it a marketing buzzword. But we are also seeing it applied to a different approach to creativity. Some of you here today represent this kind of hybridity. It's evident in firms such as KVA, which Sheila Kennedy co-founded with Frano Violich, a firm that is marrying technical research and design. It's evident in some people, like Jay Wickersham, who is an architect, a lawyer, and an environmentalist, and has founded a practice that somehow blends all of those things, a kind of legal practice that didn't exist 100 years ago. Similarly, Anne Spirn's work very early on focused on pulling together landscape architecture, infrastructure, and urban design and making people think about the urban environment in a new, hybrid way. They are evidence of ways that the design world can expand its boundaries and find new opportunities to solve problems that perhaps have not traditionally been considered design problems.

Let's start by thinking about some definitions of hybrid. Its roots are in biology, and so I'd like to ask Nevin Summers, as our architect-scientist, to describe some of its scientific connotations.

Nevin Summers: The first use of the term that I encountered, a long time ago, was in a discussion of hybrid vigor. Inbred strains are disease-prone; they are selected for a particular trait, but they're not very robust. If you cross them with another inbred strain or with the wildtype found in nature, you often get an outbred strain that rescues the robustness and has what's called "hybrid vigor." The more recent uses in biology have been in molecular genetics, in understanding how DNA, itself a hybrid molecule encoding functional instructions called "genes," is copied, cut-and-pasted, and edited during cell division, sexual reproduction, and during evolution. In the 1970s, humans figured out how DNA could be moved around between different organisms in the lab. This recombinant DNA technology borrowed the metaphor of the "chimera" from classical mythology - think of Picasso's images of the Minotaur, half-bull and half-man. But let's be very clear we do not make hybrid monsters today using DNA! The scientific community at that time self-imposed a moratorium to first

evaluate the ethics and safety. So today, researchers are proceeding cautiously, making genetically recombinant hybrid organisms only for societally approved purposes — for example, making a life-saving drug such as human insulin by fermenting harmless bacteria that have been genetically modified by insertion of human DNA.

Of course, a more familiar example can be found in our family lineage: children are the hybrids of the sex cells of their parents. And Darwin expanded this family lineage concept to all organisms as one big evolutionary "Tree of Life," which is a grand unified genealogy where all members have descended from a universal common ancestor. All of us earthly living beings are biological hybrids genetically related to one another by a distant common relative. For humans and chimps, that common ancestor lived some 5 million years ago.

Human-made artifacts evolve as well. "Convergence" has a similar meaning to "hybridization" in the technological world. Cell phones and PCs, with their discrete functions merging together into "smart phones" like the Apple iPhone, are probably the most ubiquitous convergent devices around today. We can expect buildings to become even more convergent as information technology, energy management, and dynamic control systems become more necessary and more integrated into building design.

Anne Spirn: I consulted the *Oxford English Dictionary* and learned that the word "hybrid" comes originally from "hibrida," which is the offspring of a tame sow and a wild boar. The notion is that it's the offspring of two different species or varieties or, more generally, anything derived from heterogeneous sources or composed of different or incongruous elements. But the idea of people as professional hybrids isn't completely new. The *OED* cited a quotation from 1874: "I will tell you what you are: a hybrid. A complex cross of lawyer, poet, naturalist, and theologian."

We're seeing convergence, but also something that is perhaps more holistic, more synthetic, than the interdisciplinary efforts of the past few decades. *Anne Whiston Spirn FASLA*

Lynda Hartigan: That's an interesting quotation, because it makes the distinction between a hybrid person and the then-prevailing idea of the Renaissance man — the gentleman scholar with multiple interests, mingling the amateur and the professional which is an ideal that goes back even further in history. What's the difference between the current hybrid combining of disciplines and the concept that's been around since the 1980s of work that is interdisciplinary or cross-disciplinary?

Anne Spirn: I think the current hybridity is bringing back together things that never should have been separated in the first place. The late 19th century saw the rise of all sorts of new disciplines, which became increasingly specialized in the 20th century. Now we're seeing convergence, yes, but also something that is perhaps more

holistic, more synthetic, than the interdisciplinary efforts of the past few decades. And it's manifested in all sorts of ways — land use, for example. We are beginning to rethink the traditional approach to zoning, which maintained that all the various land uses should be classified and separated.

Elizabeth Padjen: There's an aspect of hybridity that is purposeful, that creates something new by design. The Renaissance-man model is interesting because it represents a different approach: it's about being a little bit of everything, but not really melding a knowledge base to create something new or different. Isn't that part of what's happening with this new convergence? We're choosing what gets melded back together in a deliberative fashion.

Robert Cowherd: Hybridity is helping us to recover something that was lost. It's important to remember that it was initially useful to create these separations and distinctions. There have been unprecedented leaps forward in terms of our scientific understanding, for example, because of the specialization that dominated the 20th century. But the problems of the 21st century are really the result of the solutions of the 20th century that came out of that single-issue focus. Now that we are confronted with such serious, secondary, unintended consequences of our actions in the last century, it's not surprising that we are rethinking some of these separations and fusing them back together.

Hybridity is not simply finding the least common denominator between two entities. Nor is it one-plus-oneequals-two. *Robert Cowherd PhD, Assoc. AIA*

Sheila Kennedy: Nevin mentioned the chimera, which made me think of Leonardo's monsters. Is a hybrid monstrous or wondrous? What was considered monstrous about Leonardo's monsters was that the individual parts were still recognizable: the tail of a fish, the top half of a lion. But hybridity in practice or as a way of thinking about design is a bit different than a collage of parts. The biological analogy, and the idea of convergence that Nevin mentioned, suggest that a hybrid is a new integrated whole, which is born from different parts, but in which the constituent parts are no longer recognizable.

> Jay Wickersham: And yet the most familiar use of the word "hybrid" today is in fact marrying two very different technologies, each of which continues to work in its own way. The hybrid car has both an internal combustion engine and an electric battery, and it switches back and forth between those two modes of power. It is not necessarily some new convergence.

Robert Cowherd: The thing that keeps it from being just a dualfuel vehicle is the part where you hit the brakes and generate electricity; that's what starts to fuse the two together.

Nevin Summers: And there's a third element: you couldn't have a hybrid car without the computer, the "brain" that organizes and dynamically controls it as an integrated system.

Elizabeth Padjen: Can you describe some other examples of the hybrid in your own work?

Lynda Hartigan: I'm a representative of a hybrid institution, the Peabody Essex Museum. Two separate institutions literally down the street from each other, with very different perspectives and yet some ties of history, merged 16 years ago, and out of that has come a new institution that is very different from either of the original museums.

The Essex Institute in many respects functioned as a historical society but it was also a collecting institution, which put it in the realm of a museum focused on New England. And the Peabody Museum, since its inception way back in 1799, really was a museum, collecting and looking at things from a much more anthropological or ethnographic viewpoint. So when the two were brought together to become the Peabody Essex, the paradigm that each institution was using dramatically changed. Neither institution had looked at what it had as exemplars of art and culture, which is the focus of the new museum.

Robert Cowherd: That's a good example of another aspect of hybridity: it's not simply finding the least common denominator between two entities. Nor is it, to continue the math metaphor, one-plus-one-equals-two.

Anne Spirn: This conversation is making me think differently about the book I just finished on Dorothea Lange. Lange is known for her photographs; what is less well known is that she was also an author who grouped her photographs and wrote stories about the groups, in addition to the captions she wrote for individual photographs. But these stories have been stripped from her photographs. So did she create a hybrid art of image and text? Many people would argue that the photographs can stand on their own, and they can. But the experience of her photographs is entirely different when married with her captions for both single images and groups. The issues that arose from the fact that her images and words had been sundered, and the question of why the words of this famous photographer had been ignored, led me to produce what is itself a hybrid book — a combination of a monograph, a biographed.

Lynda Hartigan: The time when Lange was writing those captions was a period in which photography itself was fighting the battle, not just over whether it was art, but over differences among art photography and scientific photography and journalistic photography — which is an example of what we talked about earlier, the urge in previous eras to identify and enforce distinctions. So the introduction of words, I suspect, would have made the art world's photography advocates very uncomfortable.

The architectural profession itself is subject to hybridization, and not always driven by forces within the profession. Jay Wickersham FAIA

Now there are contemporary photographers who embed inscriptions or narrative within the photographic image itself.

Anne Spirn: And of course photography is now an integral aspect of the Web, which is itself a hybrid medium. It brings together text, video, audio, and graphic images in entirely new ways.

Nevin Summers: And that's leading us toward informational content hybridity. Newsprint, which is carbon-based, has moved to an electronic form, which is silicon-based, and is supplemented by videos. You can see a real-time broadcast of a speech that someone is giving with the teleprompter transcript running down the side. It's a much richer experience to have all these different media simultaneously. Hypertext links have profoundly enriched the online reading experience and enabled powerful democratizing community-generated knowledge resources like Wikipedia.

Elizabeth Padjen: Is the Web one of the reasons why this kind of hybrid thinking is more prevalent? People are immersed in a hybrid medium, and it's encouraging them, overtly but subliminally too, to find things out there that might be married.

Sheila Kennedy: I would say that architecture is inherently synthetic, even apart from the influence of the Web. Architects reach out by necessity to other individuals in other disciplines for the common purpose of solving problems that couldn't be solved by one discipline alone. We're trained to synthesize information, to create not just a woven braid from those diverse threads, but a whole new cloth.

Jay Wickersham: At the same time, the architectural profession itself is subject to hybridization, and not always driven by forces within the profession. One longstanding assumption, rooted in the 19th century, is that architects don't build things. That was grounded in ethics: the architect was supposed to be a neutral, trusted agent who would ride herd on the presumably corrupt contractor. It also had a social goal: the architect could achieve a higher status by not sullying his hands with a trade — and back then it was, of course, *his* hands. The assumption that the architect doesn't build, which is so deeply ingrained in the design professions, seems to be breaking down now as we're seeing a move toward integrated project delivery. It's a form of hybridization that carries enormous risks for the profession; many existing design practices probably will not survive in this new world.

Elizabeth Padjen: What is integrated project delivery, and what are the risks?

Jay Wickersham: Integrated project delivery is driven by owners and contractors, and is a method of delivering the built product, not the design, faster and cheaper. So it is a process where the designer works with the contractor on a much more intensive basis from the beginning of the design. The consultants work with the contractor and with the subcontractors and with the manufacturers on a much more intimate basis, with the idea that you have a design that is more buildable, in which the cost has been much more carefully controlled through this process. But there's also a very real risk that the designer will lose control and lose the traditional role as the mediator between the contractor and the owner, who creates the design working directly with the owner. The designer may actually be squeezed out.

Robert Cowherd: Design/build is a hybrid process that is probably familiar to many people. Is this a variation on design/build?

Jay Wickersham: It's somewhat different. Design/build is a hybrid that already challenges the conventional role of the design professional, but the designer is hired by the contractor. With integrated project delivery, the designer may still be hired by the owner, but there is a greater blurring of the lines.

Sheila Kennedy: I agree with Jay that integrated project delivery represents a profound change for the profession, but I have a slightly different perspective on the risks. It's a process that requires a digital platform, where many people are working together on the same software platform — as if on the same computer, so to speak — to create an artifact, a building. But many large objects - ships and planes, among other things - have been designed and constructed in many different parts of the world as a result of this process, and so there are ways to deal with the risks. But what happens when many people are literally working on the same digital model? What does that mean for ownership? What does that mean about responsibility? Who updates the digital model and, very importantly, who is its caretaker? But even these questions about ownership, control, and responsibility aren't unfamiliar to us as architects. Risks always reside even in the most standard practices of architecture. And they are very likely to reside in other areas of design practice, such as landscape, urbanism, and infrastructure, where traditional disciplines and design entities are merging into different forms of practice.

