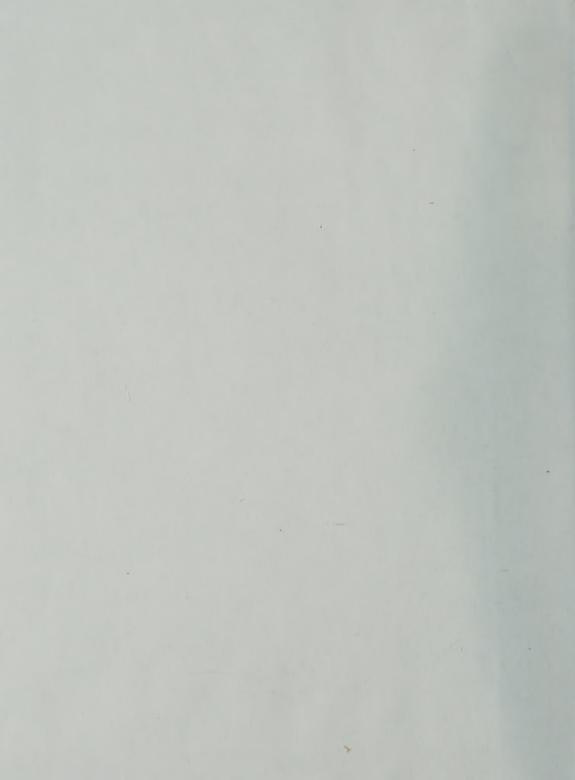




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COVER Illustration by James Weinberg

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THIS SPACE AVAILABLE

Many of today's tech firms, start-ups, and architecture studios are designed with an open plan. In theory, barrier-free offices are supposed to encourage creative discussion and spontaneous collaboration across departmental "silos." In practice, as anyone working in such spaces can attest, staffers wear earbuds at least some of the time, tuning out their colleagues and working in the cool quarantine of Wilco or Arcade Fire.

This is just one of the many contradictions in the way we approach the increasingly blurred boundaries between the public and private spheres. We fret over institutional surveillance and want assurances that our privacy is protected in every encounter, yet we willingly give over critical financial data and insights into our deepest personal preferences to Amazon or eBay. Social media mavens share wantonly on their personal devices, revealing intimate details once reserved for the confessional, yet they find police cameras at intersections a Big Brother–esque intrusion on their native right to run yellow lights.

Sharing is celebrated if it's ad hoc and individual, but not when it's codified into regulation. We love the "collaborative consumption" of the sharing economy, from Zipcar to TaskRabbit, and we feel a warm sense of nobility when we join a crowd-funding campaign. Yet the formal democratic contract—I put in my tax dollar to pay for your child's school, and you put in your tax dollar to pay for my park or subway—is frayed almost beyond recognition.

The overlap of public and private roles is manifest in the built environment as well. Business Improvement Districts tap commercial tenants to fund private security and maintenance for public streets. Public park improvements increasingly are funded through nonprofit "friends" conservancies or novel revenue streams such as underground parking lots. The commercial sector extends its hand to the cashstrapped public realm in exchange for naming rights and corporate banners billowing from every streetlight. Pretty soon the government will be selling space on postage stamps. Your logo here!

Zoning restrictions offer another opportunity to extract public benefits from the private side.

Elected officials passed laws ensuring public access to the shoreline, but it took a vigilant nonprofit group—The Boston Harbor Association—to monitor the law's enforcement and give us the HarborWalk. Probably dozens of new public spaces have been created in exchange for height or density easements granted to developers, but few local residents know where they are. (See Jerold Kayden's eye-opening article, "Boston POPS.")

The grand public buildings of the Works Progress Administration—courthouses, post offices, public schools—have been replaced by modular, off-the-shelf designs that are all about function (and economy). If architecture reflects the values of the times, what

does this say about our collective respect for the public sector? Is it just a coincidence that many of the midcentury buildings so out of fashion, like Paul Rudolph's Orange County center in Goshen, New York—or Boston City Hall—are seats of government?

Nowhere is the fusion of public and private touted more than in the plan to bring the 2024 Summer Olympics to Boston. Whether you are an Olympics booster or a persuadable skeptic, it's undeniable that the massive civic undertaking would be the largest exercise in private-public cooperation the region has ever seen. It could be a great boon to upgrading our neglected infrastructure—or just a great boondoggle.

A robust nonprofit sector and a generous business community are both essential to a functioning society, but they are no substitute for the resources that become possible when everyone pays his or her share. Only the federal government, maligned as it is, could have funded the Big Dig. No one has yet paid for affordable housing or a new subway line with a Kickstarter campaign. And to be truly public, our shared civic spaces need to be visible, accessible, welcoming—and free. It's not a trending point of view in today's privatized culture, but free is actually something worth paying for.

Renée Loth Editor









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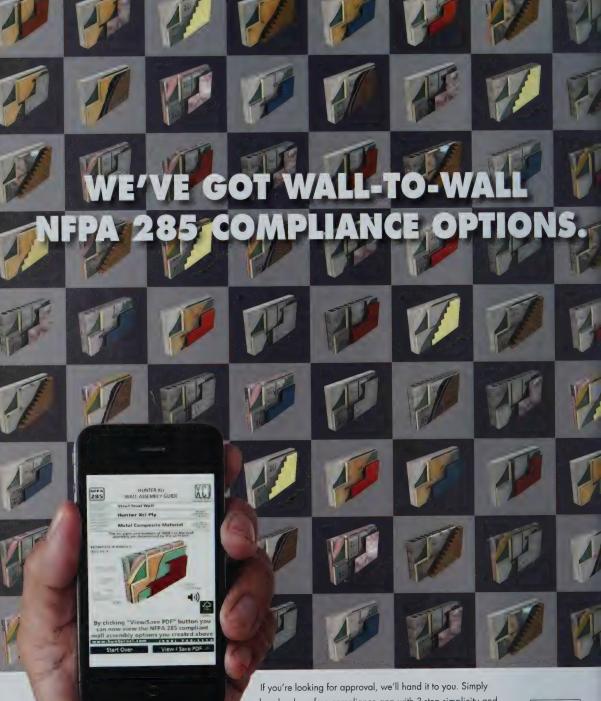
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ON "GLOBAL" (WINTER 2014)

I was intrigued by Jay Wickersham's article "Code of context" and his thoughts on the global homogenizing of the built environment. Having led international design for close to 15 million square feet in the Middle and Far East, I cannot agree with Wickersham strongly enough.

My agreement is not an indictment of the profession—since many of the issues can be traced equally to client pressure, local review agencies, and time constraints but a reaffirmation of Wickersham's comment about identifying appropriate design drivers. Successful design development stems from an intimate connection to place: an understanding of the people, culture, and setting. From personal experience I can attest that developing a successful design in an unfamiliar environment is an absolute challenge.

What is required to shift this movement is a renewed focus on two key drivers. Wickersham identified one: Sustainability. Those projects rooted in a well-conceived concept of climate, materials, and techniques resident in the region are a very good start. Second, I would advocate for culturally sensitive operational understanding.

How do these users uniquely interact with this building type? Yes, international architects are commissioned to bring global expertise and a different perspective to the typology, but understanding how that typology will be affected, at an operational level, will determine how well it is accepted. An architecture that springs from a combination of cultural and climatebased sensitivity is far more likely to be regionally successful.

By no means am I saying there is an easy fix. Our profession is one of creativity and exploration, and I truly believe in our intentions. Developing an understanding of a new way of life takes significant commitment in a world obsessed with "speed to market," but it is the challenge we accept, as the magazine puts it, with the "uneasy excitement of global practice."

T. SCOTT RAWLINGS AIA Payette, Boston Jay Wickersham outlines several challenges for architects who practice globally: challenges to make their work more sustainable, relevant, and socially responsible. Challenges fall into many categories: Some are projects that are envisioned to glorify powerful planning leaders despite the logic of the marketplace or good principles of city-making. To some degree this is symptomatic of increasingly competitive cities and their planning leaders vying for promotion and stature. Others are projects that aspire to high social or environmental goals but fall prey to realities of funding or scheduling. With many private developers, one tends to see so much of the proverbial "greenwashing" that rarely results in projects that are particularly sustainable.

But in China, recent revelations of widespread corruption among party officials are having an impact on businessas-usual planning. Many cities are putting large public projects, such as exhibition halls, museums, and performance spaces, on hold, while other public officials are demanding more private participation in large-scale urban projects. This is a good first step toward bringing more rigor to development in China that far too often has led to poorly conceived or executed publicly funded projects.

Another change that is coming is more accountability. Many of our planning directors are asking us to protect traditional residential neighborhoods and historic buildings from the wrecking ball, and agricultural areas are being preserved close to city centers to provide farm-totable enterprises. Our more enlightened public clients are asking us to reverse the ills of superblocks that have rendered so much of China's cities so pedestrian unfriendly. Newer policies are requiring that displaced villagers, all too frequently banished to the hinterlands, be relocated on site to preserve social organization and community cohesion.

Although China's autocratic government has a long way to go to calm some of our most uneasy feelings about social



equity and environmental sustainability, it has made a lot of progress the 15 years I have practiced.

Alan mountjoy aia *nbbj*, Boston

I've been working in the Middle East for quite some time, most recently in Saudi Arabia, and things have definitely changed for women architects.

Four years ago, during my first visit to Saudi Arabia, I will admit I was somewhat fearful about traveling to a country where I was advised that women must be accompanied everywhere by their husbands, and concerned I might make a cultural misstep during the trip. When the pilot announced the plane was 40 minutes to landing in Riyadh, I changed out of my Western clothing and into an abaya and hijab, which was hot and quite oppressive once I got out in the desert environment. The next day my client told me it was unnecessary for me to wear a hijab, which was a relief.

I am now at the point where I travel by myself (without my "three husbands from Cambridge Seven"), and I see more solo Saudi women every time I fly. I am used to being the only woman in a room of 30 men here in the States, so that aspect of Saudi Arabia did not faze me in the least, and everyone has been very respectful.

One piece of advice I have for architects hoping to work in the Middle East is this: Don't expect to immediately get down to business when you arrive. Building relationships in Saudi Arabia and in other parts of the Gulf Region is very important. Expect to spend about a day sharing family stories over tea and coffee. Don't rush this part of the process—it can be just as important as the presentation you are there to make.

PATTI INTRIERI AIA Cambridge Seven Associates Cambridge, Massachusetts

Having spent a good part of my design career flying to countries such as China, Singapore, and India, I found the conversation with Moshe Safdie ["Citizen of the world"] to resonate with my own experience—especially where he describes searching for "the particular," or lack thereof.

When I first started working overseas in the mid-1990s, we were hired exclusively for our Western know-how. Our value was judged on how well we could impart our knowledge and experience from the United States. Thus we were not inclined to regard "the particular." We often worked alone rather than with local partners. We used suspect translators and were whisked from one meeting to another before dinner and the hotel. Visiting a project site was almost cursory. Our clients also were not interested in the particular.

Friends and family would ask: What did you see? Restaurants, hotels, traffic, and airports, mostly. Others would ask if we spoke the language or had some specific knowledge of the place. No, we didn't—we were hired to be "American" designers. Intoxicating at first, the process of continually being mined for a singular perspective is gratifying for only so long.

Twenty years later, working in some of these same places has naturally evolved with globalization. Thankfully, interest in the particular is now paramount to the success of most visible overseas projects. We now spend more time on and around a site than in meetings and dinners. We have indispensable local partners who contribute to defining the particular. We now find we are engaged more for our past experience working in a country than for being from elsewhere. At a recent meeting in China, all the consultants and the client were younger than us, and the entire meeting was conducted in English. A lot has changed.

CHRISTIAN LEMON Lemon / Brooke Landscape Architecture Concord, Massachusetts

With the pressing desire for innovation and the pervasive need for differentiation in architecture practiced around the globe, the focus on context has taken a backseat. Not so long ago, the notion of genius loci, simplistically translated as "spirit of place," was considered essential to designing buildings in keeping with the local environment and their immediate surroundings, including adjacent buildings. Today, architects are more intent on making their own personal design statements, choosing a style and architectural language that rarely makes any reference to its neighbors. This is an ironic trend, especially when there is so much attention being given to "sustainable" design.

These self-referential structures dominate in countries where new buildings of scale are occurring-mostly designed by Western architects in rapidly developing countries such as China and India, the Middle East (primarily United Arab Emirates), and in parts of South America. But in an emerging continent such as Africa the architecture tends to be more contextual because there is limited capital, more direct access to local materials, and building methods that are by nature regional and therefore more sustainable. I believe we need to consider more carefully what it means to be contextual, and why it is important, especially with the scale of buildings being constructed in this age of urbanization.

In line with this question, we should more closely examine the role of the Western architect and the responsibility we have to identify, integrate, and incorporate cultural, historical, and environmental elements of a site in the designs of our buildings as we practice globally.

STEVE BRITTAN ASSOC. AIA CannonDesign, Boston

CORRECTION: A caption accompanying the "Code of context" article in the Winter 2014 issue misidentified a project of MASS Design Group. The illustration is of the Ambulatory Care Center in Butaro, Rwanda.



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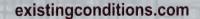
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IN THIS ISSUE



Steven G. Cecil AIA ASLA ("The water's edge," page 32) is the founding principal of The Cecil Group in Boston. He applies to the firm his 30 years of professional experience in urban design, planning, landscape architecture, and architecture projects. His practice brings creative solutions to planning and design challenges that are attentive to their cultural, environmental, and community context.



Diane Georgopulos FAIA ("Yours, mine, ours," page 36) is the manager of the Design and Construction department at MassHousing, the Commonwealth's leading affordable housing lender. She was a recipient of the AIA's Thomas Jefferson Award, a previous president of the Boston Society of Architects, and the 2008 recipient of the annual Women in Design Award of Excellence by the BSA's Women In Design committee.



Jerold S. Kayden ("Boston POPS," page 44), an urban planner and lawyer, is the Frank Backus Williams Professor of Urban Planning and Design at Harvard's Graduate School of Design. He wrote Privately Owned Public Space: The New York City Experience (Wiley, 2000) in collaboration with the New York City planning department and the Municipal Art Society, and founded Advocates for Privately Owned Public Space, a nonprofit organization.



Laura Wernick FAIA ("Quiet, please," page 40) is a senior principal at HMFH Architects, Inc. A previous president of the BSA, she is active in the national dialogue on architecture and education, and has organized and spoken at educational conferences, both regionally and nationally, on the topic. Her projects have received acclaim for their use of design in support of innovative learning models.

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UNSTRUCTURED Opinions and Observations

Uneven Growth: Tactical Urbanisms for Expanding Megacities

Museum of Modern Art, New York Through May 10, 2015

Few would question that this exhibition has its heart in the right place. A collection of six very different studies for six very different "megacities"—Mumbai, India; Hong Kong; New York City; Lagos, Nigeria; Rio de Janeiro; and Istanbul—the schemes each respond to some aspect of the unbalanced economic distribution that has characterized urban growth in recent decades. Dense with infographics, broad statistics, and ambitious statements, the show aims to be both encompassing in its global reach and precise in its responses.

As part of MoMA's "Issues in Contemporary Architecture," the curators asked six architect teams to create projects for these cities. Like the shows that preceded it in the series—*Rising Currents* in 2009 and *Foreclosed* in 2011—the success or failure of the exhibition is that of the commissioned projects. But unlike the exhibitions that preceded it, Uneven Growth is an overly broad prompt. While the curators acknowledge these varying contexts, one has to question whether Hong Kong and New York City belong alongside Mumbai and Rio de Janeiro, since the political, economic, and historical pressures in each city trigger such vastly divergent responses a whimsical utopian scheme in Hong Kong, an examination of housing policy in New York City, a resourceful small construction in Mumbai, and a catalog of improvised construction methods from Rio de Janeiro.

Although these projects are each earnest engagements, they don't make much sense together. Certain issues reappear in several projects—centrally, the problem of the finance and construction of housing for poor and middle-class residents—but the overall effect is disjointed. Certain responses are modest and emulate (or fetishize) "bottom-up and informal" techniques; other projects attempt to reprocess massive structures of growth and development. Overall lessons are hard to come by because each city presents a unique array of challenges. Uneven Growth is, well, uneven and would have done well to narrow its global ambitions.

ALEKSANDR BIERIG is a PhD student at the Graduate School of Design at Harvard University.

ABOVE

URBZ, a research collective in India, worked with Ensamble Studio (Spain) and MIT-POPlab (Massachusetts) to envision Mumbai's live-work and public infrastructures moving upward to relieve pressure on the land. Courtesy: MoMA

GENIUS LOCI F is for Franklin Street

Boston is a city that leaves clues to its past as much as it may preserve it. They make detectives of passersby, partners in the search for the stories that buildings, pavements, and names wait to share.

Such is the curve of Franklin Street in the heart of the Financial District. Seen from Washington Street, past the steel form of Millennium Tower taking shape behind the old Filene's façade, Franklin Street reads as slightly ungainly, a pot-bellied spread of asphalt flanked by undistinguished storefronts. The clues start here.

The curve itself tells of Charles Bulfinch, architect, planner, and selectman. He laid it out in 1794 for the Tontine Crescent, a development inspired by visits to London and Bath a decade earlier. The ellipse of 16 townhouses on the southern side of the street featured an arcaded central element, where he offered space to two nascent civic organizations: the Massachusetts Library Society and Massachusetts Historical Society. (A related clue can be found nearby on City Hall Avenue, off School Street. There, the central element of the Tontine Crescent was replicated in the 1930 façade of Kirstein Business Library, now closed and in disrepair.)

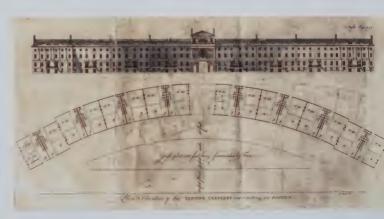
The crescent stood across a landscaped garden from eight semi-detached residences Bulfinch designed on Franklin Place, which he named to honor Benjamin Franklin, who was born nearby. At the center of the garden stood a marble urn etched with Franklin's name. Bulfinch considered the Tontine Crescent his architectural masterpiece, but a volatile economy, balky investors, and massive cost overruns made it his financial ruin. The houses were demolished in 1858 for redevelopment. Had they not been, they would have met the fate of their successors in 1872, when Boston's Great Fire leveled 60 acres of the Financial District.

Other clues: the name of Arch Street, which passed beneath the Crescent's central arch to connect Bulfinch's development to Summer Street, and a fading plaque and photograph at the corner of Franklin and Hawley streets.

Bulfinch's ambitions for shaping a new Boston reached beyond residential development. Following the repeal of the Puritan ban on theater in 1792, he drew up plans for the Boston Theatre at the northwest corner of Franklin and Federal streets. After the building burned in 1798, Bulfinch designed its successor. Across from the theater site, a bronze plaque at Number 75 marks the spot of Holy Cross, Boston's first Catholic Church, which he designed in 1803. He lived to witness the demolition of many of his buildings but was spared learning the fate of the Tontine Crescent. His children salvaged the urn he had dedicated to Franklin and placed it over their father's grave at Mount Auburn Cemetery.

Franklin Street is also home to younger ghosts. In 1934 Hatch Shell architect Richard Shaw designed a slim Art Deco chapel, now closed, at Number 49. Its heavy glass-inset aluminum doors have been replaced with a more practical entrance for the restaurant that now occupies the space, and the ecclesiastical motif above the door is hidden beneath its sign. Inside, the honeycombed ceiling is one of the only remaining original design elements.

Political ghosts linger as well. Deep in the bowels of the old Boston Safe Deposit and Trust at Number 100, Mayor John Collins met regularly with his brain trust in the 1960s, leading efforts to forge his own vision for a "New Boston." Officially termed The Coordinating Committee, the group's meeting place gave them the enduring nickname "The Vault."



TERRI EVANS is the communications manager of Shepley Bulfinch and leads architectural walking tours for Boston By Foot.

ABOVE

Plan and elevation of the Tontine Crescent, Boston, in 1796, engraved by Samuel Hill. Photo: Boston Athenæum

MATTER OF COURSE Reimagining the Government Service Center

To many Bostonians, Paul Rudolph's monumental and monolithic Government Service Center (GSC) is "that weird parking garage on Beacon Hill," or "the concrete eyesore up the street from Mass General." Occupying a curved-triangle block bounded by Cambridge, New Chardon, Merrimac, and Staniford streets in downtown Boston, the center has been a controversial site almost since the day it opened in 1971. A classic Brutalist redoubt, it was supposed to include a tubular, futuristic office tower, which was never funded by the state.

Still home to the Erich Lindemann Mental Health Center and the state's Department of Unemployment Assistance, the GSC is now an urban disaster area. The tiered concrete plaza that Rudolph hoped would be an oasis for lunch-breaking bureaucrats is now cocconed in chain-link fencing and barbed wire intended to deter the city's homeless from camping there. "It is an underutilized and sad corner of the city," says Mark Pasnik, a founding principal of over, under and a professor of architecture at Wentworth Institute of Technology—this from a man who *likes* the site. "It think these buildings are troubled but are also really interesting. They represent the heroic imagination of a previous generation, and they need care and transformation."

Pasnik and his Wentworth colleague Carol Burns, of Taylor & Burns Architects, devoted a semester to brainstorming alternative uses, or dynamic readaptations, of Rudolph's aging GSC. In a course they labeled EPIC—externally-collaborative, project-based, interdisciplinary curricula—they invited interior designers from Wentworth, landscape architects from Northeastern University, and officials from the state's Division of Capital Asset Management to meet with their class of 27 students to dream up new "programs" for the Service Center.

I attended Pasnik and Burns's end-of-semester review, when student teams presented seven proposals for reworking the GSC to eight guest architects. The concepts varied widely. One team simply treated the site as a commercial development opportunity, breaking up the low, linked structure into four buildings with greater floor-to-area ratios that match the highrises now surrounding the site. Another tried to exploit the site for tourism, replacing the center's parking garage with a Boston History Museum, surrounded by mixed-use towers of office space, residences, and a hotel.

Tagging along behind three of the feistier reviewers—David Eisen, Mark Klopfer, and Jim McNeely—I heard three of the seven presentations. As the project architect for the Lindemann center, McNeely was a rich addition to the critical mix. The original program for the mental health building "was written by a bunch of psychiatrists for whom money was no object," he recalled. It had a swimming pool, a chapel, electrical and



plumbing workshops for occupational therapy, coffee shops, and a theater. "They thought the state would cough up the money to maintain it, which it didn't," he said.