Anne Spirn: But there are always historical precedents. A great hybrid model that has inspired my work is the Fens and the Riverway in Boston. We have, in fact, a transcript of the conversation between Olmsted and the city engineer about the creation of the Fens. Originally the city engineer was proposing a straightforward masonry storm basin. Olmsted asked, "Why can't the whole park be a detention basin?" And then they extended the idea further, so the Riverway became a storm-drain system as well as a recreational system as well as transportation infrastructure in the form of a parkway. What I took from Olmsted was that habit of thinking, of always looking for ways to incorporate more functions, more purposes, into the program.

Robert Cowherd: Killing two birds with one stone is as old as design itself. One of the reasons I left engineering for architecture was because there was always only one right answer, and you were taught to look at a very narrow question. There are attempts in every generation to find a way to splinter architecture into disparate, specialized fields, but they've generally been resisted, perhaps for

the reason Sheila mentioned, that architects are trained to think in terms of synthesis. The big calamity was of course the separation between planning of the larger built environment and architecture; that has proven disastrous. And we're just beginning to correct that.

Elizabeth Padjen: How can we train people to think in terms of making the kinds of connections Anne was talking about?

Anne Spirn: The studio has to focus more on systems thinking in addition to the design of formal objects. And we need to teach students to imagine how multiple problems can be solved with a single solution. Your client usually hands you a set of issues that need to be resolved, and a program. But as the designer, you need to think beyond those issues and that program: here's what the client wants done, but what else is happening on this site, in this place? Are there other issues that can be served through this new design?

Sheila Kennedy: We don't have to worry about whether we are teaching a new way of thinking. The problems will tell us. And the problems that are first and foremost are about how architects make use of things: land use, water conservation, energy.

One specific example is the problem of how architecture makes use of the many different forms of renewable energy. The traditional solar panel on the roof may be part of a response, but the question deserves many responses. A decade ago, I discovered that though there were technologies that were being created — energy-efficient lighting, photovoltaics, sensors and switches — this young industry had very little capacity within itself to integrate these elements. The technology was available, but there was no real way to introduce it into the building context. In short, the problem was one of vertical integration.

So in 2000, our firm decided to radically reorganize the way that we were thinking — about making things and about practice. We hired people from different disciplines and with different sets of qualifications, from electrical engineering, to interaction design, material science, electronics, and of course architectural design — even people with experience in masonry and in working with materials. The goal was to try to build some capacity and to try to tackle this problem of vertical integration. We were interested in the problem of manufacturing, but also in finding ways that would make these new technologies appealing, that would encourage people to adopt them because of their aesthetics, their ease of use, and low cost. Eight years later, our work has little to do with traditional modes of architectural practice. The problems told us how we needed to think.

Elizabeth Padjen: You're describing a process that is very deliberate, and that's an essential aspect of this kind of hybrid thinking. It's not a path that many designers have been prepared to follow, although it seems to be more common among young firms.

Lynda Hartigan: I think it's partly generational. My college-age son belongs to a generation of people who have been encouraged to understand their individuality but also to work together as the key way to become better-educated and more well-rounded problem-solvers. I see a lot of promise in that process, but it's hard to learn to emulate that. **Robert Cowherd:** Facing complexity is what forces us to deal with hybridity. It was much easier when we had the heroic singular vision, when designers thought in terms of a beautiful, idealized object without context, placed on a pure, infinite plane. Now that we have opened Pandora's box, allowing the real world into the frame of our consideration, our students are facing extreme complexity in ways that previous generations of students and professionals have not really come to grips with.

Elizabeth Padjen: Members of this generation — those in school and those who have graduated in the last decade — are also the first to understand globalization as an integral aspect of their lives. We've talked about the Web as a contributor to hybridity. What is the influence of globalization?

Robert Cowherd: First, I have to say that "globalization" is a term that quickly outlives its usefulness. It's useful if you're writing a newspaper article and you want the majority of people to understand vaguely what you're talking about. But there are power disparities that lead to dominance and imbalanced transfer of influence rather than the more equitable exchange implied by the neutrality of the term "globalization."

As soon as you really examine the economic, political, and particularly the cultural forces — how they are coming together, where they are leading us — you quickly have to move on from the term globalization, which cloaks as much or more than it discloses, to ideas like cultural hybridity.

Hybridization turns out to be an extremely valuable means of dealing with the phenomenon of the interaction of cultures, which has been going on for thousands of years. For example, Java and Bali, where I've worked, have been influenced by the cultures of, first, India, then China, then Muslim traders coming in from northern India, then European colonial forces, and now American media. But the core values of the Javanese religion and culture are still there. They're simply expressed through new means. There is a word in the Indonesian language, Indonesianization, which is commonplace. It's just taken for granted that that's what you do. You take things from other cultures and make them your own.

An example: A prince was going to an event. The king would be there, so he had to wear the traditional Javanese costume with the short sword tucked in his sash at the small of his back. The Dutch governor would be there, so he had to wear European coattails. When the prince put them all on together the sword made the coattails stick out, so he called his dresser and said, "Quick! Cut these tails off." To this day, that is the required dress for formal occasions in Java. It looks European, it looks Hindu, it looks Chinese, and when the fez is sometimes added, it looks Middle Eastern. But it's considered purely Javanese.

Jay Wickersham: That's a fascinating example of a culture that is embracing infusions from other cultures into a society that is still struggling to maintain a sense of its own identity. Much of the talk about hybridization in contemporary culture, at least in the industrialized world, presumes that for a pre-industrial culture to survive and to retain its own identity, it must remain pure, uncontaminated by outside influences. At the same time, it's useful to remember, going back to our biological analogy, that many cross-breedings are reproductively sterile. The mule, which is a cross between a horse and a donkey, is an example; it may be useful in the short term but it cannot reproduce itself. So the challenge is to know which hybrids have real vigor, and which are ones that may be leading us into dead ends.

Elizabeth Padjen: I wonder if the history of art might be the best tool for teaching people about hybrid thinking. If you accept art as a cultural relic — the remains of a culture or society — then the history of art offers a way of tracing hybridization through human history, as well as different models for contending with cultural pressures in our own time.

Lynda Hartigan: Actually, I think it's art itself, especially modern and contemporary art, rather than the history of art, that provides insights into hybridity. The history of art has been driven by the concept of lineage — that artists and styles are either the logical progression from one to another or the reaction against predecessors. Since the 1920s, artists have really pushed the boundaries of what can happen when disparate ideas, materials, processes, and forms are brought together. The logic of lineage just isn't part of the equation for these artists. Globalization across cultures now has also exponentially escalated art's potential for hybridity.

Sheila Kennedy: Cultural hybridity is not necessarily about giving up a culture as much as it is about adapting and adding to your culture and being able to choose which strand of your culture you wish to draw upon at a given moment. We see that in design schools; it's definitely the reality of most young people today.

Nevin Summers: Perhaps another way of looking at the question of cross-disciplines that we talked about earlier is to think of them in this way, as cultural hybrids that increase our choices and opportunities. I work with the Division of Health Sciences and Technology [HST] that was established by Harvard Medical School and MIT 40 years ago to bring together the clinical realm and the engineering realm. Back then, there were a lot of clinicians at Boston-area teaching hospitals looking at life-threatening medical problems, but they didn't have access to technical engineering capabilities. Conversely, there were a lot of scientists and engineers in labs engaged in basic research without an awareness of real-world medical problems. You could say this region had a lot of nails in need of hammers and a lot of hammers in need of nails. The goal of HST was to create a

highly creative inter-institutional, inter-disciplinary environment where all these people could easily come together and collaborate. HST, while it now has a bricksand-mortar presence, started as a virtual institution that spanned across a world of vertical stovepipes. It's the longest-standing collaboration between Harvard and MIT, schools often portrayed as rivals, but HST is in fact a degree-granting institution, and at any one time there are over 400 students getting MDs, PhDs, and MBAs.

The irony is that the people get promoted by putting their effort into working their way up their particular departmental stovepipe, but the real creativity happens by making collegial connections between the pipes. So, for example, there might be clinicians in Boston studying some disease, who need access to a new drug-delivery implant technology, and maybe some engineers across the Charles in Cambridge who have been developing a novel nanotech surface coating, but haven't found the right application, because they're thinking photovoltaics or batteries, when in fact it could also be used in a biomedical application. Through HST, which is itself a hybrid, these two groups who might never have encountered one another are brought together, and they come up with an idea, a new application, which is a hybrid as well. Last year, HST began a new initiative with the government of India, so now the emergent "hybrid frontier" includes collaboration across geographic and cultural boundaries, too.

Cultural hybridity is not necessarily about giving up a culture as much as it is about adapting and adding to your culture and being able to choose which strand of your culture you wish to draw upon at a given moment. *Sheila Kennedy AIA*

Jay Wickersham: Do the HST faculty and researchers find each other by chance? Or are there people who are actually matchmaking?

Nevin Summers: There are mentors who advise, but collaborations aren't pre-structured. They just happen by creating a vibrant community and providing a lot of opportunities to network. Some researchers are natural-born entrepreneurs and very proactive social catalysts. Others need mentoring.

Robert Cowherd: Every verb Nevin uses to describe HST works equally well if he's describing a virtual interaction or a spatial interaction. So I'm dying to know, to what extent is this something that happens in "meatspace" and to what extent does it happen in cyberspace?

Nevin Summers: Interaction starts in meatspace, and then that face-to-face contact gets nurtured online. It's all about taking full

advantage of Boston's close physical proximity and public transit. In contrast, UCSF, Berkeley, and Stanford in the Bay area, where I've worked, have the same high level of brain power that's here, but it's spread out more. The Charles River Basin is incredibly fertile for biomedical innovation, and we're able to leverage our "propinquity," our geo-density, into a critical mass. Bright people like to be in close proximity to even brighter people because it improves their game. There are many places in the Longwood medical campus, at MGH, Harvard Square, and at MIT where HST people like to congregate.

Robert Cowherd: And then they invite each other to the home turf for a barbecue?

Nevin Summers: That's right. And faculty members get together with industry mentors to co-advise students, so there's a whole educational process that goes on at the same time.

Anne Spirn: I often find that students are the catalysts for bringing people together. They go out and find various thesis advisors, who often have never met or even heard of each other. Meeting on a thesis committee brings people together physically, and cross-fertilization often emerges from the conversation.

Jay Wickersham: I recently did some research on one of the great hybrid practices of all time, the office of Charles and Ray Eames. Their entire method of working was all about hybridization, all Another way of looking at the question of cross-disciplines is to think of them as cultural hybrids that increase our choices and opportunities. *Nevin Summers AIA*

about moving from furniture to architecture to exhibition design to film. I talked to a number of people who worked with them, and a couple of interesting ideas emerged. One was the role of research. Some of their work came out of doing things just for fun. The films, for example, were for pure entertainment, but they developed some technical expertise, and then people wanted to back their projects. I talked to someone who had been their client at Herman Miller, who referred to their method of working as "clumsy." From the perspective of the furniture manufacturer, they took a long time and were willing to follow a lot of different dead ends, then tear everything up and start all over again. But that was part of their method. When they designed exhibits for the National Aquarium, they made everyone in the office learn how to scuba dive; then they filled the office with huge fish tanks, so everyone would learn how to feed fish and how to run the filtration systems. And they made things - for them, designing and making was all one, because they made all the prototypes.