I found myself most involved in "Against Impenetrability," a three-student initiative to open up the fortress-like structure to the outside world. "Right now, the public doesn't know how to use the building or what's inside it," said team member Kaz Cunningham. Among the solutions proposed was to open up the building on its north-south axis, creating a hypothetical flow of pedestrians from North Station up and down Beacon Hill to government office buildings, to the medical centers, and to the Financial District.

The trio showed an elegant rendering of the building's north-facing "urban passageway" lifted onto slender pilotis, allowing a sightline from Merrimac Street straight up the hill to Cambridge Street. In an early sketch, the students built geodesic overlays onto Rudolph's forbidding entrances, only a few of which remain in use. "What happened to those Buckminster Fuller entrances?" McNeely quizzed the students. "Easier to draw than to build?"

Klopfer pointed out that one proposed passageway through the site blissfully ignored new construction that had sprung up since Rudolph's time. "You come through here," he said, pointing at a drawing, "but where do you end up? At the blank side of a Graham Gund building." The students hadn't integrated One Bowdoin Square, Gund's low-rise that abuts the Rudolph site, into their plans.

Noting that a student had placed an uncovered hotel entrance away from the street, Klopfer noted a practical problem: "People get out of the cab from Logan, in the rain; they don't want to walk to the hotel entrance," he said. "It can't be there."

I asked Greg Gibson, a student member of the "Impenetrability" team, what he thought of Rudolph's Services Center after spending a whole semester working on it. "I like the building even though I know it's unpopular," he said. "It's a byproduct of Rudolph's ideas. He thinks on a higher level than most individuals, and it's hard to appreciate that."

You've drunk the Kool-Aid, I suggested. What about all that massed concrete? "Concrete has qualities that are pretty harsh," Gibson replied. "But you have to accept that as a byproduct of this great work."

ALEX BEAM writes a column for *The Boston Globe* and is working on a book about Vladimir Nabokov. "Matter of course" visits exceptional architecture classes at New England schools.

LEFT

 $\label{eq:student} Student work from the Wentworth seminar included renderings by Sara Zettler and Jared Guilmett (left) and Matt Arsenault (right).$



AHEAD

Drawing Ambience: Alvin Boyarsky and the Architectural Association

The Rhode Island School of Design Museum, Providence April 24–August 2, 2015

One of the most influential figures in 20th-century design education, Alvin Boyarsky championed architecture as an artistic venture, a wide-ranging practice that is as much about drawing and publication as it is about design and construction. During his tenure as chairman of the Architectural Association in London (1971 to 1990), Boyarsky orchestrated an exhibition and publication program that situated drawing as a form of architecture in its own right. The RISD show highlights the impressive collection he assembled: drawings by Frank Gehry, Zaha Hadid, Rem Koolhaas, and Daniel Libeskind, and folios representing the work of Peter Cook, Peter Eisenman, Coop Himmelblau, and Kisa Kawakami, among others. Together, they explore the techniques and spirit of drawing practices that permeated this time of experimentation in architecture worldwide.

ABOVE

Bash, by Eduardo Paolozzi, uses material from mass media and pop culture to create a collage, 1971. © Eduardo Paolozzi. From the Collection of the Alvin Boyarsky Archive.

5 QUESTIONS Feeding the soul

Julie Burros is Boston's chief of arts and culture, a position recently created by Mayor Martin Walsh. Formerly the director of cultural planning for the city of Chicago and trained as an urban planner, she provided assistance to cultural organizations focused on strategic growth. Her first initiative in Boston is to lead the creation of a cultural plan.

What is your favorite spot in Boston?

One thing I appreciate that is uniquely Boston—it lacks a grid. I walk around trying to navigate, and there is confusion: Streets change names halfway through. You catch a little glimpse of that. There are cobblestones and little lanes. There is a great sense of how everything looks and fits together. I am delighting in the feeling of a city that isn't driven by a grid.

How does investment in arts and culture benefit Boston as a whole?

It's very different from investing in hedge funds or other economic mechanisms—

it will benefit Boston in multifaceted ways. Research on the impact of funding for artists and arts organizations [shows] a positive impact on tourism and economic development, creative industries and education, the general culture of innovation in the city. One of the most important benefits is that it helps seed the ecosystem—arts and culture is the stuff that feeds people's souls.

What elements are crucial to a successful cultural plan?

Assessment and analysis of what conditions exist in the landscape and the field. It also requires public and stakeholder engagement, which is the cornerstone of any cultural planning process. Then, there is a synthesis pulling things together that reflect the goals of the people of Boston, the cultural community as well as the administration. Mayor Walsh has talked about wanting to make Boston



a municipal arts leader. That's a complex goal, but by establishing my role and initiating the plan, the mayor is creating greater visibility and beginning to put the proper resources in place.

How can the design community support your cultural planning efforts?

By being receptive to an interdisciplinary approach that embraces the role of arts and culture in the everyday lives of people and their experience of the civic realm. The ultimate collaborative approach would be to have artists on design teams at the earlier stages of all kinds of civic projects and public works. That is my dream. Beyond creating, say, a mosaic within a train station, maybe the artist on a transit project could be a dancer who is well versed on how to move people in the best possible ways. I'd ask the design community to remain open-minded, creative, and aspirational about a collaborative, interdisciplinary process.

If you were going to be stuck on a desert island, what piece of art would you take with you?

Here's the thing: If I'm on a desert island, let's just say any island, I'm going to assume that it is a physically beautiful place, so I'm not going to bring a piece of visual art with me. I would bring the collected works of Stephen Sondheim. I've been completely obsessed with it for a little while, listening to Sondheim all the time. I'd bring a solar-powered device so that I could listen to the music. If I had that with me, I don't think I would ever feel alone.

LEFT Julie Burros in her Boston City Hall office. Photo: Ryuji Suzuki

Interviewed by GINA FORD ASLA, a principal at Sasaki Associates.



SEEN "The Voke" Worcester, Massachusetts

Acquainting myself with abandoned historic buildings during moments of silence—before their rebirth—is something I consider a privilege. Oftentimes, it's as if the contents of these remarkable structures are mindfully aware of the changes about to take place. Ordinary in their day, today they carry special significance: The keys left on a sink. A flag draped over a chair. Elevator gates left slightly ajar. Hatboxes and broken glass. Weighing stations and other machines of commerce rusted and hushed.

And so my work begins, capturing the character and temperament of discarded objects and beautiful decay. The images become storytellers, offering tangible proof of lives who labored. learned, convalesced, or worshiped within these buildings.

At an early age and hand in hand with my father, who made his career preserving architectural heritage, I was encouraged to experience these landmarks firsthand. Worcester Vocational High School was no exception. It was a magical place to photograph. Once bustling with students studying trades such as woodworking and drafting, "the Voke" abounded with signs of its former spirit—graffitied lockers, scattered tools, magnificent machinery. Having inherited my father's love of old things, I turn my attention and camera to artifacts that have been discarded but by no means overlooked.

MARIA VERRIER is a photographer based in Concord, Massachusetts.

ABOVE Photo: Maria Verner





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BLURRED LINES

Whether the milieu is social space, the workplace, residential life, transportation, or civic territory, what arises when the public and private realms intersect? This issue of *ArchitectureBoston* mines the boundaries that are muddied when these domains overlap, exposing the friction, and benefits, that lie beneath.

JAMES WEINBERG is a Boston-area illustrator, designer, and teacher whose work has been featured in AIGA's Best of New England Show and Communication Arts.

A LONG AND WINDING ROAD

by Jesse Brackenbury

The Rose F. Kennedy Greenway is a success for all. The public loves it: 987,000 came last year for its carousel, food trucks, Wi-Fi, and events, plus millions more enjoyed its fountains, public art, and gardens. It has spurred massive investment in nearby real estate. Philanthropists have contributed \$25 million to the park. But the Greenway is a public space with a complex provenance.

As part of the federal Big Dig project, its blueprint was overseen by the Massachusetts Turnpike Authority, reviewed by multiple city agencies, designed by six landscape architecture firms, informed by community advocates, and complemented by four nonprofits designing cultural facilities for the Greenway. Yet the nonprofit Rose Kennedy Greenway Conservancy responsible for maintaining, programming, and improving the park in a public-private partnership with the Commonwealth—was not involved in the park's planning. The ramifications of that exclusion affect the public's experience of the Greenway today, and the lessons learned must be applied in developing new public spaces in Boston.

Elements of the original design continue to impair the park experience. Visitors are insufficiently buffered from the car and truck congestion on adjacent roads; this unpleasant experience results from wide streets (intended to prevent traffic from backing up on the ramps) and flat park terrain (chosen to improve sightlines for safety). Since the Greenway wasn't built to accommodate bicyclists, the Conservancy struggles to keep pedestrians safe from bikers in the park who just want a safe, attractive route from North Station to South Station.

Prioritization of specific design concepts trumped many of the finishes and amenities that enhance the park experience. An example: "View corridors" (combined with cost-cutting) resulted in barren plazas in front of the spectacular Rowes Wharf arch. Consequently, the Conservancy's first improvements were focused on adding basics: scores of movable tables and chairs, dozens of umbrellas for shade, wayfinding signage, and electrical outlets. Other items, such as potable water, are still lacking. Having the park operator involved in the park planning would certainly have helped address operational considerations: The Conservancy cares for the park out of unheated, unlit outdoor storage units located four blocks from the park.

The Greenway hosts 300 free events annually, but not as the original design anticipated. A "Great Room" between State and India streets was envisioned as an event site across two park spaces by closing a half-block, but street closure is beyond the Conservancy's authority and happens infrequently. Consequently, festivals are scheduled in other areas in the park, but these spaces' infrastructure (and nearby residents) did not anticipate big events. The original scheme called for a café; by accommodating innovation, the Greenway has instead become a food truck hub.

Six years of operations have been instructive. The Commonwealth has just tasked the Conservancy with care of 1.3 additional acres along the corridor. New public-realm planning is under way through the Downtown Waterfront Municipal Harbor Plan and a ramp-parcel study. As downtown's public space is reshaped by the development the Greenway has spurred, the recent past must instruct our immediate future. JESSE BRACKENBURY, executive director of the Rose F. Kennedy Greenway Conservancy, has also worked for the Boston Consulting Group and the City of New York Department of Parks and Recreation.

STUDIO CITY

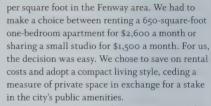
by Aeron Hodges

I live with my husband in Boston, and we share a 375-square-foot studio.

That may seem small for two people, but I grew up in a tiny apartment in Shanghai. Space was in high demand in the city, and families like mine lived in a communal housing typology adapted from many early-20th-century estates. The "Shi Ku Men" housed a half-dozen families sharing a small courtyard and a kitchen, where daily gossip was exchanged and childhood friendships were made.

Several years ago, when I was working in Tokyo, my husband and I lived in a simple, well-designed 200-square-foot apartment near Ginza. Although there wasn't much room, everything we needed was readily available. There was no wasted space. Every object, from alarm clock to rice cooker, was essential and had its designated location. I strive to practice that level of precision and discipline in my own Fenway apartment.

There are many perks to living in the city, including convenience to transportation and proximity to various urban amenities, but these perks also come with a sizable price tag. Rent costs approximately \$4



Sharing a studio is not for everyone; it is a lifestyle that requires extra effort. Without a separate bedroom, we have synchronized our sleeping schedule so that we don't keep each other up. Meticulous planning is often needed for smart use of space. We scrutinize what we really need for living versus what we can live without.

If the rental cost is so high and the limited space adds constraints to our lifestyle, why wouldn't we move out of the city? I wouldn't be able to take a 10-minute ride on the commuter rail to work. We would lose the convenience of a supermarket at our back door, having more than 20 restaurants and bars to choose from for a night out, and our frequent walks to the Boston Symphony Orchestra and the Museum of Fine Arts. The city is our living room.

We are not alone in sacrificing space in return for what the city has to offer. During a focus group study conducted by the research initiative what's in, the majority of the participants preferred to downsize their city apartments if rents could be more affordable. As living costs keep increasing in Greater Boston's urban core, many will be priced out of the city. Could compact living be a viable solution? How do you fund enough of such developments so that they become truly affordable? How do you alleviate current zoning constraints on minimum housing sizes?

Thinking about these questions, I couldn't help but remember moments from the Shi Ku Men: the banter of our neighbors next to the clothesline full of drying laundry, the melodic Chinese opera playing on the radio next door, and the aroma of meals being prepared and shared. Living small will require us to share with others, but that's also how we get to experience so much more.

AERON HODGES designs high-density urban housing at ADD Inc, now with Stantec. She is the co-founder of WHAT'S IN, a research group looking for affordable urban living solutions.



OFFICE SPACE, THE SEQUEL

by Shawn Hesse

When sociologist Ray Oldenburg coined the term "third place" to describe the coffee shops, cafés, pubs, and public squares that are not home (first place) and not work (second place) but still integral parts of our lives, the Compaq SLT/286 laptop weighed 14 pounds and cost \$5,399.

A lot has changed since 1989. New technology enables us to be truly mobile (a MacBook Air weighs just over two pounds today and costs \$900). Demographics have changed, too: According to an annual survey by Johnson Controls, 79 percent of 18- to 25-year-olds want to be mobile rather than static workers. No wonder the distinction between "third places" and workplaces has become so blurred. And now that Starbucks offers wireless phone charging, working from the corner coffee shop is more feasible and desirable than ever.

Still, working from a coffee shop definitely has its downsides: no conference rooms, no private phone calls, talking to others is typically limited to "Is this seat taken?" Plus you have to pay for the coffee just to get Internet access. Cue co-working spaces such as the one I work out of — Workbar. Co-working offers the opposite of the Starbucks experience: You pay a membership fee, schedule the use of shared conference rooms and private phone booths, collaborate openly with your neighbors, and drink all the free coffee you want.

Co-working spaces serve as a blend of a second and third place that meets both professional and social needs. During my search to find a location for our Cambridge branch office, I toured multiple co-working spaces throughout Boston. As an architect, I immediately noticed the way the design of the space supported (or, in some cases, hindered) the promise of co-working to provide a flexible work environment that enables cross-fertilization of companies and ideas.

Some of the less successful ones look a lot like traditional offices, with glass walled offices lining the perimeter of the floor and a large communal space in the center. Others even use traditional cubicle-style workstations (shudder). The most successful spaces create a sense of openness and equality, and the furniture supports collaboration and community



by removing barriers between individuals.

As with all architecture, there is a play between the static, built form and how the space is used. When synchronized, the effects of both can be amplified. Ideal co-working spaces aren't just designed to promote interaction; the culture of community is consciously built through events and programming. Our firm, emersion DESIGN, has directly benefited from this. We have hosted a series of events in collaboration with Workbar and other co-worker organizations to promote sustainability, civic engagement, community building, and even zombie preparedness.

According to *Forbes*, there are more than 260,000 people currently working from spaces just like Workbar. That number was fewer than 10,000 just five years ago. As technological advances continue to reduce the number of cables necessary for us to work at a fixed *somewhere*, co-working spaces seem poised to change the way we think about our traditional second place. SHAWN HESSE leads the Cambridge office of emersion DESIGN, a sustainability consulting, architecture, interiors, and engineering practice with offices in Cambridge, Massachusetts, and Cincinnati.

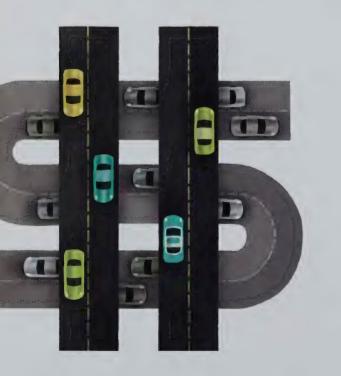
TRAFFICKING IN LUXURY

by Phil Primack

Compared to other states, Massachusetts has been wary of public-private partnerships to meet the transportation needs that keep growing in inverse proportion to available funding. But with proposals percolating to privatize two key traffic points, and an anything-but-taxes new governor knowing he has to find infrastructure fixes, privatization may be about to move up the Bay State agenda.

The idea of contracting with profit-seeking entities to operate roads and other public operations has been around for decades—as has the often polarized debate about the process. Supporters see public-private partnerships as an infrastructure savior, enabling the supposedly more efficient and better-financed private sector to build and even operate costly projects. Opponents blast them as tax-dollar giveaways to unaccountable corporations that fail to deliver promised financial and other benefits while enriching themselves. Each side has its poster projects: Foes point to Chicago's 2008 privatization of its parking meters, while supporters

PHIL PRIMACK is a Medford-based writer, editor, and consultant on policy issues.



cite the more recent \$1 billion Port of Miami tunnel project.

As usual, truth drives down the middle lane. Decades of experience, positive and negative, have made both the public and private sides much more sophisticated in how they consider and negotiate these partnerships. Chicago, for example, got \$1.15 billion when it leased its parking meter operation to a private company, but officials there probably now wish they hadn't locked the city into a 75-year deal that requires it to reimburse the vendor whenever it closes a street for repairs, storms, or other purposes.

Two pending proposals in Massachusetts may show how well the players have learned such lessons.

Under one plan before the state's Public-Private Partnership Oversight Commission, created as part of the state's 2009 transportation reform bill, private investors would collect toll revenue to build a special travel lane along nine miles of congested Route 3 between Braintree and Norwell. (The state would remain responsible for maintenance.) The other proposal—much less formed so far, and with significant public opposition—calls for a third crossing over the Cape Cod Canal. Former Governor Deval Patrick wanted to advance at least one privatization proposal before he left office, and the state Department of Transportation says it will issue "requests for information" for both the Route 3 and bridge proposals this spring, with likely support from the new administration of Governor Charlie Baker.

If they move forward, both plans will ignite one of the biggest flash points sparked by road privatization, namely that it creates a two-tier transportation system, producing better travel options for people able to afford them, whether a Route 3 "Lexus lane" or a "Beamer bridge" to the Cape. Critics also contend that policies that make driving even more attractive conflict with efforts to encourage public transportation to reduce greenhouse gas emissions. Advocates counter that all drivers, including those stuck in regular, nontoll lanes, benefit from less congestion, which also reduces pollution.

The arguments are old, but the urgency of transportation needs and the Commonwealth's severe capital crunch are not. And that means public-private partnership polemics may soon be flying in a political theater near you.

BLINDED BY THE LIGHT

by Michael S. Dukakis

Thousands of visitors coming to Boston these days remark on what a beautiful city it has become. And it is, with one conspicuous exception: We are being assaulted by a rapidly growing collection of commercial billboards, street furniture, bus shelters, and—worse still—flashing electronic billboards that seem to be a clear violation of Lady Bird Johnson's Highway Beautification Act. In a city like Boston, with its superb architectural and planning communities, this is difficult to understand.

Moreover, many of the sites for this visual pollution are on public property, especially that owned by the MBTA, even when they are strongly opposed by the communities in which they are located. Several years ago the Massachusetts Supreme Judicial Court ruled that the T did not have to comply with local zoning laws. As a result, more than 200 billboards have gone up on T property when there were none—deliberately so—when I left the governor's office.

If you don't believe me, drive down 1-93 from the north and take a good look at the 16 massive billboards that greet you as you approach Boston. There are so many that you have to look hard to find the skyline. They aren't there because the city of Somerville wants them. They are there because the land on which they sit happens to be T property and is therefore fair game for the T's advertising campaigns.

Approaching Boston on the Southeast Expressway is, if anything, worse, and we will soon be greeted there—as we are now on the north—by digital billboards flashing their messages as motorists try to navigate a difficult and often dangerous route into town.

Buses and streetcars are fair game, too. I never allowed advertising on the outside of vehicles during my administrations. Now, it is often a "wrap"—the entire vehicle is nothing but a rolling billboard covered with commercial advertising.

How has this been permitted to happen in the state that led the way nearly a hundred years ago, when the 1917 state constitutional convention passed a specific amendment making it crystal clear that the Commonwealth had the right to regulate billboards? And why is our public transportation agency seemingly using every available inch of its space for commercial advertising?

A few years ago, the T even opted to cover its



street cars on Huntington and Commonwealth Avenues with liquor ads, apparently designed to encourage all those students along both avenues to drink even more. Finally, then-Representative Martin Walsh and Kitty Dukakis persuaded Governor Deval Patrick, to his credit, that it was time to stop. The liquor ads have disappeared, but the rest is getting worse.

We took a South Station that was falling apart back in the 1970s and turned it into a magnificently restored transportation terminal. But have you been there lately? I am honored that the legislature and Governor Patrick named it for me. But that glorious hall is now littered with hanging advertising banners. The front entrance that used to lead directly into the great hall now features escalators to a second-floor Cvs, and you can't even see the great hall from the entrance.

There are better ways to generate revenue for the T and the Commonwealth than plastering the state with this stuff. Where are Boston's architects, and why aren't they raising hell about this? MICHAEL S. DUKAKIS is a former governor of Massachusetts and currently professor of political science at Northeastern University.

THE WATER'S EDGE

BETWEEN THE BOUNDARIES LIES A COMPLEX, PERMEABLE DOMAIN

by Steven G. Cecil AIA ASLA

The physical dialogue between the public realm and the private realm forms our cities. In simple terms, the "public realm" consists of places where anyone can go; the "private realm" is available by invitation only. Designers respond to the evolving cultural boundary between these two realms by creating buildings, spaces, and connecting infrastructures that directly shape our urban experience. They make the public/private boundaries visible.

Polarized views fill the air within significant territorial struggles about which places *should* be public or private. The interplay pervades—and sometimes bedevils—the regulation, funding, and design of urban projects. Professionals and their clients devote substantial time and resources negotiating workable boundaries.

But complex urban communities do not always fit simple public/private distinctions. We experience layered and permeable edges between these realms. In fact, we can find a third and more foggy realm, comprising quasi-public places and spaces. Boston's waterfront is an emerging case in point.

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Take a walk along the urban waterfront and look around. At first, the public/private boundary seems perfectly clear. You can plop down on a bench in the small park (public) where Central Wharf used to be, at the foot of an office building where tenants have spectacular views (private). You can look into an inviting street-level seafood restaurant—great if you have the appetite and the bucks—but is it a public place? You can watch families with gangs of excited kids parade into the New England Aquarium after paying a fee, which helps support this outstanding nonprofit institution. Is it public, or private?

Advocates frequently seek clear distinctions in these circumstances. Some might lay claim to waterfront views they enjoy. Public ambitions may extend to access and use of the land at no cost, without regard for private title. The private advocates typically cite the economic potential of sought-after waterfronts, with buildings for living, working, shopping, eating, and entertainment. Private fishing, boating, and shipping companies also claim the water's edge, arguing that working waterfronts are scarce and diminishing resources for water-dependent enterprise.

The contrast between public and private places is a touchstone of urban design, often portrayed with stark distinctions in a figure/ground relationship. The iconographic diagram of this duality is the Nolli Map, named for architect and surveyor Giambattista Nolli's 1748 chart of Rome. Nolli's elaborate engraving recorded footprints of all spaces behind closed doors as darkened shapes. This was the private realm and formed the "figure" parts of the map. He left uncolored all other exterior and publicly accessible street-level interior spaces. This revealed the public realm available for civic life, picturing the "ground" that contrasted the private city.

The plan hints at the volumes of the buildings and the spaces that they define. In the mind's eye, Nolli provides a pedestrian's perspective of a balanced composition that includes rich sequences of streets and plazas connecting the accessible interiors of churches and civic structures. But we can also invert this perspective and imagine being within the houses, palaces, and buildings that conceal the private life of the city. The seductive map conveys a compelling vision of clear, artfully shaped boundaries between public and private worlds.

Maybe 18th-century Rome really was like that, but Boston is not. This city was derived from a colonial heritage and has evolved with intertwined gradations of rights, places, and spaces.

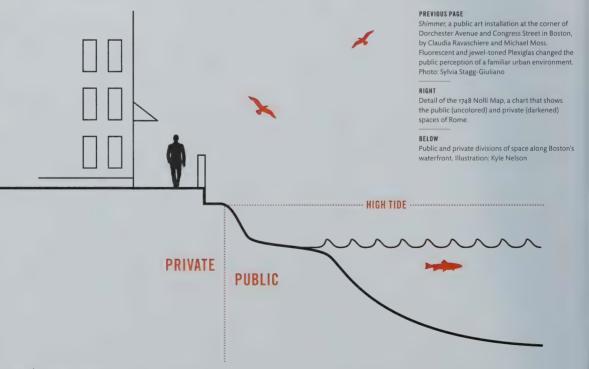
Key legal frameworks date from prerevolutionary times. The Massachusetts Bay Company launched the colony as a commercial venture, after all, and did not separate "public" and "private" as we might today. Open waterways were needed by everyone, so the Commonwealth held all rights below high tide for public benefit. But there was a quasi-public zone above low tide. Under the Colonial Ordinances of 1641–47, the intertidal zones could be privately owned, but the Commonwealth preserved limited public rights for access to the water for fishing, fowling, and navigation. Above high tide, land was available for private ownership and use.

This mix of public and private rights along the waterfront evolved over the centuries and is even more complex today. In 1866, Massachusetts defined public rights along waterfronts in Chapter 91, a state law. Further regulations and interpretations dramatically expanded the role of Chapter 91 over the past 40 years.

For example, limited public waterfront rights remain within the presumed location of many historic tide lines, even if those lines were obliterated by urban fill and the land is now private. When fill covered tidal flats at the Fan Pier of South Boston more than a century ago, quasi-public rights remained. But our right to fishing, fowling, and navigation has been radically reinterpreted as a right for the public to enjoy private waterfront land for less water-dependent uses — including effective rights for wining, dining, exercising, enjoying jazz concerts, or simply taking in the view. We may still hold the right to take a potshot at a passing seagull, but legal advice should be sought before trying that out.

Private rights also persist on some properties if approvals and licenses secure appropriate public access. So private sector funds create layers of both public and quasi-public spaces and activities as a condition of the private development.

We now have special regulations to implement quasi-public





spaces and uses, leading to obscure technical language and convoluted standards that have provoked innovative solutions. For example, "Facilities of Public Accommodation" (FOPAS) allow people to enjoy the waterfront, even if they are private establishments—like that seafood restaurant near the Aquarium. "Special Public Destination Facility" (SFDFS) are private or public interior facilities that are particularly attractive to the public with civic programming—like the Aquarium and other museums. "Offsets" provide public benefits to balance the presumed detriment if a project exceeds certain dimensions: so shadows from a tall building like the one being constructed at Lovejoy Wharf could be offset with space provided on the ground level for a visitor's center. These are just tips of the regulatory iceberg.

People may ask whether all of these really constitute public benefits. The answer is no. Some of these are *quasi-public* benefits recognizing quasi-public rights. A kind of shared ownership breeds hybrid places.

What does this all mean for the urban environment and its form? A single segment of Boston's waterfront shows the results: Atlantic Wharf is a mixed-use development with offices and residences along Boston's Fort Point Channel that includes both historic restoration and a 395-foot tower. The project has designed, packaged, and paid for both public and quasi-public amenities onsite and around the Harbor. The project provides for the Boston Society of Architects' ground floor information center (a FOPA). There is a waterside restaurant with outdoor seating, a wide-open public plaza and publicly available restrooms (more FOPAS). A dock serves water taxis and private vessels (a water-dependent FOPA). The project helped fund a park next to the Children's Museum (which is an SPDF). Atlantic Wharf supports programs organized by the nonprofit Friends of the Fort Point Channel, ranging from live music, temporary art in the water and on the shore, exercise programs, and other activities.

Boston's harbor serves as a useful point of reference, but you will find the foggy third realm of shared public/private placemaking as a fundamental part of urban design in most communities, if you look for it. These are the office building and hotel lobbies where you can take shortcuts between streets when it rains. These are the public entertainment events filling Copley Square for a few hours on stages erected by corporate stewards of public relations budgets. These are the well-designed bus stops owned by a company that puts slick ads on the sides to pay for them, placed on public sidewalks serving public buses. These are the cafés spilling tables out onto the sidewalks of Boston (or Paris, or Rome), making money for their owners. It's the thick spatial edge between public and private.

It's not exactly the Nolli Map, but it seems like a good way to build a city.





THE SHARING ECONOMY NUDGES OWNERSHIP ASIDE

by Diane Georgopulos FAIA

The act of sharing opens a door into our interior life, revealing a self that we usually don't access in our day-to-day experience. When we share ourselves or our possessions, we lay bare our vulnerability. Risking our self-image or a possession imbued with personal significance is what makes these moments memorable and carries us over a threshold as we experience the new domains created within the sharing economy.

That wash of good feeling about sharing sweeps us into these new, still-evolving forms, challenging long-held notions of ownership. Apps expand access to information and services, connecting us to sources that satisfy what we need or desire. The generation that grew up protesting conservative postwar institutions spawned a period of vast consumption of resources as well as a younger generation that is now inventing its own counterculture.

Common threads of the sharing economy are the embrace of an entrepreneurial spirit, an awareness of resource scarcity, and the abandonment of nonfunctioning institutions as sources of leadership and innovation. Some examples include food trucks that share public spaces and create lively dining options; racks of Hubway bikes and Zipcars parked on city streets available for hourly rental; and,

most recently, Uber and Lyft, defended as a cheaper convenience by a population of new users unconcerned about the disruption of the taxi business model. In the generational transformations natural to changing priorities and values in American society, the sharing economy is recalibrating how we consume resources and services.

Airbnb, where private property is rented out to a paying public, is causing a stir among condominium owners. Investorowners in developments without strict, enforceable regulations about the minimum length of rentals are in conflict with occupant-owners seeking to control the stability of their community and access to their private property. Occupantowners see high turnover as a potential for higher condo fees, less familiar faces, and a more transient community. Investorowners, however, see Airbnb as the highest and best use of their unit, maximizing its value through short-term rentals in addition to normal appreciation.

As a culture, we have adapted to smartphones, tablets, and laptops that allow us to access the services of the new sharing economy anywhere in the world. At the same time, these devices help us minimize large personal collections of books, records, and photographs. Our mobility is enhanced tremendously: We can pack our charger and take our favorite things with us wherever we go.

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Similarly, social media link us with our friends anywhere in the world without leaving the comfort of our bedroom. Anyone can "connect;" the chance encounter is no longer coincidence but engineered. Staying home after work is a matter of a choice rather than the outcome of not having made plans. Fewer possessions and social networking have influenced the actual square footage of new micro-units, where shared gathering lounges are designed in a nod to the reduced need for individual living rooms. In a previous generation, the micro-unit model was the single-room-occupancy or residential hotel that included social spaces such as dining rooms and lounges. Real estate movers and shakers are sanguine about renewing this housing option, where higher rent for less space is a winning combination.

The sharing economy is felt in the workplace, too. The private office, long the symbol of privilege in a hierarchical organization, now feels like a relic. Office interiors have been replaced by shared resources, including movable workstations, glass walls, work bars, and team rooms. All these speak to an attitude of openness, of paperless and transparent organizations. Team leaders circulate among employees or use standing desks to overlook their charges. Technology and cloud sharing has hatched a generation of "consultants." You see them in coffeehouses and fast food restaurants all over the city. Cheap by any

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commercial real estate standard, these independent workers appropriate seats for their private enterprise with no more rent to pay than the price of a cup of coffee. Telecommuters or laptop cowboys who may need the periodic support of the "mother ship" come into a "hotel space" in the office. Commercialspace needs diminish, and the flexibility to adapt to new projects is much less costly.

The sharing economy was taken to court in 2000 when Napster showed how the tech-savvy could appropriate music without paying royalties to artists or recording companies. Before the legal case was settled, hackers outsmarted the entertainment industry and forced it to rethink its distribution models. Twentysomething app inventors and clever hackers have acquired counterculture hero status and have been catapulted into the ranks of the super-rich, possibly without ever having owned a suit.

A trend among a younger cohort is placing higher value on experience than on ownership. There is a subculture, too, of "freegans," anti-consumerists, or dumpster divers who perceive their access to unearned goods as a legitimate exercise. They defend their actions by asserting that they are hurting no one and merely taking advantage of the surplus that exists and would otherwise go to waste.

Perhaps the most revolutionary example of the sharing

Stantec

economy, however, is found in cases such as Kahn Academy and MOOCS, or massive open online courses. These are the wildflowers in education that have sprung through the cracks of ivy-covered walls. It remains to be seen what springs from the seeding of this fallow ground.

As entrepreneurs create modern models for businesses, cities grapple to create alternate models to finance the maintenance and upkeep of roads, buildings, transit systems, harbors, tunnels, and bridges whose operation is essential to commerce. Our infrastructure's decaying condition is irreconcilable with the unwillingness to bear the shared cost of repairs through traditional methods of taxation. The new strategy? Public/private partnerships that finance the maintenance and upgrading of necessary infrastructure.

Some find the sharing economy a refreshing break from relentless consumption. Others see reckless destruction of established business norms. Like a cat standing on the threshold looking in at the party, we feel a societal skittishness, perhaps defined by which generation we identify with, about embracing these new businesses until we know which will survive. What is inevitable is that today's innovators will spawn yet another generation that will create—and share—its own counterculture.

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FOR SOME OF US, SOLITUDE SUPPORTS LEARNING

by Laura Wernick FAIA

I walk by William Rawn's Cambridge Public Library extension twice a day on my way to and from work. I love the transparency of the south façade. It is sharp and crisp, and I can see right through to all of the exploring, socializing, reading, and working taking place within. When I go into the library for research or study, however, I tend to move quickly away from the openness of the new building into the old one. I find a semi-enclosed quiet spot away from the crowds, turn off social media, and get to work.

In the world of educational facilities, the buzzword over the last 10 years has been "collaboration," with the focus on shaping physical space to support students' cooperative efforts. Great energy has been put into designing classroom furniture to enhance students' ability to work together. Classrooms have been designed to allow students to easily share ideas, efforts, and experiences. Even the rise of the now-ubiquitous academic "learning commons," in place of the traditional library,

LEFT AND ABOVE

Hoodini, part of the Chair Wear collection from the Dutch design studio Bernotat & Co, offers a moment of privacy wherever an occupant might need it.

Photos: Rogier Chang

came in part from the impetus to create more group or social learning spaces.

The seemingly indisputable logic behind all of this comes largely from the business world. As Malcolm Gladwell has written on his blog, "Innovation—the heart of the knowledge economy—is fundamentally social." Business tells us that innovation requires collaboration; therefore, we should be

Are there at least some of us who need privacy to do our best work?

training our students to work in groups. As humans, this reasoning insists, we do better work when we know how to work together effectively in teams.

But what if Gladwell and the rest are wrong? In her bestseller Quiet: The Power of Introverts in a World That Can't Stop Talking, Susan Cain disputes the power of collaboration theory. As part of a longer argument defending her thesis, she describes innovators such as Steve Wozniak toiling alone in his cubicle night after night in his pursuit to create the first personal computer. She provides a letter from the solitudeloving Charles Darwin replying to a social invitation: "My Dear Mr. Babbage," he writes, "I am very much obliged to you for sending me cards for your parties, but I am afraid of accepting them, for I should meet some people there to whom I have sworn by all saints in heaven. I never go out."

Some research bolsters Cain's thesis even within the business world. In "The Brainstorming Myth," a *Business Strategy Review* article from 2000, organizational psychologist Adrian Furnham indicates that performance gets worse as group size increases. He writes, "If you have talented and motivated people, they should be encouraged to work alone when creativity or efficiency is the highest priority."

Given that there is at least uncertainty over the benefits of collaboration, perhaps it is time to rebalance our thinking on the types of spaces students need to learn, to think, and to be creative. Are there at least some of us who need privacy and solitude to do our best work?

The Roeper School in Birmingham, Michigan is exploring that theory. Our firm, HMFH Architects, has been hired to design a new dining hall and library for this K-12 school for gifted students. The initial design solution called for infilling the courtyard of its doughnut-shaped building with a learning commons that included group study areas, social spaces, and food service. The proposed learning commons would open directly into the existing building through the renovation of the library. The initial concept included

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a range of spaces for different-sized groups and types of activities, but the emphasis was on providing opportunities for collaboration.

The feedback was generally positive, but there were voices with a persistent question that we couldn't ignore. The voices were from the students, and they were asking, "Where do I go to be alone?"

Cain would not have been surprised by the question. She reports on a series of studies done in the 1950s at the University of California/Berkeley on the nature of creativity. "One of the most interesting findings, echoed by later studies, was that the more creative people tended to be socially poised introverts and 'not of an especially sociable or participative temperament." The students at Roeper, who tend to rank high in originality and curiosity, are likely to fall within that characterization. They were eager to have their renovated school support the way they operate and learn.

The revised approach for Roeper has become known as the "Continuum," and for obvious reasons. The Continuum will provide a spectrum of spaces from large active spaces at one end of the building through a range of small group areas and ultimately to quiet individual study spaces at the other end. The design provides opportunities for more enclosed rooms than originally envisioned, but the Continuum also allows students to enter at the level of activity and social interaction that feels right simply by deciding on which entrance to pass through.

Roeper is not alone. The recently opened Brody Learning Commons at Johns Hopkins University, designed by Shepley Bulfinch, is a careful mix of solitary and group study. Although it does have an open commons space for more collaborative activities, that is complemented by 15 small group rooms and the very popular Quiet Reading Room, which, according to Shepley's senior library planner, Kelly Brubaker, "is intended to promote an atmosphere for focused research and individual scholarship within the larger facility."

We live in an era that elevates openness and connections. We want our lives to be full of experience and information. We want our workplaces to provide plentiful opportunities for meaningful interactions. We expect our institutions to be open and transparent. We shape our architecture to those goals whether in our open office plans, the transparent façades of our high-rises, or in schools with high levels of interconnectedness. But maybe those students at Roeper are on to something. Maybe in the midst of all that openness and interaction we also need to be creating something else as well. Perhaps we need to be carving out both time and place for solitude.

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ABOVE

Looking toward the city from the 14th-floor observation deck at Independence Wharf, Boston Photo: Peter Tocci

BOSTON POPS

THE CITY SHOULD COMPILE A DIRECTORY OF PUBLIC SPACES

by Jerold S. Kayden

Boston is one of many cities worldwide that has deployed its land-use regulatory approval process to secure from developers so-called Privately Owned Public Spaces at office and residential towers. Legally required to be open to the public, these "POPS"—plazas, arcades, gallerias, rooftop terraces, and other outdoor and indoor spaces—are meant to be places to relax, meet with friends, eat a sandwich, read a book, take a snooze, or watch the city go by—all without having to pay for the privilege. Properly designed, accessorized, and maintained, POPS can richly complement a city's public realm.

So how many POPS does Boston have? Where are they located? How many have seating, landscaping, public art, restrooms, or water fountains? When do they open and close? How many are indoor, heated, and airconditioned? Are they operated at all times in compliance with applicable legal requirements? These questions have answers, but it is unlikely anyone knows them all. Most important, the public does not know the answers.

Some of us know where some POPS are. There is the 14th-floor observation deck at 470 Atlantic Avenue (Independence Wharf) and its interior seating area off the HarborWalk. There's Foster's Rotunda down the street on the 9th floor of 30 Rowes Wharf. Atlantic Wharf at 290 Congress Street has public seating and events. But what about the outdoor plazas scattered about the downtown commercial area? Was the Hancock tower's observatory (now closed) ever a required POPS? Are some office lobbies actually indoor POPS?

This lack of knowledge is not unique to Boston. Local governments, civic organizations, members of the public, and even some owners remain

unaware of their full POPS collections. This condition is slowly changing, however. Inspired by an ambitious project completed in 2000 in New York City, a number of cities have assembled information from relevant legal documents and other sources to answer questions about their cities' POPS. More recently, websites have sprung up to make the information accessible and usable to visitors.

POPS have a half-century history. In 1961, New York City introduced incentive zoning, offering to private developers a zoning bonus of 10 rentable office or residential square feet in return for one square foot of plaza. The developers and successor owners would legally own and maintain the plaza, but such spaces would have to be open to the public 24 hours a day, seven days a week. A plaza was defined as a space free of obstruction, at least 750 square feet, and no more than five feet above nor more than 12 feet below street level.

The deal proved irresistible to developers, and most office towers in succeeding decades provided public spaces in exchange for zoning bonuses. Unfortunately, the spaces, while accessible to the public, offered little to no reason for the public to use them. Most were sterile and windswept, spaces that repelled rather than invited public use. In 1975, taking heed of research conducted by the urbanist William H. Whyte, New York's zoning began requiring better design, sunlight orientation, and the addition of amenities such as seating, lighting, landscaping, water fountains, and identifying signs. Unsurprisingly, the quality and use of the spaces increased dramatically.

Yet problems persisted, including the vexing absence of comprehensive, legally accurate, and publicly available information about the nature and extent of New York City's POPS inventory. In the late 1990s, close to 40 years after the initiation of POPS, no one in the city could with confidence answer how many existed and what legal obligations governed their provision. It took the efforts of a scholar (full disclosure: me)-working in formal collaboration with New York's Department of City Planning and the Municipal Art Society of New York, a civic organization—to create a database describing in carefully researched legal detail each and every POPS built from 1961 to 2000. The forensic efforts were time-consuming and exhausting. Thousands of legal documents and plans were unearthed (sometimes literally) from the dusty bowels of the city's Department of Buildings. All were subject to post hoc legal and planning analysis. With decades-old, incomplete records, best guesses about the likely legal status of a space often had to suffice.

The results of the project resuscitated for New Yorkers an asset that many did not know they had. The raw numbers — 503 POPS at 320 buildings — were instructive, but the database created the conditions for something far more valuable. Individuals could now visit and evaluate all the sites, which we did, finding that 37 percent of them ranged from very good to acceptable while 41 percent were, in a word, unusable.



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The other major finding was that roughly half the buildings with POPS had a space out of compliance with legal requirements, resulting in their privatization. Examples abounded of access denial, commercial activities spilling onto the space, and removal of required amenities such as seating. In 2000, contemporaneously with the publication of the full study in the book *Privately Owned Public Space: The New York City Experience*, the city filed three civil lawsuits and eight administrative actions against owners for alleged violations of the legal requirements, now available for all to see, governing their spaces.

In the years since, other city planning departments or civic organizations have undertaken their own projects to assemble and publicize data about their public spaces. San Francisco, Seattle, and Toronto are among the better examples of creating and making available POPS data for public and professional consumption. But New York City boasts the most ambitious website anywhere (apops.mas.org), providing photographs, written profiles, site plans, and legal data for every space. Equally important, the website creates a digital space where members of the public can post comments, report problems, share photographs and videos, and even suggest redesigns for underperforming spaces.

So where does this leave Boston? Behind, to be sure, but remediable given the right attitude and hard work. A first step would involve a physical survey of the city, along with discussions with knowledgeable individuals, to develop a list of possible outdoor and indoor spaces. Next would be an analysis of the legal documents governing the public approvals of the buildings to which the possible spaces are attached to determine whether, indeed, the spaces are required and, if so, what are the requirements. Synthesizing this analysis into a publicly available and usable format would complete the initial project. From there, programs for activating the spaces, along with monitoring and enforcement to ensure compliance with applicable legal requirements, would be suddenly possible.

Whether Boston's city government takes on this project by itself or in partnership with civic organizations and interested researchers, it needs to make available for scrutiny the legal documents governing the public approvals received by developers. Some of these records are maintained by the city, others are held elsewhere, but they are all obtainable with the right spirit of transparency and cooperation. Only then can we have the appropriate debate about whether POPs, with their private owners, can ever be truly public spaces; what rights citizens hold in terms of using the spaces; whether the zoning deals for the spaces have yielded a worthy benefit; how existing spaces may be improved; and whether new ones should be encouraged. If this is done correctly, then when someone refers to the Boston POPs, at least some people may ask, "Do you mean the orchestra or public spaces in the city?"



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ARBOR

Above the computer hub at John Jay College of Criminal Justice, almost 700 suspended timepieces are visible as an abstract composition from within the lab and from the street outside. When observed from one spot at the entrance, this 2014 array of timepieces optically morphs into a depiction of the scales of justice. *Arbor* expresses the interplay between the temporal and the judicial, grounded in an individual's experience of time and space.

A sculptor who designs and installs large-scale work, Ralph Helmick has for the past three decades focused on creating artwork for public spaces. Many of his commissions—which range from airports to universities, courthouses to crime labs—feature hanging objects and metal fabrications that coalesce into an arresting tableau. The overall effect can seem at once fragile yet robust. "I used to make discrete objects; now I'm much more stimulated by the context," he says. Indeed, Helmick's best-known early work is 1984's Arthur Fiedler Memorial on the Charles River Esplanade.