Sheila Kennedy: You touch on something very important, which is that you have to really like and really enjoy what you're doing.





You have to play around with things in order to understand what their potentials are. You can take something that's relatively new and start playing with it as a way of learning about it, even if your knowledge is going to be a bit imperfect.

Nevin Summers: Children are natural hybridizers for that very reason. They play. They'll put stuff together in naïve ways that aren't informed by prejudices that grownups have learned. Play is often part of creativity.

Lynda Hartigan: And broadly speaking, artists function in very much the same fashion, but they're often doing it more from a rebellious viewpoint, instead of the child's naïve exploration.

Sheila Kennedy: I wonder if Jay would be willing to speculate about new hybrid design practices since the Eames and how they might change the way we think of the basic architectural contract.

Jay Wickersham: The most radical experiments have happened in Australia, a country that has even more litigation than the United States. In certain parts of Australia, the predominant model of building large infrastructure projects is what's known as an alliance. It is a contractual model where the owner, the contractor, the engineer, and other consultants all join in one contract, and all agree not to sue one another, and all agree mutually to share the risks and the benefits of delivering the project on time and on budget and in accordance with certain defined performance criteria. Nevin Summers: It sounds like a partnership.

Jay Wickersham: Yes, in effect, it's a short-term projectspecific partnership. One of our clients was part of the Australia National Museum in Canberra, where it was used very successfully to design and build a very high-profile building. And interestingly, our client and other people who worked on that project called it a life-transforming experience. There was a different set of relationships among the different participants in creating this building. It was a contractual form that encouraged them to work collaboratively for the good of the project. The legal structure meant that they had to rely upon one another — either they all would succeed or they all would fail. And so they all succeeded.

Robert Cowherd: It's a social model.

Jay Wickersham: Exactly. We think of legal contracts, particularly in architecture and design, as being outside forces and constraints, but in fact they are social constructs. When we rethink how we build all these relationships in really hybrid ways, we can really affect behavior.



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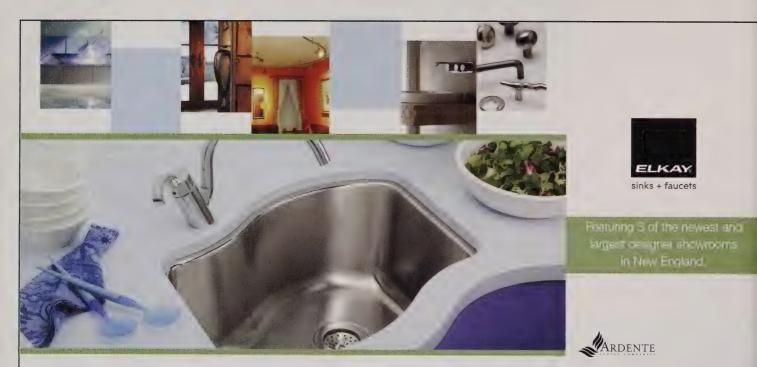
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In the United States, more than 40 percent of our carbon emissions is attributed to the construction and operation of buildings.

Existing buildings, both historic and otherwise, play an essential role in creating a sustainable world. While statistics such as those above suggest that buildings represent a threat to the health of our planet, they also demonstrate that the reuse and greening of these structures present an enormous opportunity to reduce our nation's carbon emissions. New technologies, knowledge, products, and design methodologies are steadily creating new synergies between old and new, demonstrating conclusively that historic buildings can go green without losing (and sometimes even recovering) the distinctive character that makes them significant and appealing. Architects, developers, and property owners do not have to choose between environmental responsibility and historic character. They can have both — a true hybrid.

Like all hybrids, green preservation projects are shaped by two or more components that create designs of greater complexity and interest than those shaped as responses only to green or to preservation concerns. The expression of these new hybrids can be as exciting as any completely new building, and such projects often meet the social and economic goals of true sustainability more easily than do new buildings. According to the Carnegie Mellon Green Design Institute, renovations create 30 to 50 percent less greenhouse-gas emissions than new construction, at the same time creating 20 percent more jobs (usually local).

A sound older building that is abandoned, underused, or demolished is a wasted asset. According to a formula produced for the Advisory Council on Historic Preservation, about 80 billion BTUs of energy are embodied in a typical 50,000-squarefoot commercial building, the equivalent of about 640,000 gallons of gasoline ("embodied energy" refers to the total amount of energy used during construction and in the shipping and fabrication of materials). Putting existing buildings to good use reduces demolition and construction waste and lessens the demand for energy and other resources for new building and materials. We are much too inclined to think of our buildings as disposable, rather than as a renewable resource. As noted above, a 2004 report from the Brookings Institution projects that by 2030 we will have demolished and replaced 82 billion square feet of our current building stock. It will take as much energy to do this as it would to power the entire state of California --- the 10th largest economy in the world with a population of about 36 million people - for 10 years. If we were to rehab even 10 percent of this 82 billion square feet, we would save enough

by Jean Carroon FAIA, LEED AP

energy to power the state of New York for well over a year. Construction debris accounts for 25 percent of the waste in the municipal waste stream each year. Demolishing 82 billion square feet of space will create enough debris to fill 2,500 NFL stadiums.

The reasons we demolish buildings rather than reuse them are many and complex, including misperceptions about energy efficiency. Older and historic buildings are often not the energy hogs that many people assume. Data from the Department of Energy indicates that commercial buildings constructed before 1920 use less energy per square foot than buildings from any other decade up until 2000. A 1999 study by the General Services Administration found that utility costs in the GSA's inventory of historic buildings are about 27 percent less than in nonhistoric structures. Energy performance of an existing building can almost always be enhanced by embracing both new and old approaches, especially because poor performance is often at least partially due to lost user knowledge and detrimental changes.

If we can change some of these misperceptions about older buildings, we can simultaneously relieve some of the pressures contributing to the loss of our landscape to development. While sprawl is devouring our land, many neighborhoods in the inner city and the inner ring of suburbs are vastly underused. Revitalization of existing neighborhoods promotes efficient land-use patterns and focuses public and private reinvestments in areas where infrastructure is already in place, and already paid for. Furthermore, older neighborhoods are typically compact, centrally located, walkable, and mass-transit accessible characteristics that are promoted by advocates of smart growth and the "new urbanism," and which are increasingly recognized as the key to sustainable land-use patterns.

Jean Carroon FAIA, LEED AP, is a principal of Goody Clancy in Boston and is the author of the forthcoming *Sustainable Preservation: Greening Existing Buildings* (John Wiley & Sons, 2009). This article has been adapted from testimony before the US Senate Rules Committee, prepared with Patrick Lally, director of congressional affairs and Patrice Frey, director of sustainability research for the National Trust for Historic Preservation. This is an exciting time, when the boundaries between architectural practice areas and specialties are blurring. Practitioners in the fields of preservation, green design, and architectural theory are finding common ground, each enriching their own work through a greater understanding of the others. The case studies below illustrate three dramatically different building types in different parts of the country — an Armory in Oregon, now a theater; a barn in Pennsylvania, now a visitors' center; and a small house expanded and transformed in California. Each is an innovative, elegant design shaped by both a commitment to environmental responsibility and respect for the context, purpose, and form of the original building.

Green preservation projects celebrate our cultural past as well as our connection and responsibility to the natural environment. While greening new buildings is undeniably an essential element of any effort to combat global warming, even construction of the greenest new building uses significant energy and other natural resources, thereby contributing to global warming. We simply cannot build our way out of our environmental crisis; we must *conserve* our way out, by making better, more efficient, and more innovative use of our existing buildings. There is approximately 300 billion square feet of existing built space in the United States. That space may well be our most significant renewable resource.

Older and historic buildings are often not the energy hogs that many people assume. Commercial buildings constructed before 1920 use less energy per square foot than buildings from any other decade up until 2000.



The Gerding Theater in Portland, Oregon, is a LEED-certified Platinum project, the highest ranking in the popular green metric system. The theater is housed in an 1890s armory listed on the National Register of Historic Places. The constraints of the exterior envelope led to a design that incorporates space excavated 30 feet below the original floor to accommodate a complex program in a dense urban setting. The visible celebration of the original Douglas fir roof trusses in the open ceilinged foyer is one of the most dramatic components of the design and an apt metaphor for green preservation.

The project team demonstrated from the outset a commitment to the building reuse and to environmental responsibility. Steps were taken to minimize the urban heat island effect and storm water runoff by using rainwater harvesting. An adjacent sliver park is home for native vegetation and benches to enjoy the garden. A rainwater harvesting system captures all rainwater and stores it underground for use in toilets and urinals. Installation of low-flow plumbing fixtures also reduces water consumption; in total, the building uses 88 percent less potable water than a conventional system. The unusual use of an off-site district chilled-water plant eliminated the need to install chillers on site. This strategy, combined with displacement ventilation, extensive daylight, and the building's thermal mass, cut projected energy costs by 30 percent. LEED-NC, v.2/v.2.1; Level: Platinum (53 points).

Photos: interiors by Josh Partee/GBD Architects; top right courtesy United Fund Advisors; center by Marcus Lima/GBD Architects.

GREEN DESIGN ELEMENTS Sustainable Sites:

- Public transportation proximity
- FlexCar shared vehicle
- Bicycle accommodation
- Interior excavation of site
- Permeable paving materials
- Xeriscaping
 Bioswales

- Water Efficiency:
- Rainwater harvesting system
 Ultra low-flow plumbing fixtures
- Dual-flush toilets

Energy and Atmosphere:

- District chilled-water plant (off site)
- Chilled beams
- Radiant heating (lobby floor slab)
- Thermal mass
- Displacement ventilation
- Occupancy and photoelectric sensors
- Building commissioning

Materials and Resources:

- 95 percent construction waste recycled
- Recycled content materials
- Fly-ash concrete substitute
- Forest Stewardship Council (FCS) certified wood
- Locally manufactured materials

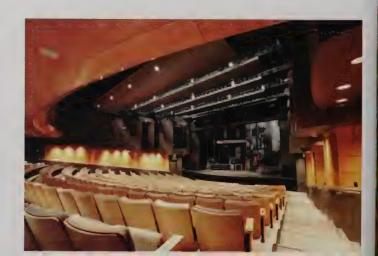
Indoor Environment Quality:

- Skylights
- Operable windows
- CO₂ monitors
- Low-VOC materials and finishes

Additional Features:

- Occupant recycling program
- Green cleaning policy

For more information: www.aiatopten.org/hpb/overview. cfm?ProjectID=833 (Click on left margin menu options.)



THE BARN AT FALLING WATER Mill Run, Pennsylvania Bohlin Cywinski Jackson

This renovation of a barn for the Western Pennsylvania Conservancy not only houses administration functions, but also serves both as a remembrance to the community of Pennsylvania's agrarian past and an example of good stewardship toward the environment. The 19th-century, two-story, "bank" barn was built to accommodate access to both levels from grade by sinking one side of the barn into a hill. Excavation of earth beneath the existing structure preserved the building's integrity while gaining space for administrative needs.