Two of his projects for forensic labs—*Exquisite Corpse* and *Pattern Recognition*—were publicly funded but are not readily viewable by the public, requiring special access. "They felt like private commissions," says the Boston-area sculptor, "given how physically protected they were and how those experiencing them were a small subset of the general public." In principle he prefers private commissions because "they're inevitably more streamlined than publicly funded projects and perhaps even more 'free,' but maybe they haven't resulted in my best work."

Most public art, like architecture, is anchored to its site. "So much of American society is about looking for connections," says Helmick. "As an artist, the challenge is figuring out which ideas fit into the public realm."

—Fiona Luis

Site: John Jay College of Criminal Justice, New York City, Commissioned by the Dormitory Authority of the State of New York; 17 feet high, 17 feet wide, 38 feet 8 inches deep; timepieces, stainless steel cable, steel.

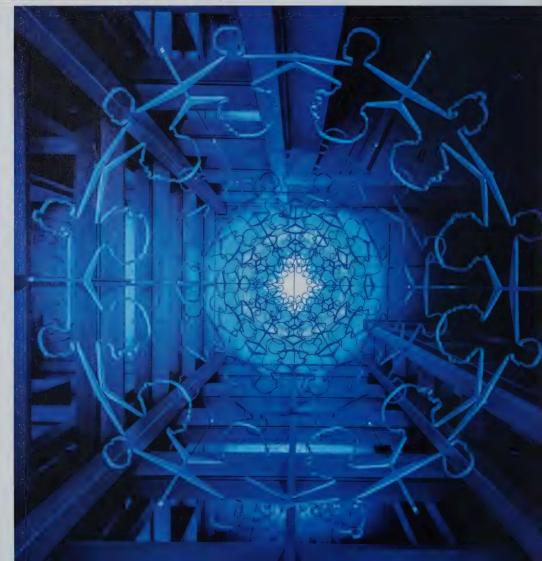




BLUE LINES

Seven metal rings of silhouettes of residents and police officers are suspended in the "lantern" of this 2010 police station. Viewed from below, the rings create a generational tunnel reflecting the seven stages of life. At night the sculpture comes alive from the street, the result of illumination from-floor-mounted lights. The title derives from "thin blue line," a phrase that nods to the police force as a vital membrane separating civil society and criminal elements.

Site: Nashville Neighborhood Police Station, Fort Worth, Texas. Commissioned by Fort Worth Public Art; 29 feet high, 6 feet diameter; silver powder-coated aluminum, LED lights.













EXQUISITE CORPSE

Analysis, synthesis, and mortality are central to this 2004 artwork created for the state forensics laboratory of Minnesota. Nineteen giant aluminum "magnifying glasses" house two layers of imagery: stained-glass panels depicting cross-sections of human anatomy that collectively indicate the form of a recumbent male figure and welded metal filigrees holding the panels in place that refer to analytical techniques employed at the lab.

Site: Minnesota Bureau of Criminal Apprehension. Commissioned by the Minnesota Percent for Art Program. Collaboration with Stuart Schechter; 8 feet high, 5.5 feet wide, 26 feet deep; steel and stained glass.

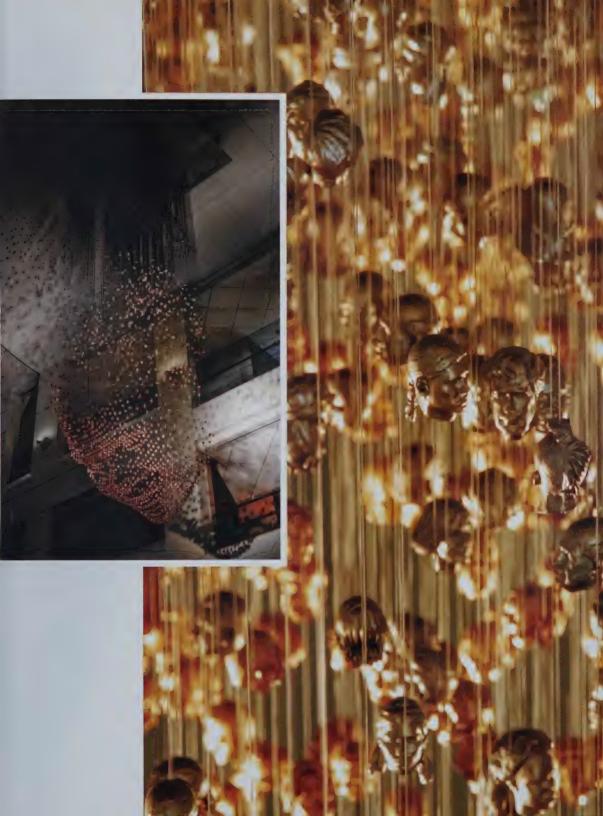




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The building blocks of this 2007 piece are pewter portraits of Charlotte citizens controlled by 1,600 motors. During the course of a week, the heads gradually move one by one to create a three-dimensional face, which then slowly reverts into a cloud. The following week another portrait builds, then dissolves. New faces are continually formed over time, from an elderly Latina to an African-American man, an Asian boy, a middle-aged Caucasian woman, and so on.

Site: Charlotte-Mecklenburg County Courthouse, Charlotte, North Carolina. Commissioned by the Arts & Science Council, Inc. Collaboration with Stuart Schechter; 36 feet high, 16 feet wide, 12 feet deep; pewter, steel cable, ballchain, steel, motors, processors. Photos: Will Howcroft





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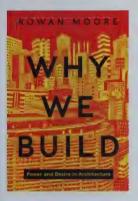






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BOOKS



Why We Build: Power and Desire in Architecture Rowan Moore Harper Design, 2014 Reviewed by William S. Saunders

When, in Why We Build, we read the sentence "Dictators and architects alike are driven by the desire to dominate and shape the world, and they like this quality in each other," we know that the critic writing this has uncommon independence from the architects whose work he studies. So many other critics, to ensure that they have access to the architects and works they write about, cultivate friendships and positive evaluations that restrict their critical freedom. Not so Rowan Moore, architecture critic for *The Observer* in London and author of this audaciously muckraking book.

Moore thinks of architecture's highest calling as facilitating the best possible quality of life in and around it, "a [flexible] instrument that enables other events and experiences to happen." Buildings that disturb Moore are those at extremes: either trying to control and dominate experience or offering no stimulation and support for it. For Moore, overly prescriptive buildings include many of architecture's sacred cows—including Farnsworth House and Fallingwater works that impose the architect's values and are too indifferent to users' needs and comfort. Or personal fantasies that try but inevitably fail to create some idealized life within them, such as John Soane's house in London: Gesamtkunstwerks. For Moore, architecture is not art, responsible only to its creator.

Moore's architectural hero is Brazilian architect Lina Bo Bardi because she created open, unrestrictive spaces that foster freedom, such as the São Paulo Art Museum. This position is too extreme; it demotes most of the discipline's masterpieces, undervaluing the aesthetic and neglecting the fact that their users might embrace the kind of life these works encourage. His revered Bo Bardi art museum is, to my eyes, blank, impersonal, nondescript.

But Moore's bugaboos include many more in this wide-ranging book. He sees the spectacular, dramatic-shaped buildings of recent decades — from the kitsch of Dubai to the shape-centered work of Frank Gehry—as capitulating to our culture's enslavement to image. He hates architecture whose main role is marketing, branding, or creating glamour. He bemoans architects' willingness to compromise their values to get commissions-he cites Richard Rogers' push for the hollow-souled Millennium Dome. He sees starchitects' ego-assertion as often inflicting financial crisis on clients and reduced functionality on users (think Zaha Hadid). He will not accept the idea that "geniuses" need not be held to standards of conventional morality. Always starting from specific instances, he bemoans the insincere, status-seeking patronage of art by the super-rich; buildings that are primarily propaganda; large housing projects that strangle residents' individuality; and stage-set architecture pretending to be more than it is.

"Form Follows Finance," the book's strongest chapter, is an unblinking look at how most of what gets built is driven by developers' greed, sanctioned by politicians' idealization of free market forces. He sees London's recent towers, such as Renzo Piano's "Shard," as paying lip service to green ideas of compact living while really existing to increase profits. Dubai is his exemplar of the hideous contemporary rule of the super-rich, indifferent to the suffering of the have-nots, including the immigrant workers banished to Dubai's fringe slums.

Like Mike Davis in his book City of Quartz, Moore is profoundly disturbed by the pervasive evils of the contemporary world. Unlike Davis, he is not completely cynical and tries to offer balanced judgments. He will not, for instance, rank manly Albertian classicism higher than an atmospheric architecture of "illusion, shadow, [and] transience." Overall, he wants readers to be unflinchingly realistic, particularly by deflating any overestimations of the power, virtue, and importance of architecture conceived apart from living. He is lucky that he has Lina Bo Bardi's work to admire.

WILLIAM S. SAUNDERS is the retired founding editor of *Harvard Design Magazine* and book review editor of *Landscape Architecture* magazine. He has authored or edited 16 books.



Arts & Crafts Architecture: History and Heritage in New England Maureen Meister University Press of New England, 2014 Reviewed by Beverly K. Brandt

In her portrait of a group of architects who practiced in Boston while promoting the English Arts and Crafts movement a century ago, Maureen Meister weaves sensitive descriptions of construction details and materials that convey her intimate familiarity with the subject. In part an architectural history, this book is more a story of ideas: Meister demonstrates that the movement's ideals and turn-of-the-century Boston's intellectual climate—more so than a specific style—shaped the architecture produced by this group.

She explains how and why a majority of building types—town halls, libraries, churches, houses, schools—reflect the influence of the Gothic Revival, Colonial Revival, or Old English styles, in contrast to a more progressive approach. It must have been an organizational challenge to cover the architects' varied backgrounds and their preservation of existing monuments, development of new building typologies, predilection for historicism, and fascination with new materials. Meister has met it with clarity and logic.

The book is surprisingly comprehensive for its length. Meister begins with biographical sketches of 12 individuals who are her focus: Robert Day Andrew; George Edward Barton; Ralph Adams Cram: Lois Lilley Howe; Alexander Wadsworth Longfellow, Jr.; Charles Donagh Maginnis; Louis Chapell Newhall; William Edward Putnam, Jr.; George Russell Shaw; Richard Clipston Sturgis; Charles Howard Walker; and Herbert Langford Warren (subject of Meister's excellent 2003 monograph). They constituted, she argues, the "architect-leaders" of Boston's Society of Arts and Crafts between 1897 and 1917. Only these 12 (out of 40 architect members) achieved "Master" status in the organization.

Arts and Crafts architecture in Boston, Meister asserts, was the product of practitioners who promoted the movement's ideals. The resultant work may look historicist in comparison to the proto-Modernist work of Gustav Stickley, Frank Lloyd Wright, or Greene and Greene. But it epitomizes such "salient concepts and concerns" as fitness, beauty, joyful labor, the vernacular, simplicity, sincerity, proportion, and harmony, even as it struggles to balance historicism with originality. These ideas, she points out, reflected the influence of English thought leaders as well as that of Boston's intelligentsia: Ralph Waldo Emerson, Charles Eliot Norton, and Louis Brandeis. A shared ideal links the work of these 12—not a homogeneous appearance.

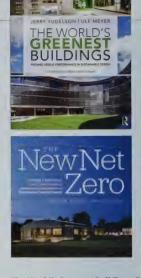
Meister competently summarizes the English Arts and Crafts movement's origins and its representative architecture, and how both influenced New England. She discusses Boston architects who predated the founding of the Society-H.H. Richardson, Robert Swain Peabody, and Charles Follen McKim-vet laid groundwork for the emerging movement. She touches on the founding of architecture schools and professional organizations, the architectural press, and the preservation movement, all of which provided context for the Society's founding and subsequent blossoming of reformist architecture in New England.

The last three chapters examine structures that reflect an Anglophile influence, the Colonial Revival and Shingle styles, as well as the use of stucco, reinforced concrete, and steel. The chapters demonstrate that these "architect-leaders" incorporated innovative ideas regarding kitchen design and tackled new typologies: apartment buildings, gymnasiums, auto salesrooms, subway stations, and hospitals.

Meister's epilogue questions the long-term impact of this group locally and nationally. This minority of architects controlled the Society, which attracted nearly a thousand craft workers. Although their words and deeds resonated across the United States, their reticence at embracing Modernism ensured that their influence declined after the Art Deco era.

They did leave a lasting legacy of built architecture, with many structures being preserved or repurposed. But because many were educators, theorists, and critics who left behind a cache of articles, books, lectures, and correspondence, their words may have a greater impact than their works.

BEVERLY K. BRANDT is professor emerita of The Design School at Arizona State University.



The World's Greenest Buildings: Promise Versus Performance in Sustainable Design Jerry Yudelson and Ulf Meyer Routledge, 2013

The New Net Zero: Leading-Edge Design and Construction of Homes and Buildings for a Renewable Energy Future William Maclay Chelsea Green Publishing, 2014 Reviewed by Charlotte Kahn

Buildings account for more than 40 percent of global greenhouse gas emissions annually, so the idea that a building could be responsible for no emissions at all or generate more energy than it consumes may seem fanciful. Yet that is precisely the direction in which architecture is headed. The Architecture 2030 Challenge, adopted by the AIA in 2005, commits the field to net-zero fossil-fuel emissions in all new buildings by 2030. Two new books show the way.

In The World's Greenest Buildings, architects Jerry Yudelson and Ulf Meyer set out to demonstrate that "uber-green building, low energy use, and great architecture are not incompatible." Their intercontinental tour of the highestrated commercial and institutional buildings across green rating systems offers an inspirational but finally cautionary tale.

In detailed case studies, the authors discover, to their surprise, a dearth of independently verified postoccupancy data. While some buildings transparently live up to their green billing, many owners are unwilling to share performance data once a Platinum plaque or Green Star is affixed to the entrance. And no wonder. When data are available, many buildings come up short.

Through interviews with architects and engineers, we learn that managers and occupants need help to become competent stakeholders of ultra-green buildings lest they undermine innovative, complex systems. But few postoccupancy plans include the necessary training, feedback, and monitoring.

That insight underscores the authors' conviction that truly successful green buildings reflect a tightly integrated design process engaging architects, landscape architects, systems engineers, owners, occupants, and contractors from initial goal setting through post-occupancy fine-tuning.

Finally, they find the world's green

rating systems to be "neither consistent nor comparable." For example, they note, a building achieving all the energyefficiency points under the US Green Building Council's 2009 LEED standard uses far more energy than a state-ofthe-art European building.

With the world's population slated to rise from seven to 10 billion this century and climate change upon us, the authors have little patience for lax measures and wishful thinking: "Mother Nature doesn't care about relative improvements; she only cares about absolute CO2 levels in the atmosphere." Without integrated design teams, data transparency and irreducible measures such as per-square-foot energy and water usage, green building performance cannot be achieved, rating systems harmonized, or valuable lessons learned and shared.

Their conclusions are mirrored in Vermont architect William Maclay's almost encyclopedic *The New Net Zero*, which grounds the field's ambitious goal for 2030 in current practice.

Equal parts philosopher, designer, and shop teacher, Maclay culls 40 years of experience to lay out detailed and well-illustrated options for setting and achieving net-zero goals in energy and water usage, heating and cooling, lighting, and air circulation in US climate zones 4 to 7.

In case studies, many from New England and including a number of Living Buildings, he shows how long-proven technologies and intriguing new techniques such as biomimicry and interior and exterior biofilters are creating buildings and communities in which "all flows and cycles are in balance . . . a new way of thinking about our trade." This book belongs on every "green" designer's shelf.

CHARLOTTE KAHN, retired director of the Boston Indicators Project at the Boston Foundation, now works on responses to climate change.



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DARKNESS VISIBLE

Shadows cast by tall buildings aren't physical; sometimes they aren't even visible. But they can still constitute a private intrusion onto public space. This idea animated more than 800 protesters in New York City on a brilliant October day in 1987. Brandishing black umbrellas, they opposed the redevelopment plan for what was then the New York Coliseum, claiming the proposed towers would cast shadows across Central Park. On cue, the protesters opened their black umbrellas, mimicking the towers' encroachment.

The demonstration, organized by New York's Municipal Arts Society, was peppered with boldfaced names, including Paul Newman, Jacqueline Kennedy Onassis, Henry Kissinger, and journalist Bill Moyers. Central Park, said Moyers, "is the people's park, the last great preserve of democracy in the city. It does not belong to the highest bidder."

Developer Mort Zuckerman tried to renegotiate. But the Municipal Arts Society sued, and won, over improperly granted zoning rights, and the project stalled until 2000. Today it is the substantially redesigned Time Warner Center.

Advocates in the umbrella brigade had won a reprieve, but there is a sad coda to the tale. Today at least seven glitzy new towers are planned for the edge of Central Park, some of them predicted to rise 1,400 feet. Tall and thin, they will cast a series of long, straight shadows, rather like prison bars, across the people's park.

ABOVE Photo: Vic DeLucia/ The New York Times/Redux

"Superb level of design and craftsmanship."

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David de Mueio, Executive Diractor Audreun Automobile Museum & Collections

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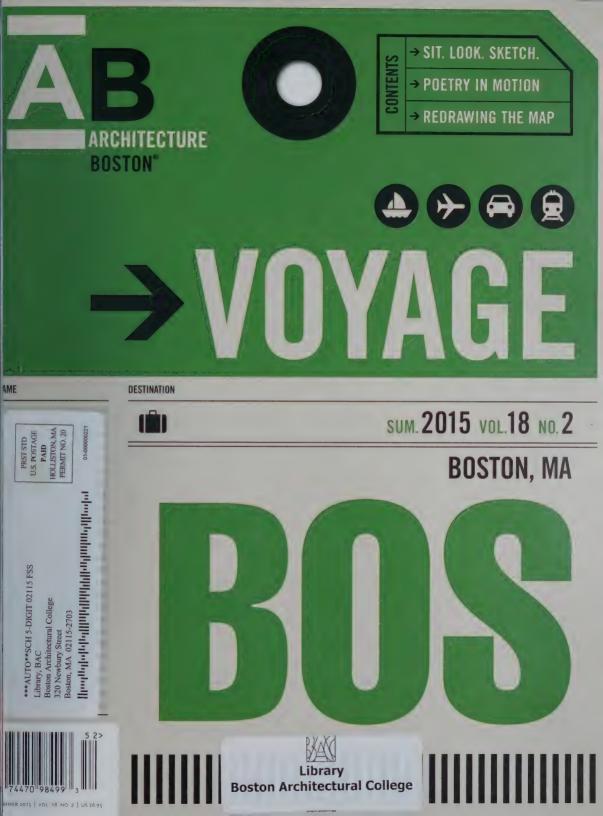
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Harvard Graduate School of Design students drawing Caravaggio's Madonna del Loreto in Sant'Agostino in Rome. Photo: T. Kelly Wilson

COVER Kyle Nelson/Stoltze Design



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START WHERE YOU ARE

In The Greater Journey, his chronicle of 19th-century American artists and intellectuals traveling to France, the historian David McCullough describes the overland trek most visitors took from Le Havre to Paris, with its strategic stop at Rouen to see the cathedral at the center of town. "The Americans had never beheld anything remotely comparable," he writes. "It was their first encounter with a Gothic masterpiece, indeed with one of the glories of France, a structure built of limestone and far more monumental, not to say centuries older, than any they had ever seen."

The gobsmacked Americans—including such luminaries as Stanford White, Charles McKim, Mary Cassatt, and Augustus Saint-Gaudens-were hungry for edification. They saw the great cities of Europe as open-air classrooms, and the influence of their studies is clear - from the echo of Henri Labrouste's Bibliotheque St-Genevieve in the Boston Public Library to St. Bartholomew's church in New York City, which White modeled after the abbey at St.-Gilles-du-Gard. Painters from the Hudson River School kept sketchbooks of the Roman Forum or the islands of the Adriatic, learning as they drew. (That tradition continues-as our sketches by architecture students and their instructors beginning on page 26 attest—even if a digital stylus and pad now sometimes replace graphite.)

Although they sojourned by steamer and stagecoach, the artists and architects on tour in the 1800s traveled for the same reasons we do today: to see the world with new eyes, to be shaken from our complacencies, to feel somehow more fully alive. Travel heightened the senses with a frisson of unease. Friendships flourished in unfamiliar surroundings; the unexpected rose up everywhere, allowing the visitors to see things literally in a new light. Writer and philosopher Pico Iyer equates this special openness with falling in love: "All good trips are, like love, about being carried out of yourself and deposited in the midst of terror and wonder." Today we have to work harder and go farther to get outside ourselves; there's now a Starbucks at the historic Lingyin Temple in Hangzhou, China. Travel is fraught with guilt over the disruption of indigenous cultures and the jet engine's carbon wingspan. But we still love to shake off our familiar cloaks and depart into the unknown. Even the mortifications of airports—the interminable lines, the security wandings, the purgatory between flights—can be part of the adventure. It's certainly a step outside our comfort zone, albeit more the product of conscious planning than of chance. (See "Nonstop," Ian Baldwin's enlightening survey of airport design, on page 34.)

Those who travel know the delicious dislocations that await: camels loping among the traffic in the center of Cairo; a craftsman in Mumbai living in the crawl space above his market stall; the incomprehensible, musical chatter of foreign languages; the otherworldly feeling of standing before the Taj Mahal or the Eiffel Tower—places you'd otherwise consider clichés—eyes wet, heart pounding.

But what if we could bring that sense of wakeful wonder and freshness to our everyday surroundings? We tend not to recognize our own environments, just as the fish doesn't know it's swimming

in water until it gets yanked out. But the sun will never glint off the corner of that building quite the same way again. Watching the crowds from a sidewalk table can be as absorbing in Boston as in Barcelona if you truly pay attention. The River Charles is as blue as the Danube.

Seeing things this way requires more of an inner journey than your typical trip to Paris. It begins with a single step. ■

Renée Loth Editor





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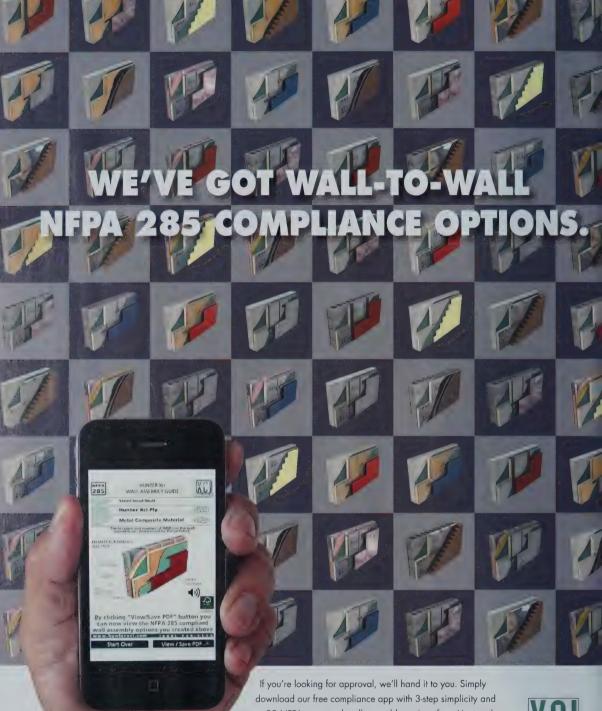
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ON "PUBLIC/PRIVATE" (SPRING 2015)

Reading Jerold Kayden's article suggesting we catalog Boston's Privately Owned Public Spaces (POPS), I was struck by the simple elegance of this idea and the disappointing realization that I know very few of them. In an issue where much of the writing addresses the challenges associated with engaging the private sector and designing successful public spaces, Kayden's message is positive and suggests an attainable course of action.

In support of that, I would like to add the Harvard Art Museums to the list of Boston's public/private treasures. (I should note that I had the great fortune of collaborating with the Renzo Piano Building Workshop on this project, so I am certainly biased!) Throughout the design process, Harvard encouraged us to engage the greater Cambridge community for feedback about the architecture. We focused on developing a building that would "front" to the city as well as to the campus. We sought to be sensitive to the Carpenter Center next door and to the historic fabric of the original Fogg Museum.

But these considerations were all about the nature of the boundaries between the museums and said little about public access. It was Harvard that decided the ground-floor public spaces should be open and unfettered. It was the museums' director, Tom Lentz, who decided to forgo the revenue of admission in order to share the iconic courtyard with the public. Through its new operational model and a design that includes entrances on multiple façades, the building welcomes equally those who plan to visit the galleries and those who might simply take a shortcut through the courtyard on their way to the T.

This sort of solution is very much ingrained in our practice, and we have several current projects, including ones at Northeastern and Boston University, that will add to the city's inventory of privately owned public spaces. For projects like these, the approval process is not always linked to the inclusion of public spaces, but academic clients can often see the benefit of improving their connection to the city. This is more difficult, but not impossible, with noninstitutional clients.

In an era where it is necessary to worry about issues of liability, maintenance, and return on investment, I am relieved to find examples of "win-win" solutions that seem to break the rules. While the Boston Redevelopment Authority can and should continue to push us from the approvals side of the equation, I hope that as design professionals we can find ways to encourage our clients to think as Harvard did in this case. Sometimes providing a true public amenity might be just what is needed to develop a compelling and engaging private realm.

CHARLES KLEE AIA Payette, Boston

The "Public/Private" issue captured ideas about many of the boundaries and mixing zones that exist in modern cities and raised some provocative questions about how we should govern and regulate space to meet the diverse needs of city dwellers. However, I hope a future issue will focus on that most significant and largest element of our communities' shared space, comprising more than 30 percent of total land area: streets and sidewalks.

Why do I call these spaces shared? Because we cede streets and sidewalks to much private activity, including parking private vehicles for far less than the space would command as a rental unit. (Parking spaces are about 160 square feet, or half the size of the microunits described in Aeron Hodges' article!) And while our streets are busy with vehicles for several peak hours each day, from 8 p.m. to 6 a.m. we could probably devote much of that space to a more diverse and interesting set of uses than driving.



When we turn to sidewalks, we truly encounter the city's living room. Here we share travel, sightseeing, social life, eating, people watching, shopping, talking, and daydreaming. The finetuned balancing act that we expect from a city's sidewalks—open to all 24/7, cared for by a wide cast of characters (municipal employees, private landowners, business associations, everyone who picks up a piece of trash or teaches their child not to litter), both loved and abused—is the most intensive and least understood piece of our shared landscape. Sidewalks are worth studying and managing better. How can we ensure that sidewalks are promptly cleared of snow? Repaved and maintained? Lined with healthy shade trees and flush tree grates? Swept and washed? A great city needs great sidewalks, and we need the design community to be part of that conversation.

WENDY LANDMAN WalkBoston, Boston

I appreciated a distinctly Boston slant on an issue with relevance nationally and even globally. Having lived in Los Angeles and in New York City, I see how questions of public/private conflict and cooperation in Boston can become a case study for other, much larger cities.

The magazine came at the issue from a variety of angles and scales, whether Governor Dukakis railing about billboards or Aeron Hodges relating her life in a tiny Boston apartment to her upbringing in Shanghai. The review of the Rose Kennedy Greenway similarly evoked other places for me: The Greenway has the potential to be a living room for Boston, but it's not the Ramblas or the High Line; there's too much vehicular circulation and confusion about public and private responsibilities. And yet it opens up public access to the sea, and the idea that you can meander along the Harbor is a great asset for Boston. Public access to private shoreline property in the rest of Massachusetts, not to mention the rest of the world, is not so easy.

This is a magazine you want to read, . not just look at the pictures as with many other architectural publications. That said, I especially loved Ralph Helmick's image of hanging clocks ("Gallery"). As a sort of watch guy myself [Editor's note: The writer and partner Robert Linn created *The Thousand Watch Project*], I resonated with that!

кеітн моѕкоw ғаіа Moskow Linn Architects, Boston

Shawn Hesse, in his essay "Office space, the sequel," captured the essence of our quest to modernize the workplace. In an age where knowledge work happens everywhere, the ultimate blurred line is the balance between work and life. The Workbar concept is that if work has become a bigger part of home, then life has to become a bigger part of the workplace. Workbar's physical design and membership model are designed for people to have the settings they need to be productive and ongoing opportunities to connect with other members both socially and on business topics. Work can often be a lonely pursuit, especially for a new venture. Having a well-built space with a vibrant buzz of people provides motivation, inspiration, and connection, three critical attributes of a modern office environment.

BILL JACOBSON Cofounder, Workbar, Boston The "Finish" piece ["Darkness Visible"] about the shadows cast across Central Park by high-rises brings to mind the battle fought in the 1970s against Boston's proposed Park Plaza urban renewal project. As envisioned, redevelopment plans for the area bordering the Public Garden and Boston Common, beginning at Arlington Street through Park Square, threatened the Public Garden with shadows from five to six buildings that would have towered up to 650 feet high.

The Park Plaza Civic Advisory Committee, formalized in 1973, was the first of its kind and the first to require studies of wind and shadow. It included members of the Friends of the Public Garden. We were determined to stop this proposal, which became a David and Goliath battle with the powers in the city arrayed against us: the mayor, governor, major newspapers, business and labor communities. When the state was finally forced to do shadow studies, it confirmed everyone's worst fears that the Public Garden would be cast in shadow throughout much of the year.

Ultimately, citizen activism forced the project to be reduced in size, saving the Public Garden and Common from an overscaled development. The Friends continued to be vigilant watchdogs, spearheading state legislation in 1990 and 1993 that protects the Common and the Public Garden from shadows. While these laws have been helpful, they don't fully address the cumulative shadow impacts during cold and dark months, which means that the parks' quality is diminished during the time of year when pedestrians yearn for sun and light. The Friends will continue efforts to protect these parks from new shadows.

BEATRICE NESSEN

Member, Friends of the Public Garden Board of Directors, Boston

CORRECTION: A caption for the Matter of Course column in the "Private/Public" issue transposed information about the renderings. Sara Zettler's and Jared Guilmett's work appeared on the right, while Matt Arsenault's appeared on the left. ARChitectureBoston® Volume 18: Number 2

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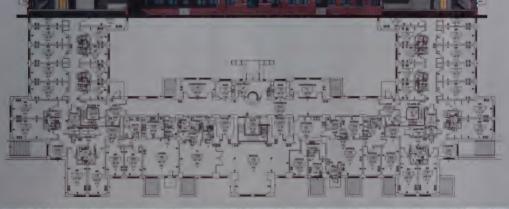
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IN THIS ISSUE



Ian Baldwin ("Nonstop," page 34) received his Master of Architecture in 2006 from the University of Pennsylvania, after working as a print journalist for several years. His writing on architecture and urban design has also appeared in *The Architectural Review, Metropolis Online*, and *Places*. He teaches at the Rhode Island School of Design and Brown University, and recently cofounded DUAL, a design practice in Providence, Rhode Island.



Herbert S. Newman FAIA ("Poetry in motion," page 38) has led the direction of Newman Architects' diverse portfolio for public and private clients, including K–12 schools, colleges and universities, corporations, civic agencies, public libraries, arts centers, religious buildings, multifamily housing, and private residences. In addition to his practice, he has been a design critic at the Yale School of Architecture since 1965. In 1995, he received the Thomas Jefferson Award for Public Architecture, a lifetime-achievement award bestowed by the American Institute of Architects.



William Rankin ("Redrawing the map," page 42) is a historian and cartographer at Yale University. His research focuses on the relationship between science and space, from the territorial scale of states amid globalization to individual buildings. His forthcoming book, *After the Map*, is a history of the mapping sciences in the 20th century. His award-winning maps have been published and exhibited throughout the United States and Europe; most of this work is available on his website www.radicalcartography.net.



Elizabeth S. Padjen FAIA ("Casting off the lines," page 64) is an architect and writer focusing on design, the public realm, and coastal issues. The founding editor of *ArchitectureBoston* from 1998-2011 and a previous president of the Boston Society of Architects, she received the 2013 Bradford Williams Medal for excellence in journalism from the American Society of Landscape Architects.

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rown point produces a really good binet, on time, and provides good stomer service. The area that Crown nint excels is that they can see the irit of a design of the entire project of then capture elements and details that spirit in the cabinets they make." -Architect; Chandler, AZ

(itchen For My Own Home"

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-Architect; Fairfax, VA



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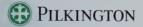
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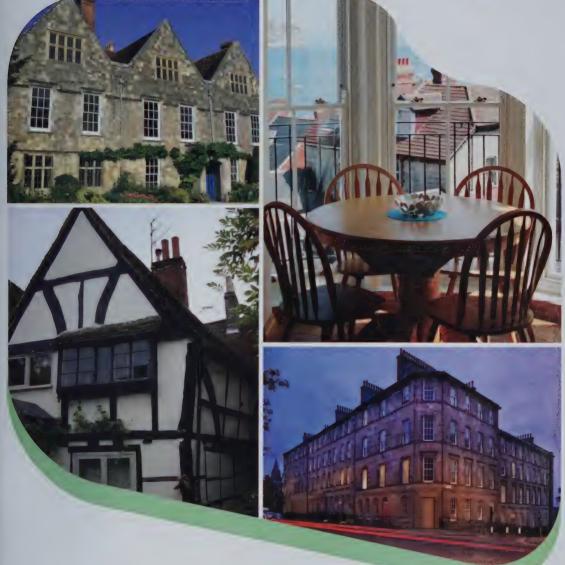
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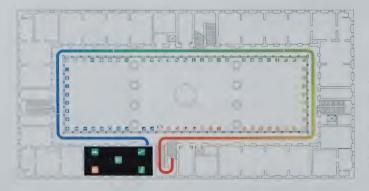


HOT TO COLD: an odyssey of architectural adaptation

National Building Museum, Washington, DC Through August 30

As a species, humans adapt and evolve to survive our surroundings. Whether in anthropology or architecture, the adage holds true. It's architectural adaptation that takes the stage in this exhibition, an ode to the much-buzzed-about Bjarke Ingels Group (BIG).

This adaptive nature has allowed us to colonize some of the harshest corners of Earth, and BIG has designed structures in many of them. Walking around the museum's atrium, one journeys from the deserts of Qatar to Finland's frigid tundra. More than 60 models of projects in varied climes perch between the arches of the museum's second level. Panels with photos, diagrams, and commentary from Ingels supplement each model, providing a window into BIG's rationale behind each design.



Naturally, the more extreme the climate, the more climatic concerns factor into the design. In temperate areas, politics and culture are greater factors in molding the structures.

Following the 800-foot walkabout, visitors walk into a gallery screening short films about some of BIG's completed projects. Entering the space feels a bit like being thrown into an independent European film: One isn't entirely sure what's going on, but there's mood lighting, and it seems mildly intriguing. Seated on chairs or benches unique to each site, viewers can experience the Danish Expo Pavilion from the vantage point of a skateboard, or explore the Gammel Hellerup Gymnasium through parkour.

The concept of adaptation is plastered all over the exhibit. But another key to ancient humans' success was the ability to use resources to their advantage. BIG champions sustainability and stewardship in the displays, but the question of how the environment will adapt to us looms large over their architectural jungles and man-made ecosystems.

HELEN THOMPSON is a freelance writer based in Washington, DC.

ABOVE

нот то cold installation at the National Building Museum. Photo: Matt Carbone

LEFT

HOT TO COLD main concept diagram. Courtesy BIG



SEEN The BMW Museum Munich

On a trip to Munich last year, I was mesmerized by this building, with its abstract shapes and light that seemed to veer dangerously off glass and slick steel. My eyes traced its beautiful modern lines over and over, searching for a way to capture its intensity. After walking the perimeter several times, I knew one or two images would not be enough; I needed to create a graphic-studies portfolio of the museum's playful visual maze.

Focusing on the basic elements of art—line, shape, form, texture—I found perspectives that allowed those details to interact dynamically. I looked for the repetition of geometric shapes and compression of forms to create a confusion of depth and scale in my compositions. While printing the photographs in the darkroom, I concentrated on the gradation of tones to re-create the feeling of the natural light bouncing off the contemporary structure.

In Building Study 3, the planes overlap one another in a way that makes you question which way is up and which is down. The negative space of the sky on the left becomes another shape that engages the viewer's eye and continues the tetris feeling of the architecture. The repetition of triangles and lines throughout the composition creates a push-and-pull effect that some might find disorienting, a reaction that tests our expectations.

ELIZABETH ELLENWOOD is a fine-art photographer based in Boston.

ABOVE Photo: Elizabeth Ellenwood





Everything is Design: The Work of Paul Rand

Museum of the City of New York Through July 19

In his 1965 essay "Design and the Play Instinct," graphic designer Paul Rand discussed his approach to teaching design: Give students a clear problem. "A problem with defined limits, implied or stated disciplines which are, in turn, conducive to the instinct of play, will most likely yield an interested student, and very often, a novel solution," wrote Rand. The creators of *Everything Is Design*, an exhibition celebrating Rand's career at the Museum of the City of New York, seem to have taken the designer's words to heart.

The one-room show appears small and restrained, both in its gridlike layout and minimal commentary. However, those who invest the time to simply stop and look not only will be delighted but also may even laugh out loud. Pithy Rand quotations hover in the visitor's field of vision, emblazoned at hip height along the bases of the vitrines. Divided into thematic sections that reflect Rand's professional trajectory, the material on display includes advertising, book design, and ephemera from his years on the faculty at Yale. But what dominates, despite the even hand of curator Donald Albrecht, is the corporate brand work for which Rand is most famous.

IBM, one of the exhibition's major sponsors, looms large. In 1956 Rand was recruited by IBM's lead design consultant, Eliot Noyes, to join Eero Saarinen and Charles and Ray Eames on a creative dream team that was given the widest imaginable latitude by then-IBM president Thomas Watson, Jr. Their mandate was a tip-to-toe reimagining of the company's image. It was during this time that Rand, who shared with the architects a Modernist approach rooted in Bauhaus principles, produced the striped IBM logo still in use today. A sidebar display reveals Rand's concurrent doodles of a jailbird in a black and white-striped prisoner uniform. In a deceptively regimented exhibition, Rand's empathy, humor, and childlike sense of play shine through.

ABOVE

Book jacket for The Dada Painters and Poets by Robert Motherwell (left) and Jazzways magazine, Volume 1, 1946, with cover design by Paul Rand; from private collections.

MATTER OF COURSE Roman Architecture

Loath as I am to leave my house, I wondered: Could I take an architecture course without leaving my laptop, thanks to the brave new world of online education?

Not surprisingly, the answer is yes. Massachusetts Institute of Technology (MIT), which purports to have the oldest architecture department among American universities, has been offering OpenCourseWare classes for some time, as has EdX, the muchballyhooed Massive Open Online Course (MOOC) collaboration between Harvard and MIT, launched three years ago.

Yale entered the online game a few years ago, and I audited what felt like a New Haven classic, Professor Diana Kleiner's "Roman Architecture," initially webcast by Open Yale Courses and now available through Coursera. I rode for free, as it were. You can also take the course for "credit," in the form of a Verified Certificate from Coursera, at a cost of about \$50.

How was the class? I enjoyed it quite a bit. It's a classic undergraduate lecture course, the kind you find at almost any decent college or university. Sure, there was some pandering, which makes it a popular course. Kleiner argues that the Romans invented the modern shopping mall (i.e., Trajan's multilevel market building), and the fast-food joint, in the form of the beautifully preserved *thermopolium* at Pompei. Yes, the class prepares you for high-level cocktail conversation. (And, indeed, some people use the Coursera course as a sort of video guidebook before visiting Rome.) But it's serious in purpose. If you want an introduction to the professions of archaeology, classics, and art history, this is an excellent place to start.

Kleiner is engaging and has been engaged with the material all her life. It wasn't uncommon to see slides of her as a younger woman posing on the paving stones of Pompei, or atop a crocodile statue at Hadrian's Villa Adriana. Even better, she has opinions, which make for great classroom fodder. A Kleiner-ism that I heard more than once: "I know I'm biased, but I think the Pantheon is the greatest building ever conceived by man."

That inevitably generated a teaching moment, in the form of a near-endless discussion thread titled "Is Professor Kleiner right about the Pantheon?" Weighing in from all over the world, students nominated many other buildings for "greatest ever" status, among them the Sydney Opera House, Hagia Sophia, Taj Mahal, and so on.

A student named Joe Rosenthal from northern California studied the Pantheon in considerable detail and demonstrated to the rest of us the non sphericity of the famous dome, a detail that certainly would have eluded me. He posted an online photo of a small, carved walnut Pantheon replica that he sent to Kleiner at Yale. Gift received; "I do indeed treasure Joe's Pantheon!" she wrote in the online forum, not the one below Palatine Hill. (Sorry, I couldn't resist.)

That's one way an online course differs from shuffling

MOLLY HEINT2, managing director and cofounder of the editorial consultancy Superscript, is an editor at Co.Design, the online design and business section of *Fast Company* magazine.

dutifully into a poorly heated lecture hall. Here's another way: Class is always in session. I attended most lectures during the worst moments of Boston's February ice jams, and of course it was quite soothing to arrange myself just so, in an IKEA chair within range of a functional space heater, and fill my brain with...concrete.

If you are reading this magazine, you are probably familiar with the design/build dichotomy of the ancient world: The Greeks excelled in design, and the Romans mastered construction. The Romans delighted in stealing Temples of Jupiter and rechristening them Temples of Zeus — and building them to last. Speaking of rechristening, I learned that the nave of Rome's famous Church of Santa Maria degli Angeli used to be the *frigidarium* (cold pool) of the Baths of Diocletian. There was a lot of that kind of thing going on.

Yes, I learned a fair amount about concrete, from its early use in *opus incertum* ("uncertain work") to the lighter, stronger remix that substituted tufa and pumice stones for the earlier, heavy rubble base.

We owe this breakthrough—"no small accomplishment" to the emperor Caligula, Kleiner informed us. Who would have thought? Hadrian was also a practicing architect who probably deserved credit, or partial credit, for many of the masterpieces attributed to him, for instance, his magnificent mausoleum, elegantly repurposed as the Castel Sant'Angelo, which towers above the Tiber due east of Vatican City.

Kleiner says she visits the online class site every day—the classes were prerecorded in a Yale lecture hall—and generally enjoys the MOOC experience. She's a bona fide evangelist, having worked in online education for 15 years. Although she is guarded on the subject of finances, she allowed that the architecture lectures, initially financed by a Hewlett Foundation grant, are "revenue neutral" for Yale. "It's not clear whether the university will ever get income from this kind of thing in a serious way," she said.

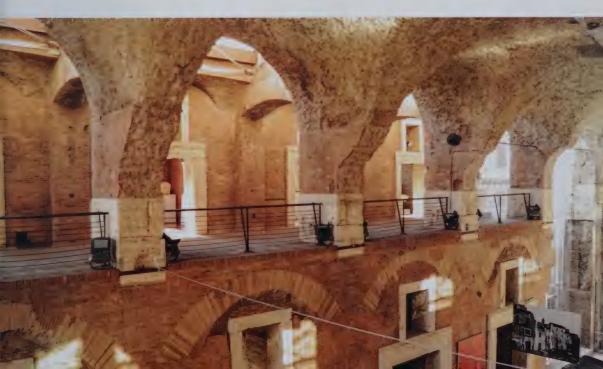
"I love face-to-face education," Kleiner said. "Being able to interact with students in my lecture course is extraordinarily exciting. I was initially skeptical about Coursera, but it has worked out better than I thought it would. The forum discussions are better than at Yale because people are putting more time into them. It's a lot of extra work, but I take it very seriously."

I, too, was initially skeptical about Coursera. It worked out better than I thought it would.

ALEX BEAM writes a column for *The Boston Globe* and is working on a book about Vladimir Nabokov. "Matter of course" visits exceptional architecture classes at New England schools.

BELOW

Inside Trajan's Forum, Museo dei Fori Imperiali, Rome. Photo: Carole Raddato



5 QUESTIONS Rosanne Somerson

Forty years after graduating from the Rhode Island School of Design with a Bachelor of Fine Arts degree in industrial design, Somerson was named the school's 17th president in February. In 1985 she was hired to run the graduate furniture concentration in the industrial design department; a decade later she helped to found the school's furniture design program. Her work has been displayed in the Smithsonian American Art Museum, the Fuller Craft Museum, Yale University Art Gallery, and the Museum of Fine Arts, Boston, among others.

You've said that RISD's immersive, studiobased educational approach might shape the future. How so?