A graywater system paired with a landscape design featuring indigenous vegetation (Xeriscaping) and low-flow plumbing fixtures helped to reduce the projected potable water use by over 70 percent. Energy needed to heat and cool the building is reduced by the use of geothermal wells, a heat-recovery ventilation system, and the addition of Icynene insulation that is both highly efficient and contains no VOC materials. As a result of these techniques, along with other "smart building" principles, the barn is 38 percent more energy-efficient than the ASHRAE 90.1-1999 requirements. In addition, 50 percent of the building's grid-supplied energy is purchased with American Wind Energy Certificates (a renewable energy source). LEED-NC, v.2/v.2.1; Level: Silver (33 points).





GREEN DESIGN ELEMENTS Sustainable Sites:

- Xeriscaping
- Bioswales

Water Efficiency:

- Graywater system
- Low-flow plumbing fixtures

Energy and Atmosphere:

- Renewable energy certificates (wind)
- Ground-source geothermal heat pumps
- Heat-recovery ventilation
- Solar-shading devices
- Occupancy and photoelectric sensors
- Seasonal assembly space

Materials and Resources:

- Over 80 percent of construction waste recycled
- Recycled wood floor (gym)
- Icynene insulation
- Innovative materials (straw and sunflower seed composite panels)

Indoor Environment Quality:

- Operable windows
- Low-VOC materials and finishes
- Hazardous material decontamination (guano)

For more information: www.aiatopten.org/hpb/overview. cfm?ProjectID=453 (Click on left margin menu options.)





Photos by Nic Lehoux, except bottom right courtesy Bohlin Cywinski Jackson.

SOLAR UMBRELLA HOUSE

Venice, California Pugh + Scarpa Architects



The architects for the Solar Umbrella House took advantage of the eclectic architectural diversity of the surrounding neighborhood to create a thoroughly modern and elegant addition to a 600-square-foot tract home that in many communities would have been a "tear down." While not an example of historic preservation, the renovation of the house and the 1,200-square-foot addition maintained the form, scale, and exterior character of the original residence on the street front, while increasing site coverage by only 400 square feet.

Winner of multiple awards, including a national AIA Honor Award, the design intentionally uses local, highly durable materials with very low maintenance requirements, an aspect of environmental responsibility that is seldom acknowledged. The addition takes advantage of the long narrow lot to reorient the house east-west, creating 100 percent daylighting, passive solar heating, and natural ventilation throughout. The photovoltaic solar panels that provide 95 percent of total energy needs are dramatically positioned in a canopy over the second floor terrace, providing an energy source while screening the building and reducing thermal heat gain. As the architects note, "the solar canopy is multivalent and rich with meaning — performing several roles for functional, formal, and experiential effect."





GREEN DESIGN ELEMENTS Sustainable Sites and Water:

- Xeriscaping, minimal turf
- Minimal site coverage; 65
- percent permeable
- Minimal construction impact
- Water-efficient appliances, fixtures, and irrigation
- 90 percent of precipitation managed on site

Energy and Atmosphere:

- Electric vehicle charging station
- 92 percent naturally ventilated
- 100 percent daylighting
- 90 percent of glazing on south and north elevations
- Building orientation for passive solar heating
- 95 percent of energy from on-site photovoltaic
- Solar hot-water collector
- Energy Star appliances
- Whole-wall R-value of 15

Materials and Resources:

- Cellulose insulation
- Reuse of existing building
- Durable, low-maintenance
 materials
- Salvaged and recycled materials
- Formaldehyde-free materials
- Locally sourced materials

Indoor Environment Quality:

- Large high-performance windows
- Natural cross ventilation
- Water-based natural finishes
- East-west axis controls
 daylighting

For more information: www.aiatopten.org/hpb/overview. cfm?ProjectID=561 (Click on left margin menu options.)



Photos by Marvin Rand, courtesy Pugh + Scarpa Architects.



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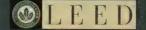
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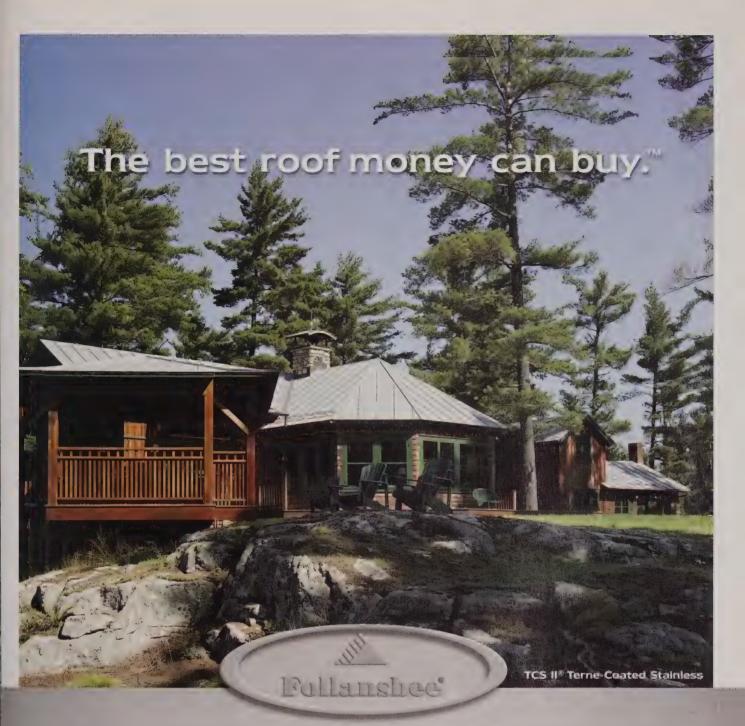


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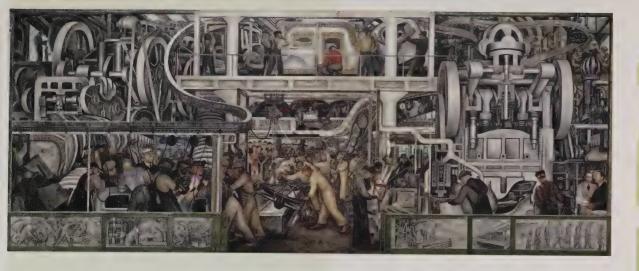


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A classic 20th-century text on Latin American culture offers clues to modernism in the 21st century.

by Luis E. Carranza PhD

INCREDULOUSLY, I WATCH TWO MEN — one of them about my age refilling an aerosol can. Forced to balance the availability of many modern conveniences — such as the aerosol can, invented in the 20th century — with their limited access to modern resources that are widely available elsewhere, these two Cuban men find ways to "make do" in order to survive the hardships of the US economic embargo. In a way, I don't understand it. I have become used to our disposable culture. On the other hand, I see it as inevitable.

It seems that in our appetite for the new there is something decidedly oldfashioned. Despite our modernity, we often seem to revert to the ways of the past ways that haven't been part of our lives since the Great Depression left its mark on an entire generation. While the debate over paper-or-plastic has passed with our increased awareness of dwindling natural and economic resources, our new reliance on reusable bags, so ubiquitous in supermarkets now, harkens to a time when our elders shopped in markets carrying their own wicker baskets and when milk, soda, and water containers were refilled.

We live in times when it is necessary to enter and exit modernity, to be more hybrid.

This idea is, as the subtitle suggests, central to Nestor García Canclini's classic book, *Hybrid Cultures: Strategies for Entering and Leaving Modernity*. First published in 1989, this study by one of the leading Mexican cultural anthropologists casts contemporary Latin American culture within the paradox of modernity and modernism. In it, García Canclini tries to make sense of the coexistence of traditional or even ancient cultures within modern times and sensibilities. His conclusion is that Latin America suffers from "an exuberant modernism with a deficient modernization." In other words, the appearance of modernity exists without the infrastructure, means of production, and urban systems needed to produce it.

To a large extent, this paradox was due to the importation of cultures from Europe and North America by artists and thinkers who traveled there for their education. This is the case, for example, of Diego Rivera, the Mexican painter who lived in Paris at the beginning of the 20th century. There he became entrenched in the artistic climate that gave rise to Cubism, and was soon recognized as one of its most adept practitioners. Upon his return to Mexico, Rivera's aesthetic interests



were tempered not only by the fevered energy of the social insurrection that had taken place there, but also by the Revolution's goals to improve the living conditions of uneducated and poor Mexicans. His turn to muralism reflected his aspiration to address the largely illiterate population through a legible painterly language derived from vernacular traditions and forms; his European training allowed him to employ Cubist representational and organizational techniques to convey complex information.

As this case attests, modernism was something that was largely imported. It was cultural. European modernism, on the other hand, had been fostered by societies that had experienced a far greater technical and economic modernization than had those in Latin America. Since the modern did not, and could not, entirely displace the traditional in Latin America, according to García Canclini, a "multitemporal

Clockwise from left: *Detroit Industry* (detail) 1932–1933; painting by Diego Rivera: © The Detroit Institute of Arts. Lagos, Nigeria: © George Esiri/Reuters/Corbis. Amonte House, exterior; architect: Axi:Ome (courtesy rendering).

heterogeneity" resulted as the past and the present worked together as a hybrid new. Within a generic Latin American way of operating, this resulted in the development of "hybrid cultures" that are aesthetically modern but in which "high" and "low," foreign and vernacular, popular and high-brow, traditional and contemporary cultures coexist through a system of negotiations of what is kept, altered, and discarded from each.

The following three examples attest to the existence of these kinds of hybrid cultures in our world today.

In the Lagos Charter, their excellent research contribution to Rem Koolhaas's Harvard Project on the City, Joshua Comaroff and Gullivar Shepard propose examining Lagos, Nigeria for new ways of thinking about cities — as one might extol the virtues of Italian piazzas and Catalan ramblas. In looking at Lagos, they say, we are looking at how the "much-touted values of contemporary capital and its prophetic organizational models of dispersal and discontinuity, federalism and flexibility — have





been realized and perfected ... This is to say that Lagos is not catching up with us. Rather, we may be catching up with Lagos." Central to their proposition is the inevitable corruption of our understanding of the modern as the most advanced and that, in fact, the collision and coexistence of the modern with other systems will dispel the inbred homogeneity of our ways of thinking based on a limited understanding of the world.

The second example concerns the ever-present race for highly rated sustainable buildings. In a conference discussion in Havana, Cuba, organized by the Association of Collegiate Schools of Architecture (ACSA) in 2002, the contradictions of our modernity became apparent. A participant had just finished touting the merits of William McDonough's newly completed Nike Headquarters in the Netherlands, with its multiplicity of systems to regulate the environment and promote good health and work habits. Someone from the audience asked the Cuban respondent for his reactions to this building and its applicability to the Cuban context. His response: "This building wouldn't work in Cuba. We do not have a consistent supply of electricity to power those systems or, in the worst of cases, to run its airconditioning units when the climate is unbearably hot." In Cuba, in other words, McDonough's work would be obsolete. Replacing it would be a good "old-fashioned" functionalist

building to fulfill well-defined practical requirements (and limitations) and operate most efficiently. Architects in this country are also seeing the paradoxes of the "new sustainability": from the exorbitant costs of many sustainable and energy-efficient materials, to the limitations of the ratings systems used to judge performance, and the reliance on other types of resources, such as computerized electronic systems, for their operation. The Saint Louis, Missouri-based Axi:Ome, for example, developed the Amonte House as a classically inspired modernist glass box. Yet, through the design of interior courtyards, vertical veranda-like edges based on vernacular traditions, thermal masses for passive heating, and manual operating systems that allow the regulation of ventilation through the double glass walls and the manipulation of thin brise-soleils on the building's skin, the design addresses the problems associated with the modernist typology and the current limitations with sustainability.