We're living in a time of great change. The competencies gained from studioimmersive learning help students and alumni achieve tangible outcomes not necessarily easily attained in a different model. Hands are very intelligent, and when the mind is cooperating with



the hands and all of the senses, a new kind of knowledge can result. Design is so much about humans, and the studiobased model brings together the natural instincts, talents, and capacities of the human body. Materials have personality, and when you work with them, they make suggestions to you about what might happen. A student here made a beautiful molded chaise longue out of cork and built inside it a structure of airline ply with ribbing. The chaise longue had compound curves and could float in a pool or sit in a living room.

How do you balance RISD's long-term faculty with your stated desire for new talent?

A balance of philosophy that comes from generational and regional differences makes a robust community. Technology plays a key role in everything we do. I brought new faculty into our foundation studies who are incorporating coding into the first-year curriculum—it's important to write your own programs so you can design and create in the language of coding. Institutions and leadership can benefit from the experience of studio practice. The same conceptual drive is important to apply to leading an arts school. Art and design education is itself a beautiful piece of studio work.

What role can design play in humanitarian and cultural concerns, and can you identify a compelling project that RISD faculty or graduates are involved in?

Designers and artists are able to rethink social systems—we have students working on clean-water projects, redesigning the voting system, healthcare issues. Our recent Solar Decathlon students and alumni formed a team with Brown University and a university in Erfurt, Germany, and designed a beautiful house made of textiles that's energy positive, the Techstyle Haus. It has this beautiful organic exterior shape and photovoltaic panels that can collect the sun at any angle, a form that could only be achieved through a structural textile. It's now permanently installed in southern France.

What's next for Somerson Studios, the furniture-design practice you established in 1979 in Fall River, Massachusetts? I'm working with John Dunnigan on a project designing interior dormitory furniture for the Haystack [Mountain School of Crafts] campus in Deer Isle, Maine, a special architectural site designed by Edward Larrabee Barnes.

Tell us about your favorite piece of furniture.

It's the one in my head that I haven't made up yet; I'm developing it in my imagination. I'm influenced by furniture from Egyptian times to the most contemporary pieces—I like most the pieces that shift the way we think of the interaction of the object, pieces that help us see materials and forms. This is a moment for designers like no other time in history. The world needs us to think nimbly and regenerate questions that answer problems with complex solutions. Designers are at the heart of that.

LEFT

Rosanne Somerson in the RISD president's house, Providence. Photo: Jane Beiles



Public by Design: Public Art in the Fenway Cultural District

Massachusetts College of Art and Design March 19, 2015

How can public art energize a place? Is it important for public art to delight or provoke? Who are we as a community? By exploring those questions, this panel discussion spotlighted the Fenway Alliance's Public by Design initiative—which aims to bring more public art to the neighborhood—and the role of architect as artist.

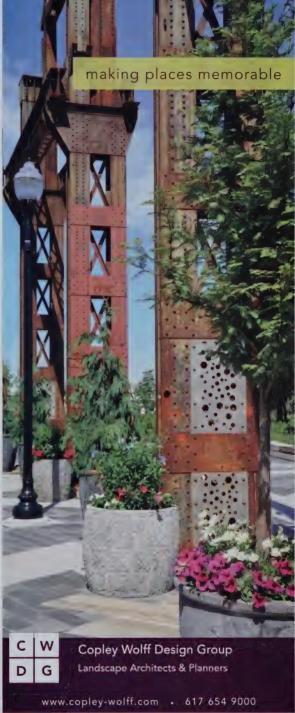
For the past three years, temporary, large-scale, site-specific public art installations by architecture firms and their young associates have provided the backdrop to the Alliance's "Opening our Doors" fall festival. Perkins+Will's Kim Poliquin launched the effort with *ENfold*, a 2012 installation featuring a luminous fabric ribbon that stretched across Evans Way Park. In 2013, Goody Clancy's Rachel Hampton led *Interlace*, an interactive piece that asked visitors to weave their thoughts and ideas—literally—into a larger web. Jean Kim of Shepley Bulfinch created 2014's *Sparkle & Chime*, an elegant and playful piece that encouraged viewers to listen, too. All three let visitors interact with a known place in an unexpected way, inviting participants to play in their city.

What do architects bring to public art-making? There are straightforward benefits, such as familiarity with suppliers and materials, and detailing them for resistance to weather and human activity. Architecture engages multiple people in its making; these pieces offered that opportunity on a compressed timeline. All three architect-led installations danced between individual contributions and larger, collective gestures. Perhaps most profoundly, public art, like architecture, is a vivid act of imagination put into permanent form. Art and beauty and catalytic ideas are introduced to daily routines. Temporary installations bring a snap, a more open attitude toward new approaches. While architects are otherwise slogging through the slow pace of building, these fleeting one-day or one-month pieces offer a chance to energetically move the city forward. Temporary can pave the way for permanent.

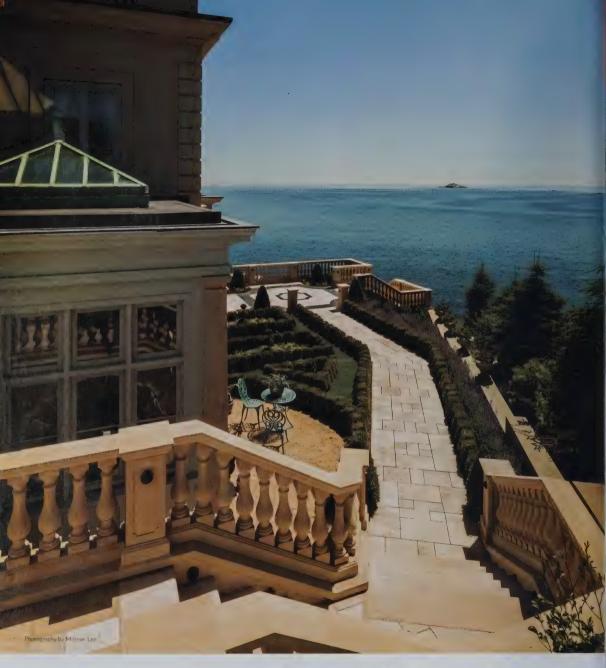
GRETCHEN SCHNEIDER RABINKIN AIA is executive director of the Community Design Resource Center of Boston and the Boston Society of Architects' director of civic design.

ABOVE

ENfold, by Kim Poliquin for Perkins+Will, in the Evans Way Park, Boston. Photo: J. Horner



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Above: 175-185 Wyman Street in Warmam, XIA designed for Histor Brook Management by Manuface Fernaci Architects

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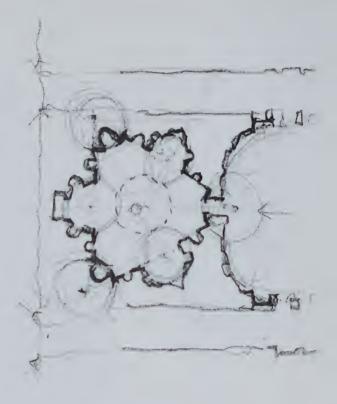
For over 25 years we have been representing some of the leading suppliers to the building industry. During the past 10 years there have been significant code changes in the area of thermal performance, air tightening, fire requirements and blast. We integrate all the different building components, essentially connecting the dots to help the architect, contractor or owner create a building envelope that meets today's requirements and is cost effective.



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THE JOURNEY FROM EYE TO HAND CAN PROFOUNDLY AFFECT THE EXPERIENCE OF A PLACE



ROME by T. Kelly Wilson

For the last 20 years, a side street of Trastevere in Rome has disgorged a dozen or more architectural design students every morning at 8:00 in early June, each carrying graphite pencils, sketchbooks, and kneaded erasers. At noon, they return for lunch and a rest, before reemerging from their apartments on the Vicolo Moroni with easels, large drawing boards, and charcoal to draw from observation, on site, the streets and spaces of Rome until sunset. This format—analyzing the architecture, strada, piazza, and art of Rome by drawing plans and sections with proportional measurement in sketchbooks, followed by drawing the urban landscape to learn the art of visual structure and composition—defines the essential experience necessary to embed the ideas, concepts, and perceptions that fuel a designer's imaginative capacity.

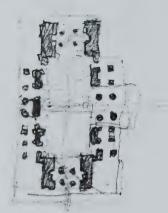
In the "Drawing Rome" course that I created with codirector and artist Jennifer Riley, and during my many years of teaching architecture at Harvard's Graduate School of Design, I've insisted on providing this course of study. I continue to do so, believing it valuable to the development of a designer's visual and intellectual engagement with the world and with the body of artists and designers that came before us. Foreign travel to experience alternate cultures and values also permits a level of reflection and awareness of the built environment that familiarity of place tends to prevent. I also believe that cross-pollination between the formats of design and artistic inquiry is one of the fertile roots of human creativity. The classes had robust enrollments; our students grasped the value of the course, one that would not rely on T. KELLY WILSON is director and associate professor at Indiana University Center for Art and Design, in Columbus.

ABOVE

Plan of Borromini's St. Ivo in La Sapienza, 9.5 × 13.5 inches, graphite pencil "F."

LEFT

Tonal drawing overview of Rome from the area near the Villa Medici and the Pincian Hill next to Trinita die Monti 9.5 × 7.5 inches, prismacolor pencil.



the camera to provide them with insight and understanding and the chance to develop themselves as designers.

This double format accomplished many useful things, but chief among them was that drawing slows down the act of seeing and deepens our engagement with the world.

It is a form of knowing, and it is also understanding, providing access to a world of sensual ideas. Many things cannot be discovered by mere looking. The extra intellectual and emotional energy required of drawing commits the mind in a manner wholly unlike any other form of inquiry. Drawing is not passive, nor is it amusement or entertainment. To the contrary, it requires rigor to be done at all.

The benefits of drawing are startling. To draw plans and sections of existing buildings and spaces is to reverse engineer, so to speak, some portion of the process by which the building or space had to be created. In so doing, we gain unique insight to the design choices by the authors of these places and build a repertoire of ideas about design. Drawing before an easel—a shift from the analytical drawings of plan and section, which have a rational basis for their construction, to the subjective drawings made from perceptual observation—addresses the invention of a complete spatial identity, one the drawing itself owns. It is useful to the architect to learn the art of composition and the cultivation of visual order born from experience. Drawing in this manner involves the total human, our conscious and unconscious lives, dreams, and sensations we hardly know the names of. This is where, in the crucible of creation, individual artistic conscientiousness has the opportunity to be forged.



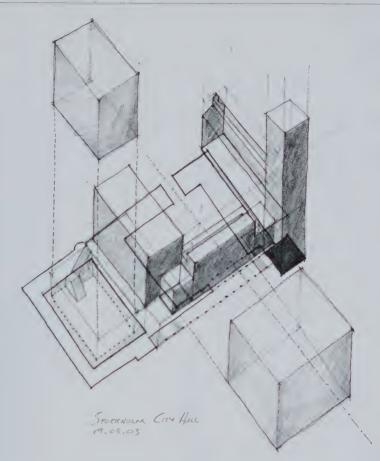
Drawing, freehand in particular, weds understanding to opportunity, creating a capacity for imagination that is unscripted. This is why freehand drawing should be supported and taught, and I do not think one has to be great at drawing to gain the insight and benefit that it now appears — with new evidence from the sciences — that we, as humans, are uniquely hardwired to imagine because we can draw.

ABOVE

Analytical drawings and observations of Peruzzi's Sala delle Prospettive, St. Andrea Quirinale, St. Carlo, 6.5 × 9.5 inches, graphite pencil "F."

LEFT

Tonal drawing of the interior of the Colosseo, 9 × 6 inches, Conté pencil.



STOCKHOLM

by Joshua Simoneau

The most extraordinary 303 days in the most extraordinary places. There is no better way to describe my experience in Western Europe, where I spent nearly a year examining many of the world's greatest cities. My research explored civic spaces as the architectural expression of the people, documenting their shape, their uses, and how people interact within them.

About halfway through my journey, I found myself standing at the gates of Stockholm City Hall. Anyone who has seen pictures of or visited this building can attest to the fortresslike nature of the structure, with its massive brick walls and imposing stature. An exploration of the interior, however, reveals an impressive array of spaces that welcome the public on an unforgettable journey. My sketch illustrates this dynamic spatial experience, one of interlocking volumes around a central courtyard. By abstracting the spaces as a volumetric axonometric, the sectional quality of the spaces—tall, narrow, wide—can be viewed in concert with the plan and ultimately convey a compelling approach to circulation and sequence through the building.

When you travel it can be difficult to see the details in the whole, whether it is because you do not know the language, the people, or the customs. It is when you are able to sit and reflect, as I did while I sat along the waterfront completing this drawing, that the nuances become apparent. Every line drawn must be thoughtful: You begin with a blank sheet of paper, and line by line the nature of the space emerges. It is here that I began to see the smaller details within the larger context of not only the building but also my trip. Each city I visited, every person I met, or building I saw was part of a larger picture.

JOSHUA SIMONEAU, a higher education planner and designer at CannonDesign in Boston, was awarded the Rotch Travelling Scholarship in 2008.

ABOVE

Sequence of Stockholm City Hall's primary public spaces: Blue Hall, Council Chambers, Golden Hall, Hall of Mirrors, Bell Tower, Arcade, and Courtyard; materials: graphite on Strathmore.

PROVENCE by Frank Harmon FAIA

FRANK HARMON FAIA is an architect, educator, and author of Native Places, a collection of observations and hand-drawn sketches that illustrate the value of looking closely at buildings and places. The monastery of St. Ganagobie in Provence, France, is located on a limestone plateau surrounded by sheer cliffs and overlooks the River Durance. The site is so commanding that it has been occupied since the Bronze Age. Stonemasons built a monastery here almost 1,000 years ago using local stone and wielding tools that an ancient Egyptian would recognize. A community never exceeding 13 monks has lived in the monastery almost continuously since its construction.

It's the sort of place that suggests refuge in a troubled world.

I visited St. Ganagobie on a recent December afternoon, when the monastery was covered in snow. Drawing allows me to see things I never noticed before, so as I sat in bone-chilling wind on a frozen stone wall, I wondered what ink and watercolor would uncover. I saw that the plateau was a vast space where the saw-toothed Alps merged with the sky. Ravens floated above the cloister, and lavender plants lay dormant in the snow. St. Ganagobie seemed small, almost cozy, in this spectacular setting, a hulk of yellow stone with intricate carvings about the entrance.

Despite its remoteness, or perhaps because of it, the monastery was exquisitely built. From doorpost to roof ridge, there were no veneers, faux finishes, hidden supports, nor imitation. If the monastery was a refuge for the faithful, the building was an act of faith.

Tools similar to the hammers, chisels, and rasps of St. Ganagobie's Romanesque builders can be found in a mason's toolbox today. Perhaps that's what gives us such a shiver of recognition. A thousand years melt away between the unknown builders and us.

When asked why modern architects no longer built cathedrals, the German poet Heinrich Heine (1797–1856) said, "People in those old times had convictions; we moderns only have opinions."

And in place of stone we have as many materials as we have opinions.

Today monks gather in the chapel choir of St. Ganagobie seven times a day, chanting prayers to God. Outside, bright cars flit down the cliff road while the River Durance flows to the sea.



cioètre Saint-Paul-de-Mansole St-Rénny-de-Provence

an iris blooming





Notre-Dame de Ganagobie

12.29.14

ABOVE

Left: Cloitre Saint-Paul-de-Mausole near St-Rémy-de-Provence, the asylum Van Gogh stayed in for a year before his death. An iris blooms beside the walk. Right: The chapel in the monastery of St. Ganagobie, with a beautifully crafted mosaic floor in the apse.

LEFT

Entrance to the monastery of Notre-Dame de Ganagobie, with Alpes in the distance covered in snow. Materials: Micron oos archival ink pen, Koi Water Color Pocket Field Sketch Box by Sakura; brush has a water reservoir.

VIENNA by Kirin J. Makker

KIRIN J. MAKKER, an assistant professor of architecture at Hobart and William Smith Colleges, New York, was a faculty leader in its Art and Architecture Rome program this spring.

RIGHT

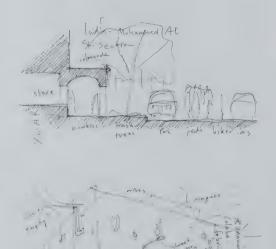
Urban seating in Vienna's Museum Quarter; materials: pencil, ink pens, colored pencil, marker, and watercolor. Le Corbusier wrote that travel sketching was a way to "fix deep down in one's experience what is seen." He argued that through the process of drawing art and architecture, one engaged in a meditative act of looking and observing, absorbing the lessons of the greatest structures of the previous centuries. However, he also argued that sketching ultimately amounted to "discovery" and enacting imagination and originality. In "inventing [and] creating, one's whole being is drawn into action and it is this action which counts."

As a legacy of both the Grand Tour and Modernism, travel sketching continues to be an act of study. Yet I do not feel the need to be an inventor in my discipline, nor do I feel pressure to foster a New Age of Architecture. I draw places and objects, whether paintings or piazzas, to look closely, to think visually, and to investigate what works and what could work better. I feel free to alter details, colors, and volumes as I draw.

While on site in the Museum Quarter of Vienna on a late sunny afternoon, I was captivated by the

overwhelming sense of calm felt within such a busy urban space. I began drawing one of the hundreds of street-furniture pieces in the main square. As I drew, I wanted to emphasize the people relaxing lazily but also convey the overall activity of the space. I made the lounging furniture formally simpler and drew people in active scribbles, using purples and yellows to show the contrast of energy, the sunlight fading into evening, the feel of the square over those hours.

Drawing for me is inherently interpretive, critical, and open-ended. I return to my sketches repeatedly, reworking them years after they were started on site. My drawings are thus processrich because I force them to be. I want them to be palimpsets of my journeys across space and time in a postindustrial and global age. Although I inherited the practice of sketchbook-keeping from previous centuries of tourists, architects, and artists, I approach drawing as a means of meditating creatively with both the world around me and the marks I make on a page.



MUMBAI

by Ryan Yaden

Walking onto the hot streets of Mumbai, India, for the first time, I was confronted with sensory overload. A riot of honking taxis, touts, pedestrians, colorful trucks, rickshaws, and the odd cow seemingly pressed from every direction. But after taking some time to sit and watch—no small feat with the commotion around me—a pattern emerged. The sidewalks were not actually the space most conducive to walking; rather, they were a place of transaction and gray markets. If you needed to walk somewhere in a hurry, you took the line between moving traffic and parked cars, which acted as a buffer between the stalls and pedestrians. If you walked on the actual sidewalk, you signified to the touts that you were shopping. I found that beneath the intensity of the smells, sounds, and colors, the more familiar model of a street section gave a structure to the unique nature of the area.

At key intersections, often anchored by a major train station, the intensity would pick up and a curious built artifact would inevitably



appear: the fading grand Bollywood theater. These structures are deteriorating for several economic and social reasons, and one of the key reprieves from the intensity of city life is disappearing along with them. Strategically placed and architecturally striking, the theaters are notable now for their crumbling façades and interiors that only hint at a more impressive history.

This overwhelming density of the public sphere and lack of respite provided a fruitful zone for speculation. In my drawings, I proposed a retrofit of the theaters that would recapture their role as an urban getaway. Taking advantage of the massive growth in the popularity of the sport of cricket, the theaters would become home to indoor minifields called pitches. The classic buildings would regain their grandeur again with a quasi-civic role. The concentration of street life outside is likely to grow as Mumbai continues to be a city of desire for a growing population, but the cricket courtyards would provide a welcome escape. RYAN YADEN, a project architect and manager at Lake|Flato Architects in San Antonio, was awarded the Rotch Travelling Scholarship in 2005 and visited Turkey, India, Thailand, and Japan.

LEFT

Top: Mumbai sidewalks are more of a linear gray market for touts that can't afford traditional rents, with a pedestrian zone between parked and moving cars. Bottom: Classic theater in Mumbai's Colaba area; materials: pen on Moleskine sketchbook paper.

MORE ONLINE architectureboston.com



Text and images by Ian Baldwin.

The airport is a constant experiment. Each terminal building founds a new city, a prototype as ambitious as it is obsolescent. Airports and cities both have hard operational logics and ever-changing populations; the airport simply lives these conditions on fast-forward. The vignettes that follow are episodic extracts of this hypermodern conjunction of humanity, technology, and commerce: the postwar city in flight.

THIS PAGE

Pan Am terminal at Idlewild Airport, 1961. Photo: Dmitri Kessel/Getty Images



IDLEWILD

The boards are majestic. Hugh Ferriss, tempted out of the perpetual night of Manhattan, rendered New York's second airport as bursting out of the light. Wallace Harrison's design boasts six-story inclines of glass set within a sharp concrete

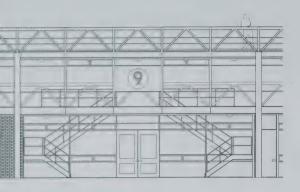
frame, an elegantly angled control tower, and rounded canopies thrusting out to meet cars gliding in from the expressway. The site had been a remote golf course called Idlewild.

From their cars, passengers would take an escalator to a soaring central lobby, then promenade to a Peripheral Building, two miles of sinuous curves providing stands for 86 aircraft. The tripartite arrival sequence echoed Penn Station, where a Doric temple front led to a Roman-bath waiting room, then an iron and glass train hall. This Idlewild was unambiguously modern but, like the train station, unambiguously a place.

Harrison presented the plan to Mayor William O'Dwyer, who responded by handing over the airport to the Port Authority. The new clients had no taste for unified buildings and grand entry sequences. Their interests were in getting cars as close to the gate as possible. A Terminal City, each building designed by a different hand, would rise along what is now 30 miles of looping roadway served by two expressway spurs. As a gateway to the airport, Edward Durell Stone designed a Gulf gas station as a flat-roofed temple faced in white breezeblock. Harrison's rearguard action was landscaping. A parterre in the manner of Versailles was planted in the center of a roadway loop, its axis terminated by the multicolored pipework of the central heating plant. Though the fountains, pools, and formal layout would have pleased the Sun King, the garden was named Liberty Plaza—a tip to the Cold War frisson of the early 1960s.

Harrison's hope for a central place to unify the airport had a physical end in the mid-'6os—when Liberty Plaza was paved over for parking—and by then, Eero Saarinen's TWA terminal, a voluptuous manta ray opened in 1962, had usurped it as a visual symbol of the airport. Liberty Plaza's conceptual end was the new wave of post-Saarinen airports that, in the main, treated passenger space as a functional problem that architects bent on statement could only worsen. Planners feared centralization would impede flow from car to plane. Places created hierarchies that would be undone by the next expansion.

Deliberate placelessness found its expression in the interiors of Amsterdam's Schiphol, designed by Kho Liang Ie and opened in 1967. The lounge seating and light fixtures were flat and compliant. Colors were muted beiges and greys to soothe harried travelers and give pride of place to the green-and-yellow signage system. Kho called the airport a station, declaring, "bourgeois coziness has no place." He complained about having plants forced on him, since they grew toward the light, not where he wished. Dutch newspapers were not quite ready for Kho's strident functionalism. One described an airport restaurant as "a waiting room for suicides."





GATWICK

Gatwick's prewar terminal, a squat, curvaceous "beehive," was a white island of Art Deco in the West Sussex countryside. Its replacement was an interchange. The main block straddled a relocated highway: to one side, a bridge to the platforms of the rail station; to the other,

a thin pier probing into the airfield with an observation promenade for a roof. The parti was so clear that passengers coming in to land grasped it with a glance out the window: parallel zones for trains, autos, and planes, crossed by a passenger axis from the past to the future.

In 1958, Queen Elizabeth II descended from a de Havilland Heron to open the airport. When she returned in 1988, Gatwick had accreted so many car parks, road interchanges, runways, hotels, and service buildings that it was almost unrecognizable, were it not for the still-embedded diagram of cross-axial movement. Even the second terminal building Her Majesty dedicated obeyed the alignment and right-angle geometries of the original.

Gatwick's piers were built from steel portal frames spaced at 40 feet. Between them, lattice trusses carried the floors and formed their handrails, with floor-to-ceiling windows beyond. The structural exhibitionism might have made Gatwick an early draft of High Tech, 20 years before the term was applied to architecture. Or its unadorned steel and plate glass, extruded by modular dimensions into theoretical infinity, might have suggested a Crystal Palace for the 20th century.

A critic named G.E. Kidder-Smith had another description— "airport-ness"—and praised Gatwick as the best example in all of Europe. "One is architecturally, indeed physically, projected onto the field and made a part of its excitement, for no solid wall ever rises between the passenger and his aerial transportation." He had discovered the true innovation of the airport's systemic, industrially produced space: The event of flying could finally slip the bonds of architecture.

LOVE FIELD

The advent of Boeing's 707 began a new set of space/time relationships, inflected by propulsion: Jet-set fliers walked through a jetway, jetted to faraway places, and suffered jet lag, a new malady of the jet age. JetRail did not get a chance to join this lexicographic elite, however, having lived for just five years.

Braniff's Terminal of the Future opened at Love Field, Dallas, in 1968. It had a lobby with circular mirrors set in the ceiling, automated departure boards, and a "corridor of color" that complemented the airline's livery. "Your trip through the terminal should be an experience in itself...easy and even fun," a brochure puffed.

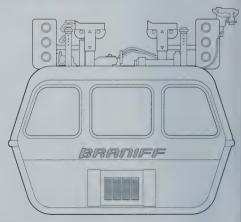
A decade earlier, Love had seen the first installation of a moving walkway. JetRail went above and beyond: It whisked passengers from a remote parking lot for 900 cars straight into the terminal building. The orange and white gondolas hung from a steel guideway and were as automatic as an elevator. Unlike the clear plastic "rain dome" helmets issued to Braniff flight attendants, JetRail was more than a visual trope of the jet age. It actually worked.

The future ended in 1974, when Braniff moved with other airlines to the new Dallas/Fort Worth Airport. A new airline named Southwest stayed behind, sharing Love with an ice rink. The JetRail station became a disco, and the orange track was dismantled.

Gyo Obata's plan for DFW laid out an axial roadway flanked by 13 identical terminals, each sheltering a parking lot within its semicircle: maximum gate area combined with minimum walking distance. The aviation version of the Lineal City was tied together by an automated people-mover that drew on JetRail's success but not its panache. The rubber-tired boxes of AirTrans



crept along a concrete guideway and shuttled bags of garbage in the off-hours.



PITTSBURGH

In the golden age of legacy hub-and-spoke networks, Pittsburgh International reversed the terminalsatellite hierarchy. Landside was an appendage for the relative trickle of destination passengers. Airside became the spot marked for the drama of crowds in motion: in plan, a giant "X" for the efficient interchange of US Airways passengers among 87 gates. At the crossing, arched trusses and tall clerestories marked the center of Airmall, a hundred stores uniting the two iconic types of postwar consumerism: airport and shopping center.

A dozen years on, US Airways pulled back. By 2010 a flight roster once boasting more than 500 daily departures had shrunk to 39. Thirteen gates closed permanently. The commuter concourse became parking. On the airport's 20th anniversary, a high school band marched past vacant ticket counters.

The airport's architect, Tasso Katselas, took to the pages of the Pittsburgh Post-Gazette. He could not understand how the company once called Allegheny Airlines had forsaken Pittsburgh's superior operational capacity for the "primitive" airfields of Philadelphia and Charlotte. The high landing fees that riled US Airways came from the airport's \$1 billion budget, he wrote, and the budget came from the airline's brief for the world's most advanced hub airport. Besides, the X saved the airline money in the long run; computer simulations had proved so: "There is no waiting time. There is no wasted fuel."

Pittsburgh's contribution to airport design was not the X hub, it was Airmall. Despite shedding one-third of its stores, Airmall claims the highest per-passenger spend in the country. The post-9/11 flier heads straight to the TSA checkpoint, grimaces, then emerges airside with a hankering for distraction. Long before retailers christened this schedule void the "golden hour," before Coach bags shimmered from LAX's Luxury Island or PDX food carts dished up kimchi quesadillas, Airmall was there.

In 2004, Pittsburgh lost its hub status and got cold consolation: LSG Sky Chefs' sole Western Hemisphere deep-freezing facility, a 20,000-square-foot, single-story industrial building called PIT 1375. After 9/11, Sky Chefs' profits evaporated. Its traditional flight kitchens cut workers and salaries and introduced stopwatch timing to speed up production. Airlines spend less than \$3 per passenger on in-flight meals, yet demand broad options for ever-pickier fliers. So Sky Chefs' "600 different frozen dishes with over 100 ethnic variations," prepared in Pittsburgh; Qingdao, China; or Alzey, Germany, can fill up to a million airborne tummies a day.

Food on early flights took the form of stewardesses handing out cold chicken and sandwiches from the airport café, which passengers balanced atop pillows on their laps. In 1937, United Airlines created the airport-based "flight kitchen" to cook meals ready to be served from an onboard galley. A United manager mocked up the first in-flight meal tray, sized for the new seatback trays with three separate depressions for each dish, and in 1946



Pan Am served the first frozen three-course meal, reheated in the air in a convection oven. By 1960, when United's flight kitchen opened at a newly expanded O'Hare in Chicago, it was run by a Swiss hotel chef and turned out 2,500 meals per day. A production chef called a reporter's attention to a hundred bowls of salad lined up on a table: "See those tomatoes? They're all peeled. United never sends out an unpeeled tomato!"

Today, Sky Chefs serves 214 airports in 51 countries with more than 32,000 employees. But the only glimpse you might catch of this vast workforce is in the few minutes it takes the meal trolleys to roll on board from the high loader. The truck and its driver disappear to the airport's back-of-house lots. Here again, the airport is urban simulacra: Like a smart, metropolitan downtown, it relies on remote unplaces, where the moving, fixing, washing, and storing gets done.

At the modern airport, the gap between the spaces and things passengers consume and the lean, global chain that supplies them widens with each subtle upgrade and invisible efficiency. The airport, like the city, is a scrum of operations and desires that never sits still. It is a perpetual draft, a collection of glimpses into a world that, for better and for worse, never quite arrives.



THE MERRITT IS THAT RARE PARKWAY THAT MAKES MOTORING A JOY

by Herbert S. Newman FAIA

OETRY IN

The **38-mile Merritt Parkway**, conceived in utility but constructed with beauty in mind, is Connecticut's longest and perhaps its most wonderful work of architecture. Inspired by the carriageways through Central Park designed by Frederick Law Olmsted, the Merritt extended the principles of the City Beautiful movement into the nascent suburbs extending north from Manhattan. It is a rare species of road—and an endangered one.

As a child, I would travel the Merritt with my brother and our parents on trips to New York City. Our backseat squabbles would be suddenly distracted by discovering we were driving on a beautifully landscaped roadway. We traveled on a gently enchanted rolling ribbon of hills and valleys, with vistas of farmlands and woods. The wonder of the road was that it was conceived as a place to experience the landscape of Connecticut, not just get from here to there. As I drive the Merritt today, the joy of that experience compared with other car travels still resonates.

It was the joy of *motoring*. Traveling at a top speed of 40 to 50 miles per hour on a journey with constantly changing short- and long-range views of rock outcropping and scenery of distant clouds and farmland—like something out of a John Constable painting—kept us alert and curious about what might come next.

And the bridges! Designed by the state's highway architect, George L. Dunkelberger, each of the 69 bridges was unique. Using many styles from Art Deco to Modern Classicism, "The Bridges of Fairfield County" are beguiling and witty. Some wink at you as you pass under them in the instant darkness of a blink. Particularly striking is the whimsy of the wings of Nike, goddess of victory, on the James Farm Road bridge in Stratford. (Was Dunkelberger symbolizing the success of his design battles?) Importantly, all the bridges were designed and built with height clearances that do not allow high vehicles, thereby preserving the Merritt for passenger cars.

Because the Merritt Parkway has no lights, advocates for the road suggested the bridges be lit for both safety and delight. With the cooperation of the Connecticut Department of Transportation (DOT), the Merritt Parkway Conservancy (on whose board I sit) lit two bridges—at Ponus Ridge in New Canaan and Newtown Turnpike in Westport—to celebrate the winter holiday season in 2004. The diverse and disparate designs of these bridges, created with love and care, evoke a sense of a unity and cohesion in a celebration of motoring.

The Merritt was built in the Great Depression, from 1934 to 1940. The team responsible for this civic gem was large, but it mainly included the landscape architect Weld Thayer Chase and his supervisor, highway engineer Earl Wood. Named for then-Congressman Schuyler Merritt, it was designed as a "road in the park." Here was a parkway consciously designed to take advantage of the winding nature of the landscape, not just blast through the creeks and outcroppings and other classic features of New England's natural world. In Dunkelberger's own words, (excerpted from Bruce Radde's 1993 history of the Merritt): "In low, flat country, the design should typify the character of the landscape, perhaps by

TO WESTPORT

PREVIOUS PAGE

The Merritt Parkway at the Guinea Road overpass in Stamford, Connecticut. Photo: Kerry Sherck

ABOVE

From the Historic American Engineering Record, National Park Service. Delineated by Mary Elizabeth Clark, Sanford E. Garner, 1992.

RIGHT

View of the Merritt Parkway from the James Farm Road overpass in Stratford, Connecticut. Photo: Ned Gerard



NEW YORK

THE MERRITT PARKWAY

horizontal lines; in rolling country by the addition of a few verticals; and on rough terrain, a combination of the two with neither predominating."

SOUND

IEW YORK

Of course, one of the past and present delights of the Merritt is the mandated prohibition of trucks and trailers. That rule, combined with regulations against commercial billboards on the road, adds a sense of safety and human scale to the motoring experience.

Over the 75 years of the life of the Merritt, the original concept of open and closed vistas has changed radically. The increasing density and suburbanization of Fairfield County brought development right to the edge of the road. Over the years, serendipitously and fortuitously, volunteer trees grew to block out the developments. Now the Merritt is a roadway with swaths of natural dense growth, which mostly blocks the view of the adjacent office buildings and suburban residences. It offers a new and yet still lovely motoring experience in which occupants of a car, now traveling at speeds of more than 60 miles per hour, can still feel that Connecticut is a forest with a winding, rolling ribbon of pavement, sheltered from the outside world of development. It is as romantic in a way as the original vision and experience of the parkway but designed by nature, not by us. What great luck to be in this corridor of green!

Sadly, such an experience may be compromised by proposed new traffic interchanges along the Merritt, which threaten to destroy the nature of this secluded parkway by exposing the chaotic development outside its boundaries. Although many trees close to the roadbed had to be removed for safety in recent years. Connecticut DOT must plant additional trees and shrubbery to replace the removed ones along the lines of adjacent properties, to shield those properties from view by the motoring public. Doing so preserves the reverie and transcendent peace from a chaotic world that is the new promise of the parkway.

Katford

Although the Merritt has been recognized in the National Register of Historic Places, there are grave dangers. The erosion of its beauty by well-intentioned plans for bike trails, tree removal without appropriate replacement, and out-ofscale "improved" interchanges are among the most pressing. At present, there are too many places, particularly in winter, where we see the backs of too many buildings, just beyond the right-of-way, never meant to be glimpsed by the motorist. It will be by "small cuts" that the Merritt may die.

The Merritt Parkway Conservancy, formed in 2002 to protect and preserve the character and integrity of this natural treasure, is working to prevent any further deterioration. Its projects include replanting the roadway with spring flowering dogwoods and mountain laurels originally designed for the road, and cleaning and restoring the bridges. The Conservancy has worked closely with the State of Connecticut to restore the historic service stations of the parkway and to ensure that required changes are being executed accurately.

Today, so much of one's time is spent in cars—whether in stop-and-go traffic or on thruways at high speed—that we tend to think of the car as a necessary inconvenience. Many young people eligible for drivers' licenses are not eager to drive, preferring to move to more walkable cities and towns. The face-to-face opportunities of a human-scaled pedestrian environment are welcome signs of the renewal of a civil urban society. But the Merritt Parkway is the rare place where driving can still be fun.

The 38-mile ribbon of road is one of New England's greatest treasures, a thrilling blend of architecture, sculpture, and landscape design. Great works of art renew us and touch our common humanity. We must pay attention.

REDRAWING THE MAP New tools create a niche for

THE CARTOPHILE

GERMINATE

08

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Adapted from Germinate, 2010, by Shannon Rankin; www.shannonrankin.com. Photo courtesy of the artist (no relation to the author)



by William Rankin

Given the proliferation of GPS devices and interactive mapping online, it's easy to declare the traditional map obsolete. Intuitive turn-by-turn directions have replaced road atlases, Google has upgraded the static map with everything from real-time traffic to restaurant reviews, and Wikipedia has taken the place of the hefty geography textbook. Is there any hope for a cartophile? Will the stand-alone map, lovingly produced and custom designed, be only a niche product for rich collectors and Luddites?

Framing the question that way is misleading because it conflates two separate changes in recent geographic knowledge. One is the shift from paper to the screen. And yes, even though wall maps still have an important size advantage, it is, indeed, difficult to see much future for the traditional coffee table atlas, road map, or topographic quad. But the other shift is much more important, and here the digital realm offers a huge advantage.

The proliferation of new spatial tools—everything from the GPS and GIS (Geographic Information System) to the easy availability of statistical and environmental data sets—is making certain kinds of mapping more relevant and ubiquitous than ever. We are not facing the decline of maps, but a shift from maps as repositories of geographic fact to maps as interpretive, argumentative, and unapologetically partial. Cartographic authorship has changed dramatically as well, since scholarship, design, and craft are now increasingly mingled. Mapping is no longer a specialist pursuit anxious about its scientific credentials; it is instead a powerful form of everyday communication. Whether these new maps appear on paper or online is largely irrelevant.

For a good example of the waning ideal of the map-as-fact, consider the massive project known as the International Map of the World. Although little known today, for most of the 20th century it was the flagship project of scientific cartography. The idea was relatively simple. Instead of every mapmaker starting from scratch, cartographers and mapping agencies agreed to a comprehensive set of standards that would allow maps from around the world to contribute to a single atlas of unprecedented detail. The project was first proposed at the fifth International Geographical Congress in 1891, and by 1913 nearly every country in the world had signed on. The graphic standards were even given the force of international treaty.

The maps themselves are nothing terribly unusual—they use a uniform 1:1,000,000 scale and show cities, railroads, boundaries, and elevation using familiar colors—but that was exactly the point. One of the first maps ever produced showed Boston, and it was hailed by the press as "the beginning of a more accurate map of the United States than any that now exists." What made the map worthwhile was its trustworthiness and authority. The graphics were internationally certified, and the content was endorsed by governments and geographers alike. At its most ambitious, the hope of the project was that nearly all geographic questions could be answered with just one map.

This model came to be seen as seriously flawed as early as the 1950s. Treating maps as comprehensive databases made them cluttered, inflexible, and confusing. Map designers in the US military were especially concerned that high-speed jet pilots and far-flung soldiers needed maps tailor-made for specific tasks, not universal knowledge. By the 1960s, the International Map was being dismissed by prominent mapmakers as nothing more than "cartographic wallpaper," and the project was finally canceled altogether in 1986.

By that time, new computerized databases were seen as much more suitable for the kind of "look-up" tasks that once relied on standardized reference maps. Jacques Bertin, a famous French theorist of graphics, separated cartography into two parts—"inventory" and "message"—and saw each as requiring its own techniques and tools. Barbara Petchenik, another well-known cartographer, predicted the "extinction" of the traditional atlas and thought that the static maps of the future might be useful only for providing "conventions and fixed points of view" for schoolchildren.

In hindsight, those predictions seem, if anything, rather too conservative, as GIS and online mapping have made "inventory"

information available not just to specialists but to everyone with a smartphone. But the imagined future of "message" mapping missed a crucial development. Today, "message" maps are not being made by large organizations to teach children, but instead by designers, programmers, journalists, and artists participating in vigorous public debate. The largely unofficial nature of these maps has given them an unexpected power, since they can easily use others' data while bypassing the traditional appeals to neutrality and comprehensiveness. "Inventory" and "message" have indeed diverged, but they have diverged socially and politically, not just technologically.

Two examples from my own work show what "message" can mean in the age of Google. The first is a map of universities in Greater Boston. At first glance it may seem like a simple locator map, but this is not just a compilation of campus diagrams for prospective students. Instead, it shows every parcel of land owned by colleges and universities, even commercial or industrial land that is not used for any academic purpose. Making this map required trawling through huge online databases of property records and doing research on holding companies and expansion plans—especially Harvard's controversial developments in Allston and MIT's properties in Cambridge. The resulting map is easily legible and perfectly factual, but it intervenes into debates about property taxes, nonprofit status, and the changing social purpose of higher

> education. "Message" here means taking data collected for one purpose (municipal property assessments) and repurposing it as part of a broader discussion. Since I first posted this map online, it has been used by journalists, historians, planners, and even in conversations between Harvard and the surrounding community.

The second example presents an overlay of 100 different definitions of the Midwest. The source material here is maps that I found scattered around the Internet, mostly from government agencies, nonprofits, and corporationseverything from the regional divisions of the Census Bureau to the sales areas of Plunkett's Pest Control. The goal was to reflect on collective identity, geographic imagination, and the difficulty of privileging one point of view over all others. Although Illinois emerges as the most Midwestern state, appearing in almost every map, there is in fact no area that was included in all definitions, and at its most expansive, the Midwest might stretch all the way from Newfoundland to New Mexico. This is how culture works: Different people carry around different mental geographies, each with



THE MIDWEST

The Midwest (2013). Overlaying too different definitions of the Midwest (based on maps found online), the author shows the region as a culturally contested idea with no obvious boundaries.



different histories, narratives, and meanings. The map doesn't just show the Midwest as a geographic area; it also helps us interpret the Midwest as a living cultural idea. This project has now been enrolled in a variety of conversations about history, identity, and design—everywhere from a small museum in South Dakota and local public radio in Michigan to best-selling books about visual journalism.

Together, these two maps show that even traditional cartography—static maps showing geographic relationships faces no competition from smartphones or crowdsourcing. Yes, one could imagine property-record data being available as an overlay on Google Maps or Zillow, but it still requires a cartographer to find interesting patterns and provide the "fixed point of view" necessary to make a visual argument. It seems even less likely that something like the Midwest map would emerge from an algorithm or a location-aware app. There is a slightly paradoxical relationship here: My maps are possible only because of the accessibility of data and software, but most of my work is about making that data and software do things that they were never meant to do.

It is not enough to say that cartography can still flourish or that map lovers should look to the future with excitement. More radically, I would suggest that the cartographer's sensibility is becoming ever more crucial to public life. We are awash in data, and all our "look-up" needs can be fulfilled in a matter of seconds. But we also rely on maps when making sense of the world—we use them to orient ourselves historically, socially, and politically as well as geographically. This has always been the case, but what is new today is the opportunity for unusual, provocative, or minority points of view to reach a wide audience.

Pick an issue — anything from drone strikes abroad to the Olympic bid in Boston—and imagine a map that reframes the debate. Now go make that map. For the cartophile, loving maps should mean producing them, too.

TRACK Record

In 2004, at the age of 17, Mike Brodie picked up a Polaroid SX-70 camera from the back seat of a friend's car, launching a four-year visual odyssey that would take him from Pensacola, Florida, to Olympia, Washington. He began documenting moments in the lives of the itinerant adolescents who found their footing on freight trains, riding the rails with them, slowly earning their trust. Brodie came to be known as The Polaroid Kidd, but when the film he used was phased out of production, he switched to a 1980s Nikon and 35mm film. The self-taught photographer captures the restless drift and raw intimacy of his train-hopping cohorts with tender images that underscore their haunting humanity. His work endures in A Period of Juvenile Prosperity (2013) and this year's Tones of Dirt and Bone. Brodie now lives in California and works as a diesel mechanic.





LEFT

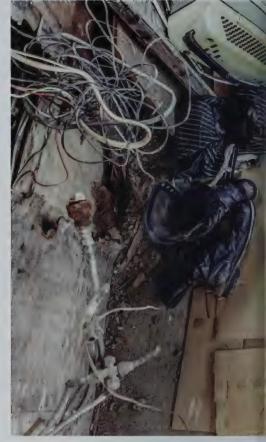
Mainline crossing, Escambia Bay. Pensacola, Florida. From the series Tones of Dirt and Bone 2004-2006 © Mike Brodie, courtesy of the artist, Yossi Milo Gallery / M+B Gallery

ABOVE AND ON FOLLOWING PAGES

All images from the series A Period of Juvenile Prosperity 2006–2009 © Mike Brodie, courtesy of the artist, Yossi Milo Gallery / M+B Gallery











"We took what we could get to make it through one more day or to get to the next town. You develop close bonds on the road because that's all you got."