The final example is based upon the division of labor as it currently affects architectural production, design, and management. Many architects complain about the limited amount of time that they spend on design. This is partly a result of increasingly complex projects and limited (and shrinking) fees designated for design itself. Additionally, while the specialization of the profession and its component tasks makes it more economically viable and efficient, the integration of decisions is becoming more difficult. A truly outstanding practice would address all these competing concerns, although, by its very nature, it would most likely be somewhat anachronistic and inefficient. One successful example, however, is that of the Mexican

t more economically viable and efficient, the integration of decisions is ore difficult. A truly outstanding practice would address all these oncerns, although, by its very nature, it would most likely be somewhat c and inefficient. One successful example, however, is that of the Mexican architect Fernando Vasconcelos. Vasconcelos' practice consists of three independent offices; he divides his time among them, while privileging the third. The first focuses on construction management for large projects (at present, he is completing the JVC Center in Guadalajara, Jalisco); the second focuses on the design of speculative office and apartment buildings and retail spaces (in collaboration with another Mexican architect and developer); the third is his investigative design practice, which is, self-admittedly, "economically unsuccessful." It is, however, funded by the other two. In this third practice, Nuevo Espíritu

(New Spirit, after Le Corbusier's L'Esprit Nouveau), Vasconcelos and his small team of young architects and interns work primarily on small residences, competitions, schools, and low-budget public works projects. Here, he applies his vast construction experience as well as his knowledge of real estate economics to the requirements of his clients, while developing new design and formal strategies without budgetary constraints. These new architectural solutions are in turn deployed in the other two practices.

At the core of these three cases is a similar procedure: the selective abandonment of modernity. The result is a new direction

based on the integration of the contemporary, radical, and modern with the old, inefficient, and vernacular — a process, as García Canclini's *Hybrid Cultures* demonstrates, that has precedents in 20th-century Latin America.

Although it would be easy for designers to usurp García Canclini's argument by merely translating his provocative title and implications into an architectural context, his book offers something more: an understanding of our culture's present ambivalence toward modernity and our "multitemporal heterogeneity." The hybrid cultures in the Latin American experience were born of expedience, not choice. A deliberate, considered integration of modernity and tradition might yield very different results. In showing us how others have stepped back from modernity, García Canclini offers us heretofore unimagined strategies and possibilities. Perhaps our newly-found hybridity is one that reconciles our embrace of modernity with our desire to leave it.

Luis E. Carranza PhD is an associate professor of architecture at Roger Williams University and author of the forthcoming *Architecture as Revolution: Episodes in the History of Modern Architecture in Mexico, 1920–1940.*

Below: IMSS Hospital, Acapulco; architect: Nuevo Espíritu with Eduardo Canseco; photo by Michel Arciga.





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The New Collaboration All Mixed Up

Told to "think outside the box," some designers and artists are doing exactly that: they don't think about the box at all.

by Ray Kinoshita Mann AIA

MULTIDISCIPLINARY. COLLABORATIVE. These are the words that litter countless architecture firm marketing brochures, that are tossed into design-school discussions, and that form many architects' self-image. The profession that emerged at the end of the 20th century was very different from that of the previous century: the master-builder had morphed into a team-player.

Now, at the beginning of the 21st century, the profession seems to be on the verge of remaking itself once again. As Alex Bitterman, a professor of design at Rochester Institute of Technology, has noted, "Architects are trained to observe and re-examine systems - construction systems, social systems, economic systems, and to forecast the vector of these integrated systems on a scale that impacts our global community." Add to that the generalized capability of architects to understand the physical and material implications of such systems, and you have a prescription for a field that is continuously reinventing itself. Today, the very nature of the multidisciplinary collaboration that has enabled the contemporary practice of architecture is evolving as a small but influential number of practitioners including designers and artists - are observing and re-examining standard practice. Their work goes beyond collaboration to mix, meld, and merge.

These practitioners embrace the notion of hybrid vigor, the idea that mixing yields something better — something more fluid and more adaptable that can better meet new and changing conditions by embodying the strengths of each component to yield a sum greater than its parts. For architecture, often so hide-bound in its traditions and professional self-identity, hybrid thinking offers the opportunity to reach well beyond the "bricks and mortar" into issues that may seem to have little to do with building, per se, that can even save lives or the environment by helping to "architect" a better life system.

Each of the individuals or practices represented in the following pages has extended the reach of architecture's potential in substantive ways through hybrid approaches. While the design media often seem to suggest that the expanding realm of architecture is defined by an ever-larger, elaborate, and technological high-wire act of complicated buildings and building systems, these works represent a broadening of consideration that taps more deeply into social needs and customs. For some of these practitioners, such as Sheila Kennedy and Frano Violich from Boston's KVA, and Julie Bargmann from D.I.R.T. in Charlottesville, Virginia, hybridity has been the underlying influence on their work since they began with an early recognition of the need to respond to a broader mission; now, 20-plus years later, they've achieved a true maturity in their approach.

What is characteristic of these folks? They've truly opened themselves to the knowledge and procedures of other fields, of the reality of conditions "out there." They have put themselves forward to meet the question, not to hammer the question into a shape they already know how to answer. This simple fact is what separates them from the rest, and in so doing, they are redefining practice from without and from within.

Of course, these practitioners are themselves intellectual hybrids — many of them share genetic affinities with architects such as Rem Koolhaas, Steven Holl, and William McDonough; with cross-disciplinary thinkers such as Stewart Brand and Richard Saul Wurman; with established collaborative design firms such as Cambridge Seven and Sasaki; and with 20th-century pioneers of collaborative practice such as Ray and Charles Eames, and the Bauhaus.

Despite these roots, and for all their success and recognition by many of their peers and the public, those engaged in hybrid practice often speak of feeling at times marginalized by the "profession." Each has given up something recognizable for a less easily recognized something else. It's frequently a brave undertaking: financial security and professional stature are often at risk when the world doesn't understand exactly what it is that you do. Even so, these designers and artists may be not only expanding the margins of the field, but also, as hybrids often do in nature, creating what is really the new center. So, to the rest of us: Watch and Learn.

Ray Kinoshita Mann AIA is a practicing architect in western Massachusetts and associate professor of architecture and design at the University of Massachusetts, Amherst. She is writing a book about the working methodologies of Japanese architect, Itsuko Hasegawa.

Wexler Studio

New York City | www.allanwexlerstudio.com





Allan and Ellen Wexler bring the keen insights of the artist into investigating and revealing new potentials of architecture and the human interaction with and inhabitation of space. With remarkable precision and humor, they show us that a chair is not just a chair and a roof is not just a roof, or that the form of a wind turbine shadow can become yet something else. And by harvesting what is special out of the familiar, they remind us how architectural thinking in almost any venue can and should cultivate entirely new possibilities in our relationships with each other and the environment around us, every day.

Top to bottom: Two Too Large Tables, Hudson River Park, New York City, 2006. Drawing Water, Purchase, New York, 2002. Windworks, Cleveland, Ohio, 2006. Photos courtesy Allan and Ellen Wexler.



John Zeisel

Hearthstone Alzheimer Care | Woburn, Massachusetts | www.thehearth.org



John Zeisel has taken architectural thinking deep into the mind of Alzheimer's Disease, to discover how profoundly we are impacted by our environments, especially as we lose neurological functioning - and how most of our building activity fails to take this into account. In co-founding Hearthstone Alzheimer Care in 1992, John Zeisel essentially subsumed his identity as an architect into that of a team of medical and behavioral experts and caregivers. In so doing, his impact is felt both in the architecture of the spatial methodology and in the architecture of the understanding of the disease and how to care for it. When we consider that responsive spaces and care systems not only have a huge impact on the sense of well-being of individuals, but have also been shown to measurably slow the progression of the disease, it is clear that we have a lot more to learn about architecture for everybody based on his insights.

Hearthstone facilities in (clockwise from top left) Palisades, New York; Marlborough, Massachusetts; and Brockton, Massachusetts. Hanging planters discourage climbing; therapeutic gardens provide a roomy but well-defined enclosure with seasonally distinctive vegetation and pathway choices; gathering spaces, in the form of living rooms or microwave stations, offer opportunities to socialize. Photos courtesy John Zeisel.





D.I.R.T. studio

Dump It Right There) | Charlottesville, Virginia | www.dirtstudio.com



When Julie Bargmann, after schooling as a landscape architect, set out to take on some of the nation's worst pollution sites, she must have had an inkling that improving the most damaged places can make anything else seem possible. "Collaboration" is an inadequate word to describe the intensity with which she has reached into the scientific community, joined forces with like-minded colleagues such as William McDonough FAIA, and reached out to individuals, communities, and historians as keepers of our culture. From the rehabilitation and rejuvenation of acid mine drainage sites to the 100-percent-recycled site-materials strategy at

the Urban Outfitters project at the Philadelphia Dockyards (shown above), Bargmann has teased out an entirely new role for design as a hybrid activity that rescues not only sites, but also their history, memories, and continued possibilities.

Left: Concrete pavers salvaged from site, Urban Outfitters project, Philadelphia, 2006. D.I.R.T. studio with Meyer Scherer & Rockcastle (architects) and Gladnick Wright Salameda (engineers). Right: historical photo of site. Photos courtesy D.I.R.T. studio/Julie Bargmann.

KVA MATx

Kennedy & Violich Architecture | Boston, Massachusetts | www.kvarch.net







What makes an object a work of architecture? Someone infusing it with an architectural thought or methodology as when Sheila Kennedy recognized that a blanket can be a home. And when that blanket is made of a simple and durable "cloth" made of solar cells, LEDs, and reflective film, it not only shelters but may even save a life by offering therapy in the treatment of tuberculosis. Sheila Kennedy AIA and Frano Violich AIA have embraced a cross-over between arts, architecture, and technology since they began working together over 20 years ago. For them, each medium is a means for revealing and articulating the conditions underlying what we make and use. The artistic and technical rigor of their approach has brought them to focus on the new energy imperative, largely through KVA's materials research unit, MATx, which includes rapid prototyping equipment. The tuberculosis blanket is a part of the KVA MATx Portable Light initiative, a nonprofit established to find new ways of delivering power and light to the developing world.



Clockwise from top left: Patient with HIV and TB receives Portable Light energy-harvesting blanket kit; photo courtesy iTEACH Medical Team, Edendale Hospital, Zwa-Zulu, Natal. Printed circuit-board production, KVA MATx Opto-Electronics Workshop. Portable Light, Cohamiata, Sierra Madre; photo courtesy Centro Huichol. Wall prototype for 34th Street Ferry Terminal, KVA Digital Fabrication Workshop. KVA photos courtesy KVA MATx.

Höweler + Yoon Architecture

Boston, Massachusetts | www.hyarchitecture.com





Eric Höweler AIA and Meejin Yoon might seem to be having just too much fun. Wearables and sittables; hovering yellow canopy cones that capture and interact with solar energy, rainwater, and sound; installations; buildings, condos, and interiors — their work suggests new lifestyle possibilities and demonstrates that architecture can be found everywhere.

Clockwise from top: Loop Chair, 2006. Möbius Dress, 2004. Hover, a temporary light installation incorporating solar panels, microprocessors, and LEDs. Photos courtesy Höweler + Yoon Architecture.



Office dA

Boston, Massachusetts | www.officeda.com



From doorknobs to toy cars, from restaurant interiors to entire buildings, Office dA principals Monica Ponce de Leon and Nader Tehrani make disciplinary boundary-breaking seem effortless. What makes this overt hybridity work so well, however, is a more subtle hybridity underlying their thought processes, what one might call a mathematical/ textile sensibility — a hyper-awareness of how the individual element exists and acts with another and another to repeat, shift, turn, accumulate. More than glibly digital or superficially virtuosic, their methodology evokes deep traditions in the made-ness of things, and in so doing, engages and enriches our collective sensibilities across time, class, and cultural boundaries. One can as easily imagine the artisan's pleasure in constructing a wall or piece of furniture as our own in seeing it.



Clockwise from top left: BanQ, restaurant and bar, Boston, 2008; photo by John Horner. Macallen Building, condominiums, Boston, 2007; photo by John Horner. Voroduo, installation at Pékin Fine Arts, Beijing, 2008; photo by Brandon Clifford.

Andrea Zittel

Joshua Tree, California | www.zittel.org



Andrea Zittel is a scientist of space and inhabitation cloaked in the guise of an artist. Relentlessly delving into the functions of the world and ourselves, often using herself "as a handy example of a human being," she helps us see with sudden clarity the assumptions and presumptions that underlie much of modern existence. Among her most familiar projects are the Wagon Stations, the portable living pods featured at the Whitney Museum in 2006 that were conceived as purposefully simple shelters that can be brought virtually anywhere. By pursuing her unbounded "research" from terrain to shelters to furniture, household goods, and even body wear, she ventures well beyond the designed gadget and the artful object to suggest that the solution to a design problem starts with redesigning the problem itself.



Clockwise from top: A-Z Uniforms, 1991–2000. A-Z Wagon Station customized by Russell Whitten, 2003. A-Z Wagon Stations, customized by Connie Walsh and Chris Young (foreground) and Jonas Hauptman (background), 2003. Photos © Andrea Zittel; courtesy Andrea Rosen Gallery.



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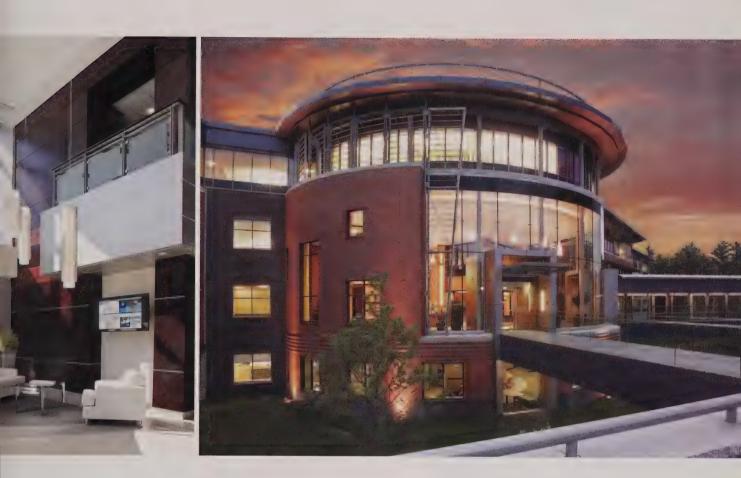
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John Maeda talks with Jeff Stein AIA

John Maeda was recently named the 16th president of Rhode Island School of Design. Previously the associate director of research at the MIT Media Lab, he is considered one of the world's leading innovators in digital design. He is the author of four books: The Laws of Simplicity (MIT Press, 2006); Creative Code: Aesthetics + Computation (Thames and Hudson, 2004); Maeda @ Media (Universe Publishing, 2001); and Design By Numbers (MIT Press, 2001).

SIMPLIN



Jeff Stein AIA is head of the School of Architecture and dean of the Boston Architectural College, and is the architecture critic for *Banker & Tradesman*.

- > Limited-edition sneakers, designed by John Maeda for Reebok: left, Timetanium; right, Emoretion.
- v Screen capture, RISD blog by John Maeda (http://our.risd.edu).

Jeff Stein: Many people would say that John Maeda epitomizes someone who has enjoyed a hybrid career, one connecting technology, art, and design. You've earned recognition as a digital artist, with work in the permanent collections of the Museum of Modern Art in New York and the San Francisco Museum of Modern Art. You are a renowned product designer, with clients including Cartier, Google, Samsung, and, perhaps best known to consumers, Reebok. You've been on the forefront of technology in your recent role as the associate director of research at the MIT Media Lab. And now of course you are in a position to further hybridize these experiences as the new president of Rhode Island School of Design. I can't help but notice that your education seems to have led to this kind of synthesis. You have degrees in computer science and electrical engineering, an MBA, and a doctorate from the University of Tsukuba, in Japan, in "design science." What is that exactly?

John Maeda: The Japanese have developed doctoral programs built around design as a science, in particular, industrial design. The idea is to create things that fit people better, using the very Japanese idea of *kansei*, which is a form of what is called emotional engineering.

Jeff Stein: You're coming to RISD from a science-based research environment at MIT. Schools of architecture, art, and design in this country generally don't promote research. Should we be rethinking this approach?



John Maeda: A lot of design programs worldwide are pondering how to engage in more research and how to get funding in a very competitive arena. The challenge for art and design schools is how to define themselves as teaching institutions, but also to engage in free-thinking research. This is something that I think is important to student development, because students are always best served by doing things they couldn't do in the real world — doing things without the normal constraints.

In the field of architecture, the real challenge is how our world of data has changed how we live. Architecture in the future is going to engage much more psychology, much more anthropology, much more of the human condition, and much more of the liberal arts perspective, because the act of living has become a lot more personal.

Jeff Stein: When architects are members of design teams with engineers and other consultants, they often characterize themselves as the people who know about the human issues of space. But when you look at the curriculum in any of the 117 professional schools of architecture in North America, the only place where they could possibly learn that would be in an architectural history course.

John Maeda: Yes. I would say that one thing that's different about RISD is the strong influence of the liberal arts curriculum; you walk around the studios and everyone's reading literary classics — *Walden* is all over the place — and that influences how students learn to think.

Professor Kyna Leski and I did a lecture together recently. When you hear her talk about architecture, it doesn't seem as though she's talking about buildings: she's talking about the purity of form, the spirituality of it, how it all connects. It's like an ancient art opening into our vast expanse of technological possibilities — how we make things, and how we've always united naturally when we are sharing the task of creating places. That's what I think architecture is.

It also translates to the world of business thinking. In studio crits at the end of the year, the architecture students defend themselves just as they would in any kind of situation where they're engaging clients. They're building the skills to defend One long-term issue I'm working on is how to resolve the misconception that many parents have about their kids going off to be artists and designers — that it's something dangerous to their future.

their ideas with logic, but also with passion. That's something that gets me excited every day here: there's just so much passion.

Jeff Stein: And that's important, because design never turns out to be a nine-to-five kind of job — it requires more time, more engagement.

John Maeda: One long-term issue I'm working on is how to resolve the misconception that many parents have about their kids going off to be artists and designers — that it's something dangerous to their future. Most people have the notion that becoming an artist is not good for you. It's not that they think artists are bad people; it's that they believe that artists can't make money — the classic "starving artist." What's missing today is the notion that artists and designers are among the most passionate people about what they do; and this world needs more passion. There's too much logic, too much systematic thinking, too much hope that the systems will save us. But humanity is about doing crazy, wonderful things. And that part has to be preserved, not just at the university level, but also K-to-12 as well. It's what built America — this wonderful place where all the rules were broken.

Jeff Stein: A large part of New England's economy depends on the export of educated minds. Yet there's only so much physical space to accommodate those transformations. Are you thinking about developing educational relationships at a distance through technology?



John Maeda: I think everyone is. I'm in a very interesting position because I have a different perspective — I can see all the parts that are out there. I can ask which ones are relevant, which ones are affordable, which ones are free. There are a lot of free things out there.

At the same time, I've always had this love-hate relationship with technology. So when people say, "I don't like computers," I understand them. When people say, "I like computers," I understand them, too. It's not that I'm wishy-washy. It's hard to figure out what to love, what to hate. I'm very curious about this balance.

Jeff Stein: And you are right in the middle of that. Some of your entries on your blog [our.risd.edu] talk about humanizing technology. What do you mean by that, exactly?

John Maeda: Some people say the best solution is high tech; some people say no, go low tech. I believe that the best solution is always less tech. Just enough, which is not usually considered an option.

Jeff Stein: You've been characterized as the father of the simplicity movement in the technology age. Someone once said your interest in simplicity came from your being frustrated that computers tend to become more complicated and difficult to use with each generation. Is that really true?

John Maeda: Yes, totally. I've been a computer user for the last 30 years now, and I've gotten kind of tired of them.

Jeff Stein: But it seems to me that they've actually gotten simpler to use, although I suppose that's partly because we have IT departments.

John Maeda: It all depends on your perspective. For instance, our vice president of media told me that her e-mail has stopped working because her password keeps timing out every hour, and there's no way to fix it. Technology has gotten so complex that fixing it is not trivial. I manage my own IT because I have such a complex situation. So I suppose you could say that I've actually complexified my life.

Jeff Stein: Your terrific little book, *The Laws of Simplicity*, has 10 rules for simplicity. The notion of Law #1, conscious reduction or subconscious compression, is a really important one right now. There was a recent *Wall Street Journal* editorial about the insanity of 55 mile-per-hour speed limits. Back in the mid-'80s when they were first instituted, Americans saved about 170,000 barrels of oil a day. But right away, it became clear that they were also losing about a billion hours a year of time by traveling more slowly. And pretty soon, they weren't traveling more slowly at all and it didn't really matter. This seems to me to be an urban-design problem. Most car trips are 20 miles or less and involve people commuting between home and work. If the urban condition were designed in a more compressed way, like Tokyo or Boston, time would be saved *and* oil would be saved.

< Digital community bulletin boards at RISD, designed by John Maeda with Potion NY in partnership with Samsung.



John Maeda: Working where you live is much more possible now than in the past because of information technology. It's not just big computers, but technology that enables services like FedEx, which were impossible before computers. You're describing a landscape that has been changed by the speed of data, which we now eat in all shapes and forms and which can provide us a different living experience. Add to that the fact that we live in an era of advanced material development, and in a time when we're creating things that are much more energy-efficient — things like hybrid cars. I've wondered what would happen if Toyota were an architecture firm, and Toyota made hybrid buildings. When I was in school in Japan, I had an industrial-design professor who was originally an architect, and he loved to say that cars were buildings with wheels on them.

Jeff Stein: When your name comes up in conversation, the term "innovation" also frequently comes up. What do you mean by "innovation"? It seems to me that innovation implies purpose — choosing something.

John Maeda: Some of the best innovation does. However, to innovate, you often have to be less purposeful. A good example is Post-It Notes. You may have heard the story — the guy who made glue that wasn't sticky and they all laughed at him? It was like Rudolf the Red-Nosed Reindeer. But now I'm not sure we'd be able to survive without Post-It Notes. That was a total accident. It was un-purposeful — innovation without a purpose.

Jeff Stein: So when you talk about creating corporate relationships with RISD, I suspect you're not just talking about funding relationships. I imagine that you want to develop relationships that foster that sort of unpurposeful thrashing around, creating new things that are seen as innovations later on.

John Maeda: Right. RISD has always collaborated with industry in different ways — that's part of its history. But I find that big companies like Google and Yahoo are discovering what's called "design thinking." When they come to RISD, though, they find RISD thinking, which isn't pure design thinking. It's a kind of anomaly: it isn't business school-driven, or industry-driven, like work-for-hire. It's very humane. It derives from the fundamentals < Preparation for *Maeda:MySpace*, May 2007 installation at Riflemaker Gallery, London.

of a strong liberal-arts education, and it makes students question everything, even the industries they may work in. I find that wonderful. And I find that the best companies really embrace that kind of thinking, because they continually ask themselves, "Is this business making sense?"

Jeff Stein: And right now we're at an interesting moment in our culture when, it turns out, many businesses aren't making sense. Most buildings don't make sense any more. They're obsolete, designed for an era of cheap oil. So the opportunities for this kind of engagement are really enormous.

John Maeda: These companies could hire any firm out there to tell them, for a fee, they're great. But when they come here, they have people who are questioning the whole nature of the economy and the industry; some of our people do not even like to collaborate with industry. And that's fine. These companies tolerate that because they're coming for a different reason. There's that great restaurant in Boston, Durgin Park, where you go because the waitress will abuse you, because that feels authentic. RISD is authentic.

What I'm trying to ensure is the preservation of its unique culture. My job is to build on that existing culture and create an advantageous situation for the next president and next generation of RISD students, and the ones after that, and beyond. My job is to ensure a 20- and 30-year horizon for RISD, so that the next generation will be able to benefit from whatever I plant now. Nothing is short-term to me. This job is not about profit. It's about ensuring how we will engage with the world in the future. We are a generator of education, of knowledge-sharing, and not just for our generation.

Jeff Stein: What about the conflict of the evolving culture of technology versus the preservation of other cultures? Is there a role for designers in the preservation of culture, generally?

John Maeda: Absolutely. That's where the big gains are going to be had, which don't have immediately obvious economic implication. But they will. The NEA [National Endowment for the Arts] design division has a program that sends designers into forgotten towns off the main highways to learn to understand them. I think it's fantastic. It's like going to a foreign country in your own country. I think that kind of socially meaningful work is what's driving a lot of students today. I think the Web has helped to create that interest. It's made them waste a lot of time, but their global identity is so much stronger now. A kid today with a MySpace or a Facebook page can have friends in India or Africa or Europe within seconds.

Jeff Stein: What do you think needs designing?

John Maeda: I think what has to be designed is what's been designed forever, which is relationships: between people, between people and their objects, between people and their past. These relationships have changed because of technology.

I was at a party and I saw Richard Saul Wurman with Nicholas Negroponte, sitting together at a table by themselves, chatting and laughing. I thought, "These guys have known each other for a long time." The quality of the relationship is incredible, because they've had a lifetime together. It dawned on me: I want that. How do you get that? How do you create a life out of those relationships? I look at the whole design question as encompassing the design of your own life.

Jeff Stein: Are there specific things that you're thinking of right now, to make sure that happens at RISD?

John Maeda: Yes, I take a morning jog with students. I also hang out in the cafés and the cafeterias. I show up and say, "Hey, how're you doing?" The one piece of knowledge I try to press upon all students is that they're coming to college for great classes, but also great relationships with friends. They'll have those relationships 20, 30 years later, and that's something that you can't put a price tag on.

Jeff Stein: You're probably one of the very few blogging college presidents.

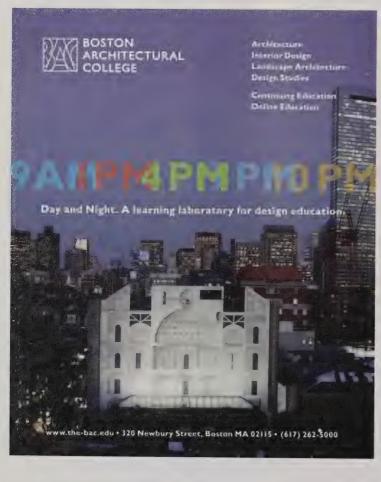
John Maeda: That's because, as a leader, it's considered dangerous to expose yourself, to be too out there, letting people know what you think. But I would prefer not to create the myth that you can't know what I'm thinking. So I open myself to the campus, to a blog where anyone can talk with me, can even have anonymous conversations with me, because I think that any open dialogue improves the quality of conversation because it's represents a diversity of opinion. That's America, and I love it. I was a kid who grew up in a tofu factory in Seattle. Against all odds, I'm the president of a college. It's a wonderful thing. I'm just out there, talking with people and making mistakes left and right, and saying I'm sorry, just as I did at MIT. A friend told me that RISD is like MIT for right-brained people. It's totally true. It's an intense place on a different dimension — a very deeply human dimension.

Jeff Stein: Simplicity for you doesn't mean just doing less, does it?

John Maeda: No, not at all. It's about the balance, really, between knowing what has to stay simple and what has to stay complex, and which ones have to un-stay. Every day, I'm like an architect, sketching new ideas in my head. And every day I have a new sketch, a new design. I talk to people and say, "Is this the right design?" And if they say, "No," I crumple it up and put it in the trash basket. So I keep looking, because I really believe in this whole reflective leadership kind of style. The more I can say, "Is this right?" instead of "This is right," the more I can benefit from the learning opportunity I have here.

Jeff Stein: And you need to ask that question often, because what you need are a series of little yeses rather than waiting for a big no at the end.

John Maeda: Right. I'm just following very simple rules of interaction that I've always believed in. Don't be passive-aggressive. Be open and honest every step of the way. If you make mistakes, say you're sorry, and move on. That's all I really have in my arsenal.



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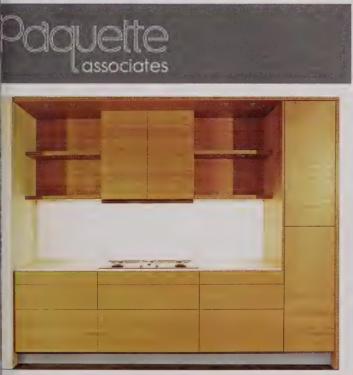
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BY GRETCHEN SCHNEIDER, ASSOC. AIA | Periodical Roundup

Covering the Issues

Talk about digging big ... Tunnels are "changing the world," enthuses engineer Martin Herrenknecht, owner of Herrenknecht AG, the global leader in tunneling machines. Burkhard Bilger profiles Herrenknecht in "The Long Dig," (The New Yorker, September 15, 2008). From Istanbul and Barcelona to New York City and the new city of Dongtan, tunnels now being dug underground are not only changing the traffic patterns and daily lives of the people above, but are also enabling urban growth to continue. Or so argues Herrenknecht. The Gotthard Base Tunnel through the Swiss Alps will make Switzerland "as flat as Sweden" and alter transportation routes across the entire continent. Beyond a simple company profile, Bilger explores the history and marvel of tunneling, along with larger questions about the relationship between infrastructure and urban experience, and our ability to carve the earth.

Back to school ... We probably haven't an exceptionally expensive high school in a tony Boston suburb, which recently triggered initiatives for statewide school design standardization. Boston Magazine promises the "Lessons of Newton North" in its School Issue (September 2008). Still under construction and still a political fireball, it may be too early for lessons. Instead, writer Jason Schwartz delivers a balanced essay about the school: why it now costs \$200 million (clues are in the windows and the building's low, zig-zag configuration); local opinions, pro and con; Newton's role as a national leader in progressive and "trailblazing" education; and this building's role in a larger story about deferred maintenance in a town. Schwartz discusses client input and the design process, as he questions the

functional life of buildings and sheds light on the tough questions facing this community - and others - about where limited resources should go.

Shhhhh... A front door closing, a car starting, an airplane taking off, the ceiling fan, a garbage truck, the refrigerator motor, a bird — my world, like yours, is full of auditory distractions. Noise interrupts sleep patterns; increases anxiety, aggressions, and social conflict; and makes it hard for kids to learn, writes Mary Desmond Pinkowish in "Quiet Please!" This is one of a collection of related articles in Ode magazine's "Silence Issue" (July/August 2008). Not overtly architectural, to be sure, though important food for thought. It's a gentle reminder that the buildings and landscapes we design affect all of the senses, and that those other senses - like sound --- deeply impact experience.

What's the rush?... What's going on at Ground Zero? Lots, suggests Scott Raab. OK, maybe not lots in the ground, but lots behind the scenes, and Raab says we shouldn't get all worked up over it. Raab has chronicled the construction of the Freedom Tower since it began. In this, his fifth and latest installment for Esquire (October 2008), he takes irreverent aim at all the naysayers as he explains what's taking so long and imagines what this site will mean in the near and distant future. Raab takes irreverent aim at high-minded design, too, as he argues for the importance of getting it right (as opposed to just getting it done), and the imperative for this building to inspire us.

Creating creativity... Harvard Business Review continues to feature the business of design. In its September 2008 cover



story "Collective Creativity," digital animation guru Ed Catmull describes what it takes to support creativity in an office setting - and make it profitable. As the head of Pixar (the makers of Toy Story, Ratatouille, and WALL-E), Catmull has established a 13-year track record of wrangling thousands of ideas and hundreds of people into movies that repeatedly deliver critical acclaim and popular success. His advice? Step One: Hire good people — because good people can develop mediocre ideas into something spectacular, but mediocre people will mangle good ideas. Make excellence the only standard. Encourage everyone to speak up, regardless of job title. And "stay close to the academic community"—the best source for the next generation of great minds. Back to Step One.

Gretchen Schneider, Assoc. AIA, is the principal of Schneider Studio in Boston.

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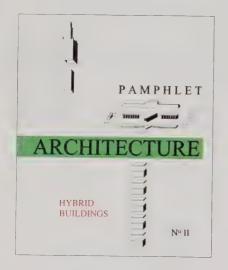




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BOOKS BOOKS BOOKS | MORE THOUGHTS ON HYBRID



HYBRID BUILDINGS PAMPHLET ARCHITECTURE, NO. 11 By Joseph Fenton Princeton Architectural Press, 1985

Borrowing from a concept found in genetics, "hybridity" is most commonly understood through the crossbreeding of plants or animals. In architecture, hybridity refers to "crossing" — the mixing of different programs and typologies within single buildings.

Hybrid Buildings, a short reference booklet amply illustrated with black-andwhite photographs, plans, and diagrams, explores the problem of combining disparate architectural programs and functions in a cohesive whole. Author Joseph Fenton presents the resulting "hybrid buildings" through a survey of historic buildings organized by type: "Fabric Hybrids" camouflage the interior volumetric programmatic configurations with the building envelope; "Graft Hybrids" express the volumetric variety of program through building massing; and "Monolith Hybrids" assume monumental building blocks that contain the various functions without distinguishing them formally. Published in 1985 as part of the well-known Pamphlet Architecture series, Hybrid Buildings also celebrates the postmodernist theories of its time - the embodied contradiction, ambiguity, and diversity that served as strong postmodern rhetoric.

Prior to the segregation of use through New York City's 1916 zoning, many buildings were conceived as containing multiple programs. For example, the One Hundred Story Building designed by Theodore Starrett in 1906 in New York was a monolithic structure comprising all sorts of urban amenities: an amusement park, market, residences, theaters, offices, industry, stores, and a hotel stacked one on top of another. New programmatic combinations emerged from greater structural capacities, zoning limitations, and the need to satisfy a broad and diverse market. The department store/hotel and the railroad smoke vents/office type can be traced back to the early 1930s. (Sound familiar? You guessed it: the Big Dig vent exhaust/ InterContinental Boston Hotel and the Nouvelle at Natick Collection - combining luxury housing and a shopping mall - are hybrid buildings in our own back yard.)

A biological hybrid is identifiable when one can recognize two separate entities that have been "crossed" to make a distinct third. Similarly, early examples of hybrid buildings often featured separate entities with clearly defined boundaries and expressions. Today programmatic variety exists without such distinct boundaries. This can be attributed to technology taking on a more active role in building systems as well as people demanding a holistic architectural experience.

The hybrid building became "a city within a city." Through the reconsideration of multifunctionality and architectural programming, it is a concept that may serve as a fresh model for the revitalization of American cities. If hybrid buildings are also considered in terms of technological systems, they can begin to perform similarly to hybrid cars, using passive and active systems as well as alternative energy resources. The iPhone can store music, serve as a phone, and browse the Internet. Why can't buildings be as robust?

Hansy Better Barraza AIA, LEED AP, is an assistant professor at the Rhode Island School of Design and a principal at Studio Luz Architects in Boston.



FASHIONABLE TECHNOLOGY: THE INTERSECTION OF DESIGN, FASHION, SCIENCE, AND TECHNOLOGY By Sabine Seymour Springer, 2008

Necklaces that remotely sense and respond to the touch of your loved one, garments that react to your body's tension and provide a soothing massage, a belt that plays music that is both heard and felt, a coat for shy people that barks if someone invades their personal space, and a dress that "grows" on your body — these creations sound like the stuff of science fiction. But in fact, they reflect the current state of science and design, as capably explored in *Fashionable Technology*.

The body/technology conflation is by no means new. In the late 1960s, farsighted designer Mary Ann Scherr created a heart-pulse monitor bracelet with technology that was eventually patented. In the 1980s, textile artist Junichi Arai created luminous fabrics with metallic yarns, the type of textile that now provides the foundation for garments that conduct sound, light, and electricity. But in recent years, there has been a veritable explosion of designers exploring the fashion/science idiom, aided by an unprecedented number of design collectives, laboratories, and schools, including the MIT Media Lab.

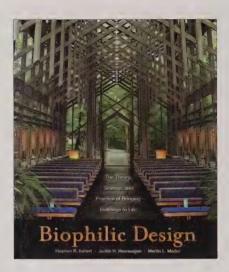
Seymour opens the book with a

"theoretical discourse" to provide an intellectual grounding and an introduction to the lexicon of "fashionable technology" (a phrase she coined in 2000). This section is rather thin, and the ideas presented could use deeper explanation. For example, Seymour argues that the integration of the body and technology is not evident in what the author calls "fashionable wearables" (i.e. fashion), but this can be readily disputed if one considers the correlation between haute couture, which is designed to seamlessly integrate with the body, and the "technology" of garment construction.

The first chapter, "Electronic Fashion," rightly opens with London-based fashion designer Hussein Chalayan. Chalayan has been exploring the confluence of fashion and technology from the outset of his career in the early 1990s and has notably created automated garments and a recent line that incorporates LED displays into the dresses' fabric. The rest of the book attempts to make sense of the burgeoning field by dividing the presentation of designer-scientists into chapters with titles such as "Scientific Couture" and "Social Fabric." Each entry consists of color illustrations and brief write-ups about the artists and their creations. While some veer into the realm of the conceptual, the book reminds us that some of this technology is readily available in the marketplace — the iPod's touch pad is a good example of a highly successful "e-textile."

While thorough in its presentation and international in its scope, the book feels hastily compiled. Many of the descriptions read like promotional literature; there are several editorial oversights and misspellings; and a more thorough explanation of the technologically complex products would be useful. *Fashionable Technology* is, however, an excellent resource and useful guide to the sheer possibility of such high-tech alchemy.

Michelle Tolini Finamore, a design and fashion historian, is a curatorial research associate in the Art of the Americas at the Museum of Fine Arts, Boston.



BIOPHILIC DESIGN

Edited by Stephen R. Kellert, Judith H. Heerwagen, Martin L. Mador John Wiley & Sons, 2008

Our culture is facing tough times. The need for drastic changes in our use of natural resources struggles daily with entrenched economic interests and our enjoyment of creature comforts. The



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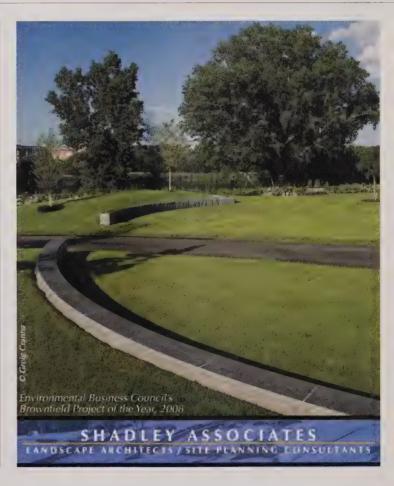
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concepts of sustainable design are beginning to take root in the community consciousness, but standard practices may well have to change more radically than we can imagine.

Biophilic Design collects descriptions of current destructive practices, analyzes their roots in human nature, and offers low-cost, low-impact strategies for change. Rather than give directions on Right Living, the concept provides an organizing structure for a great number of ideas on how changes in development and construction practices can improve our health, the health of the planet, and the relationship between the two.

Economic gain is the primary driver for the development and construction industry, and non-quantifiable motivations for development activity are generally considered suspect by the business community. *Biophilic Design* maintains that design and development strategies determined by the social sciences must be given equal weight with financial drivers. The editors have assembled a remarkably eclectic group of essays to make the case.

The essays cover a range of issues in the social sciences, medicine, the construction industry, and public policy. The first of three parts explores the theory of biophilic design and considers the ways in which nature can be an inspiration to architecture. The rationale is presented in chapters describing the disastrous effects of industrial society on ecosystems and on human relationships. "The Extinction of Natural Experience in the Built Environment," for example, is a searing description of the devastation wrought by coal mining in West Virginia.

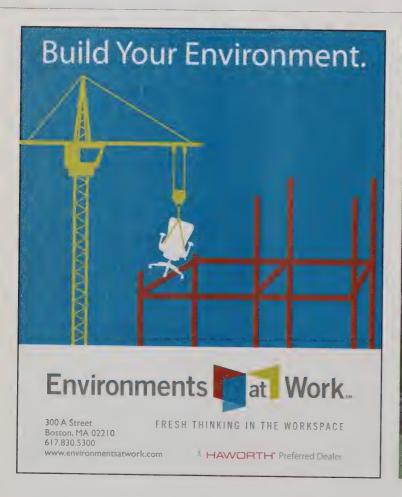
Part II looks at the science and benefits of a biophilic approach, through essays on the effect of design on health care, on restorative design, and on the necessity to focus on the needs of children in the design process. The need to connect human beings with nature as a source of mental and physical nourishment is documented in detail. Ian McHarg's *Design With Nature*, and Christopher Alexander's books are cited as groundbreaking investigations into ways in which design intervention can make an environmental and social difference at many scales.

Part III focuses on the practice of biophilic design, with essays considering everything from the place of windows in healthy design to developing urban biophilic concepts.

The essays are somewhat uneven in quality, and mining the gold takes some effort. It is worth it, however, and the ratio of "aha!" to "ho-hum" moments is high. Among many lyrical passages, I found a list by Stephen Kellert of nine very different ways in which humans respond to water.

My initial reaction to this book was, "Oh boy, another flaky plan to save the world through design by acupuncture." Then I read the book. I recommend that you do, too.

Andrew St. John AIA, LEED AP, is a principal of Smith + St. John in Essex, Massachusetts.









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http://strangemaps.wordpress.com

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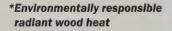
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The Corn Patch

In *The Story of Corn*, Betty Fussell tells how, in 1948, a couple of Harvard graduate students found some tiny cobs of popcorn in a cave in New Mexico. They dropped a few kernels into a hot pan and watched them pop — 3,000 years after cave dwellers must have harvested them.

Indians were cultivating corn as early as 5,000 BC. Botanists believe that corn evolved from a wild grass, which somehow mutated, changing its sexual organs. While the tassel full of male pollen remained at the top of the stalk, the female organ — a cob lined with hundreds of flowers — moved down to the center of the stalk, where its silks could literally be showered with pollen.

Corn sex is quite incredible, really. Each flower on the cob sends out a silk, or style, to collect a grain of pollen, whose nucleus divides, the first twin tunneling down the style, the second sliding down right behind to fertilize the egg. According to Michael Pollan in *The Omnivore's Dilemma*, each plant can contain 14 to 18 million grains of pollen. So pollination was never a problem. The only catch was, the kernels were encased in a tough husk that prevented germination unless planted by some human hand.

Thus began the marriage of people and corn, which, for millennia, built civilizations, from the Maya and Inca, who worshipped corn as their gods, to contemporary American farmers, who are being strangled by a hybrid gone haywire. As Pollan writes, the descendants of the Maya sometimes say, "I am corn walking," to acknowledge how central maize is to their diet and culture.

The Indians were the first hybridizers, sprinkling pollen from one plant over the silks of another, and selecting the plants with the best drought tolerance, or texture for corn meal, or resistance to disease. When the Indians shared these varieties with the first colonists, they handed the white conquerors the key to what has become the monster of American agriculture. Modern hybrids increased yields and adapted to chemical fertilizers and pesticides, the legacy of the wartime petrochemical industry. Soon, government subsidies provided another kind of fertilizer.

So then, of course, the question became, what to do with all the corn? Well, we are eating it, as Pollan tells us. It's not only in all those factory-fed cattle, which evolved to eat grass but are fattened on corn (which makes them sick, so they are given antibiotics and then slaughtered early, before they die). But corn is also poured into factory-fed chickens and hogs, farmed salmon and tilapia. It's in cow's milk and cheese. It's in all those sodas and fruit juices sweetened with corn syrup, in hamburger buns and Twinkies, catsup, and a myriad of other processed foods. Corn is also in plastics and pesticides and the very walls of your house.

We are corn walking.

This summer, while on vacation in Delaware, I couldn't find a single ear of Silver Queen, the sweet corn that used to be sold from just about every farmstand on the Eastern Shore. We used to grow it on our own 120-acre farm in Maryland, where my grandparents once sustained their family by raising beef cattle, pigs, chickens, and milk cows. They grew their own grain, they fertilized the fields with manure and cover crops, they tended a large garden and woodlot. But though Dad loved the farm, he worked in the city, and rented the fields to the Lippy boys, who were always on the cutting edge of modern agriculture. We kept a small patch of sweet corn, though, and a large garden, and enough animals to have beef, chicken, and home-cured ham. I didn't realize I was a member of a vanishing tribe of farmergardeners, who loved the race of getting a vegetable just plucked from the earth on the table and into the mouth as soon as possible.

We could taste the earth in the potato, the sun in the corn.

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But now, Silver Queen has given way to

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white varieties that contain the so-called sugar gene, which keeps the kernels from turning so quickly to starch. "They last longer and people like that," the manager at a farmstand told me last summer. "You can put them in the crisper for a week."

That's when my partner and I decided to grow our own patch of Silver Queen corn. We planted about 20 rows of it, right across from the genetically modified corn the Lippy Brothers grow now in the fields my brother owns. It came up beautifully, tall and straight, and thankfully, variable. Some stalks were shorter than others; some had two ears, some only one. It leaned over in a rainstorm and had to be propped back up. Just as the ears of our sweet corn were forming, the deer discovered them, so I sprayed them with Deer Stopper, a repellent invented by an orchardist who realized that deer hate the smell of peppermint and rosemary. And then we harvested those sweet, tender ears.

Across the road, the corn marched in military rows, tall and straight, over hills unbroken by fields of wheat or oats or cover crops that would let the land rest.

Anne Raver writes about gardening and the environment for *The New York Times*.

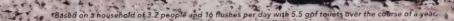
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