Mike Brodie, Los Angeles Times (2013)





"In my heart I do not feel like a photographer. I don't know if I ever have. But what I've always felt like is a railroader."

Mike Brodie, NPR (2013)





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BOOKS

AMERICANS IN PARIS



Americans in Paris: Foundations of America's Architectural Gilded Age Jean Paul Carlhian and Margot M. Ellis Rizzoli, 2014 Reviewed by William Morgan

A lavishly illustrated study of the education of 503 aspiring architects from the antipodal shore at the École national supérieure des Beaux-Arts, Americans in Paris also documents their remarkable influence when they returned home to practice. Just providing the names of the Americans who trained at the École and reviewing their role in architecture, education, planning, and landscape design would be a valuable addition to the literature of the Gilded Age. But this monumental treatise goes further, reintroducing the entire Beaux-Arts ethic.

Beaux-Arts is one of those stylistic terms, like Victorian or Brutalism, which can be anathema to some generations. Frank Lloyd Wright referred unkindly to attendees of the École as bozos. In a course on modern architecture in the 1960s, my professor depicted the Beaux-Arts as a dastardly place where Americans were forced to draw the classical orders and reproduce ancient buildings as inappropriate containers for contemporary commerce and government.

That same professor worshipped Louis Sullivan as a modern architect while ignoring how Beaux-Arts training infused his masterworks. We also learned how Walter Gropius, upon arriving at Harvard in 1938, took a hammer to plaster casts of classical figures. While the story of the smashing of the drawing-class props was apocryphal, Gropius nurtured a generation of historically illiterate architects.

As Jean Paul Carlhian and Margot Ellis demonstrate, there was much more to education at the École than exquisite renderings. History was crucial (the students "regarded Palladio and Bramante as relatives"), but the multiyear training was rigorous and embraced a complete belief system. Discipline was foremost, but there was certain freedom to be gained from working within strict requirements and limitations. (The presentation paper stayed the same size for 135 years.) From the initial 12-hour esquisse, through the six-week projet, to the final presentation, students learned to think architecturally, to express themselves succinctly, and to accept logic as their "undisputed mentor."

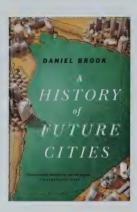
Americans such as Guy Lowell, Raymond Hood, John Mead Howells, John Russell Pope, and Charles McKim internalized the primacy of the plan. There were no contours or orientations in the Paris ateliers—only plan, section, and elevation. Such notable École students as William A. Delano; Arthur Brown, Ir.: James Gamble Rogers; and William Van Alen enriched America's Gilded Age with monumental and heroic buildings: the original Pennsylvania Station, the Boston Museum of Fine Arts, the unparalleled collection of classical government buildings that comprise the Federal Triangle in Washington, several state capitols, and our handsomest college campuses.

Americans in Paris reacquaints us with so many of these brilliant designers whose reputations were eclipsed by European Modernism. There was room, however, for competing philosophies. Carlhian, a product of the École and Harvard, himself combined the best of both worlds in his half-century at the Boston firm of Shepley Bulfinch Richardson and Abbott.

That Hub establishment was a bastion of Beaux-Arts-trained men, Henry Hobson Richardson being the fourth American admitted to the École. It is impossible to understand that great American architect's work without recognizing its underlying Beaux-Arts clarity; the libraries, for example, leave no doubt as to either their entrances or their circulation. The authors call Harvard's Sever Hall "a perfect plan" and note that Richardson's 1892 sketch of Trinity Church gave the configuration of the site in "four bold strokes of the pen."

Similar Beaux-Arts training dominates the work of Louis Kahn, through his mentor Paul Cret, another American teacher who studied at the École. What are the symmetrical, classical, and plandriven creations such as the Salk Institute or the Bangladesh capital buildings if not continuations of the Beaux-Arts schemes delineated in Americans in Paris?

WILLIAM MORGAN is a Providence-based architectural writer. He attended architecture school at Columbia University.



A History of Future Cities Daniel Brook W. W. Norton & Company, 2014 Reviewed by Deborah Bentley

Written in the same genre as Bill Bryson's At Home and Deyan Sudjic's Edifice Complex, A History of Future Cities delves into the social and political intrigue behind the initial raison d'être and subsequent development of St. Petersburg, Russia; Shanghai; and Mumbai, India. These brave new cities of the past share certain traits: They were born out of the desire to impress and attract foreigners, and some of their subsequent residents politically shaped their countries through revolution.

Apart from maps at the beginning of the book, there are few illustrations to support the prose, so if you are unfamiliar with these cities or the buildings that are discussed, be prepared to Google such items as "Bombay Art Nouveau" and "Pudong People's Square" to comprehend the variety of shape and form of the development in India and China. For each city, the history of the developers, urban planners, and architects of important buildings is discussed, which underscores that the practice of the iconic building as a billboard is now seen as a political prerequisite for a "Future City."

Author Daniel Brook weaves historical threads connecting the three cities. For instance, the Sassoons, an entrepreneurial family, were involved in the development of both Shanghai and Bombay, India, and displaced Russians fled to Shanghai after the revolution of 1917. Little gems of information are also hidden in the narrative, such as the fact that the reason Bombay grew at a rapid rate was that its cotton industry benefited from the blockade of the cotton ships in the American Civil War, thus connecting the development of these cities to the history of the rest of the world.

When Brook moves on to describe the development of Dubai, in the United Arab Emirates, research and details are given short shrift. The description of its early development is minimal, omitting any explanation of how or why the UAE evolved from the seven emirates and actions of Sheikh Zayed, a key political figure and the country's first president. Brook also fails to mention Dubai's architects and planners, especially the work of John Harris, who designed the first skyscraper in the city, which opened in 1979. The Dubai Golf Club Pavilion designed by Godwin Austen Johnson is so beloved by the Emiratis that it is illustrated on their banknote-but not in this book. Adrian Smith, the architect for the Burj Khalifa, is named (but not Skidmore, Owings & Merrill, whom he worked for at the time of the building's design); Tom Wright, meanwhile, the architect at Atkins Design who designed the Burj Al Arab, is reduced to being referred to as "a white man in London."

Perhaps Dubai is too new to try and record its history, and comprehending the politics of the region is certainly difficult from afar. (There is little transparency, and tribal family connections are not public record.) As a result, the city is full of rumors regarding who actually controls and funds what. It is a shame that the thin research on Dubai is included because it detracts from the insightful historical narrative of the older "instant cities." Enjoy the book for its exploration into Shanghai, St. Petersburg, and Mumbai, but find another source for the story of Dubai's origins.

DEBORAH BENTLEY led the design department for the Royal Court in Bahrain and taught architecture in Abu Dhabi, UAE.



Architecture an Inspiration Ivor Smith Troubador Publishing Ltd, 2014 Reviewed by Ann Sussman AIA

When was your first time? When did you realize that you were obsessed with understanding and explaining, to anyone who might listen, the magic of buildings? If this describes your mindset, then make room for this book. If you'd like to become an aficionado of built form but feel a tad lacking, this book will bring you up to speed, too.

An English architect, Ivor Smith also writes, teaches architecture, and has directed architectural schools. Here, he synthesizes more than five decades of his experience contemplating buildings, doing so with verve and a certain urgency. Smith worries that too many people are negative about the discipline today, painting it with a broad brush. He is concerned that students, not always hearing feedback sent their way, fail to appreciate the resolved complexity of many of their predecessors' work and the opportunity to elaborate on their own.

Architecture an Inspiration, a paperback book with more than 400 color photographs, strives to show that architecture that inspires does so not because it fits a certain style or fashion, but because it reconciles "a whole range of conflicting issues" into a "human and poetic synthesis."

Smith explains how that happens by arranging the book into two parts:

The first considers "the Nature of Architecture" and the role of buildings in "facilitating activity, modifying climate, relating to context, respecting material [and] conveying meaning and delight." The second section looks at the role of the designers, breaking down the mystery of an often ineffable process into separate chapters that consider the role of reason, intuition, precedent, metaphor, and search for harmony. In each case, he illustrates the concept using buildings that are mostly in the United Kingdom and Europe, often from the 20th century and sometimes from earlier periods.

In this way, the book is particularly useful for stateside residents. Did you know what the "gerberettes" are on Richard Rogers' and Renzo Piano's Pompidou Center (1977) in Paris and the role they play in holding the building up? Read Chapter 5, on "Respecting Material and Structure." Similarly, we learn that Norman Foster's glazed mesh like, digitally designed and installed Great Court at the British Museum (1994), at two acres, is not only "a well-used civic space [but also] the largest covered piazza in Europe."

But what is perhaps most interesting about Smith's work is his own evolution. Smith is famous, or perhaps infamous, as one half of the architectural team that designed the UK's enormous Park Hill public-housing development, in a Brutalist Corbusian style, for the industrial city of Sheffield (1957-61). "For the first decade or so the residents regarded Park Hill as paradise compared with what they had before," he writes. But soon after, the complex fell into disrepair, becoming synonymous with drugs and crime. The collapse of the local steel and coal industry promoted the decline, but so did his own moves.

"In hindsight, I realize [the buildings] have one major shortcoming: streets in the air, as on the ground, should have windows onto them to enrich both the dwelling and the street." Finally undergoing renovation today, Park Hill has a new redevelopment firm and new architects. This team is introducing color on the exterior and wood in the interiors and, the author says, has "got the balance right between respect for authenticity and the embrace of change." Smith is talking about himself here, too, for in the book he makes a strong case for a plurality of approaches and celebrates mash-ups, where architects combine diverse building traditions as a hallmark of 21st-century design and the way of the future. After this tour de force, it is hard to disagree.

ANN SUSSMAN AIA is coauthor of Cognitive Architecture, Designing for How We Respond to the Built Environment (Routledge, 2015).





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CASTING OFF THE LINES

by Elizabeth S. Padjen FAIA

I am going to die, I thought. And that would be a good thing.

We were somewhere off Watch Hill in Buzzards Bay, and I was heaving my innards over the rail, an activity that had occupied me for much of this wet, windy morning 15 years ago. My husband and I had just taken possession of a classic 1965 sailboat, and we had dragooned two fellow sailors into our maiden voyage from Essex, Connecticut, to Marblehead, Massachusetts. This little adventure was to be a culinary cruise—our friend Tony had proposed an itinerary based on his favorite coastal eateries.

But as I faced my certain demise, food was not figuring into any thoughts of an afterlife. I had sometimes felt queasy on boats. This was the trip where I learned that I am susceptible to the most debilitating form of seasickness. From my vantage point, head hanging over the side, the world as I knew it had already ceased to exist. We seemed to be surrounded by gray walls of water, boxed in by gray rain clouds above.

I was with three far more experienced sailors; they did not need me to control the boat. But they needed me to navigate.

"Could someone please tell me where the hell we are?" Tony's voice cut through my misery. Funny thing about that qualifier "some." "Somewhere off Watch Hill" is so vague that it is almost useless information when you're on a boat. But "someone" in this case was highly specific. I hauled myself down to the nav station.

"Here," I said a few minutes later. I shoved a chart at him and jabbed a finger at it. "We are here. We want to be there." I gave him the course.

"Thank you very much." There was no sarcasm. Tony is naturally gracious.

"You are very welcome." I turned away and made another contribution to Neptune's realm.

When I was a kid, I decided that God lives in the ocean. That might be right. The ocean looks much as it did before



there were humans; it looks much as it will long after our species is extinct. Nothing is fixed, everything moves. But here is the great contradiction of the amorphous sea: It is a domain defined by lines—a human construct—where latitude and longitude can pinpoint any location, where waypoints on charts serve as signposts along highways as familiar as any interstate. Line is the greatest abstract invention of the human intellect. Go ahead and argue for zero or infinity. You'll still have to admit that line is much more useful.

On our boat, my husband is the captain because he has instincts that come only from a lifetime of messing about with boats. I tell him where to go—as an architect, I have instincts that come from a lifetime of messing about with lines. Ashore, my car has no turn-by-turn voice GFS. I worry it would erode my sense of direction. Sailors no longer fear dragons, but they do fear rocks, reefs, shoals, and storm paths. It is no coincidence that "lost at sea" is usually synonymous with "died at sea."

We made our way to Jamestown and canceled our dinner reservation—no one had much enthusiasm for a wet dinghy ride that night. Jarred spaghetti sauce never tasted so good. We were warm, dry, and tethered to a mooring, our position secure. On a boat, charts don't change, but plans do.

ABOVE

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PRESERVE

ABOVE

The ad hoc Committee to Protect the West Village, co-chaired by urban critic Jane Jacobs, protesting urban renewal plans by the City of New York, in April 1960. The committee successfully halted plans to raze dozens of buildings the city had marked with an X for destruction. Photo: Bettman/CORBIS

COVER

Debris from the demolition of Pennsylvania Station, photographed on February 28, 1966. Ada Louise Huxtable of *The New York Times* described this site in Secaucus, New Jersey, as "a setting of macabre surrealist verité." Photo: Eddie Hausner/The New York Times



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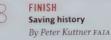
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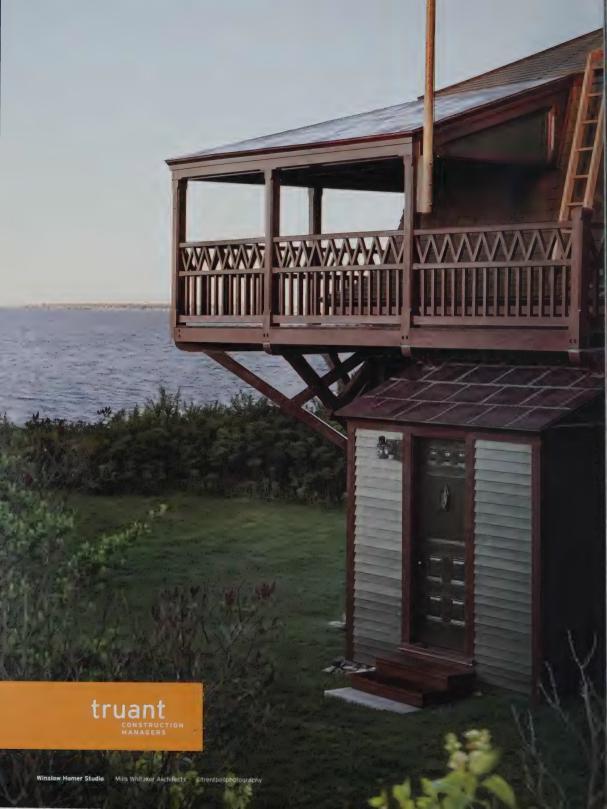
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The Language of Houses Reviewed by Melissa A. Simonetti

Open Source Architecture Reviewed by Sarah Radding AIA



A SAVING GRACE

The modern American preservation movement is

generally thought to have been sparked by the wanton destruction of New York City's Pennsylvania Station in 1963. Remnants of the Beaux-Arts building designed by McKim, Mead & White allegorical figures made of marble, pink granite columns—were unceremoniously carted off to New Jersey landfills. The demolition provoked a new consciousness of the nation's architectural patrimony and led to the creation of New York City's Landmarks Preservation Commission in 1965.

But the movement more likely began 100 years earlier in Boston, when John Hancock's manor home on Beacon Street was razed to make way for a new wing of the State House. Despite attempts by Hancock's heirs to donate the house or move it to another site, the ornate Georgian building was destroyed in 1863. The outcry that followed helped save the Old South Meeting House from a similar fate a few years later, and, in 1910, the Hancock House adorned the first issue of the newsletter of the Society for the Preservation of New England Antiquities (now Historic New England) with an inscription calling its demise "a classic in the annals of vandalism."

But what were these 19th-century preservationists trying to save, exactly? A physical structure, to be sure, but also an idea—a concept of "America." In lamenting the home's destruction, *The Boston Journal* wrote of "halls that had echoed with the voices and footsteps of the great and good men whose patriotism molded the American Revolution." We save what we value, and in the late 1800s a time of terrific social upheaval in the country establishment Boston valued a romantic ideal of a more heroic and comprehensible past.

As Michael Rawson says in his history of Boston, Eden on the Charles, it is no coincidence that the Colonial Revival period arose at a time of anxieties about the place of Anglo-Saxon culture in a changing society. "The urge to look backward was particularly strong in Boston, where natives were grappling with the growing presence and power of the Irish," he writes. Local interest in preservation rose again in the 1960s, following the dislocations of urban renewal and the wholesale destruction of the West End. Beacon Hill was first designated a historic district in the wake of that trauma. Preservation cannot be divorced from the political or social narrative of its era.

So it is fitting that many of today's preservationists are as concerned with the *story* of a place as with the structure itself. Preservation today is more than a three-dimensional encyclopedia of various architectural styles. There is a new sense of responsibility toward telling the whole story, and everyone's story—of an era's depredations as well as its triumphs, of its vanquished as well as its heroes.

Broadening the lens in this way raises thorny ethical issues—of authenticity, gentrification, and taste. Slavish devotion to a strict "period of significance" ignores the patina of years, of potential new uses and more flexible adaptations. The elegantly restored Reina Sofia museum in Madrid where an 18th-century hospital building is enlivened by three exterior glass-andsteel elevators—would almost certainly not be allowed in the United States.

But adaptive reuse can also sandblast difficult history. There is something almost grotesque about the former Charles Street Jail, for example, where conditions were so vile a court ruled they violated the constitutional rights of prisoners. Today it's a luxury hotel, complete with winking references like a restaurant called Clink.

The market, forever in search of the new, is not especially geared toward maintenance and restoration of existing buildings. But infusing preservation with contemporary values—including the R-values of energy savings—could help ignite a new appreciation for the old.

Renée Loth Editor



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ON "VOYAGE" (SUMMER 2015)

In "Sit. Look. Sketch." five architects and designers share their insights on the value of travel sketching. While I had many freehand assignments in architecture school at Cornell, my love for sketching started a few years later when my husband, John, won the Steedman Fellowship and we found ourselves at the American Academy in Rome. It was an extraordinary opportunity, and we made the most of every minute, often heading into the city, sketchbooks in hand, to capture its architectural splendors. Ten years later, when I won the Rotch Travelling Scholarship, we continued our travels and sketching throughout Europe.

T. Kelly Wilson describes the value of freehand drawing exercises in Trastevere, suggesting it develops a higher level of reflection and awareness of the built environment, Joshua Simoneau takes a different approach to recording his investigation of the complexities of the spatial sequence of Stockholm City Hall with an exploded axonometric view. Frank Harmon explores the monastery of St. Ganagobie in France in ink and watercolor, incorporating a broader investigation of physical context and historical setting. Kirin Makker references Le Corbusier's observation that travel sketching is a way to "fix deep down in one's experiences what is seen." Ryan Yaden notes that in taking time to draw a street scene in Mumbai, he finds a sense of structure in the seemingly unordered environment.

These observations resonate with me. Sketching keeps me mentally in the present. My mind is focused on the objects in front of me, and I am grounded in the here and now. Not somewhere else. Not yesterday. Not tomorrow. Sketching makes travel richer because I participate fully in the experiences at hand. Thank you for reminding us to see and record more of our environment through drawing.

DEBI MCDONALD AIA NBBJ, Boston In his essay "Nonstop," Ian Baldwin calls the airport a constant experiment. Like the advent of the jet age more than 50 years ago, we are on the cusp of another dramatic shift in the way we design and experience the airport terminal. Two paths are diverging: the high-touch boutique travel experience for the 1 percent versus the self-service, self-guided journey for the 90 percent. Both are being revolutionized by technology and the changing economics of airlines and air travel.

Before driverless cars are commonplace, the airport experience will be almost entirely self-service. Very soon, the only thing we won't be able to do ourselves is fly the airplane. Near-field communications systems will detect us as we enter airport property and check us in without our smart device leaving our pocket, wrist, or permanent bag tag. Just as Ethan Hawke's character in Gattaca strolled onto his spacecraft in a suit, the near-future airport will be about moving, not waiting. Facial recognition and even cameras that recognize someone's unique gait are biometric systems already being tested for airports. Our current staccato travel experience of divulging, divesting, and disrobing will appear as quaint as a Versailles-like parterre at Idlewild Airport, and we will slip the terrestrial bonds without skipping a beat.

JIM STANISLASKI AIA Gensler, Boston

We are not used to seeing "airport" and "architecture" in the same sentence. But in "Nonstop," Ian Baldwin points out that airports are a physical manifestation of our collective sense of place, economy, and values. They reflect local sensibility at a certain point in time. Logan Airport in Boston has terminals from every decade going back to the 1960s. Today's passengers seem to prefer our 2014 United Terminal, which includes public art such as *Flying*, by Boston sculptor Jacob Kulin.



It pays homage to flight while attracting passengers who seat themselves on the floor at its base.

THOMAS P. GLYNN CEO, Massachusetts Port Authority Boston

"Redrawing the Map," by William Rankin, summarizes a narrative that is constant in our field. Changing and emerging technologies threaten the view of traditional cartography. However, it should be noted that cartographers are in no danger of going extinct. Rankin mentions "message maps" that can be made by "designers, programmers, journalists, and artists" to convey useful data. In my experience—and as Rankin mentions—we are no longer just cartographers in today's spatial-data production world. We are called everything from data scientists and Web designers to user-experience developers. Names aside, our shared goal is to create "message maps" because there is a demand for it now. Whatever you call these manipulators of data, they're being "redrawn" into a more modern role in the digital age.

New technologies in cartography are introduced every day as companies and the open-source world try to make maps and spatial data work better. We are in the infancy stages of a revolution, similar to the introduction of the personal computer or the World Wide Web. Cartography is enjoying an amazing moment in which we can explore all parts of the modern mapping "stack" and experiment with what data is usable and visually interesting for the consumer. The transition of cartography from a field that most imagine as antique and academic to a cutting-edge discipline allows us to create new standards in design, computer science, data visualization, and geography for how we manipulate and display data. Our role in this digital age is more important than ever.

KATIE KOWALSKY

University of Wisconsin Cartography Lab Madison, Wisconsin

"The Medium is the message," Marshall

McLuhan said in his seminal Understanding Media: The Extensions of Man. Bill Rankin reminds us that maps are message-making tools and cartographers, the constructors of the message.

Maps are often read as presentation of fact and effective at persuading audiences with the stories they capture. It is impossible for a map to be a comprehensive representation of a place because, as Rankin says, it makes them "cluttered, inflexible, and confusing." Cartographers must be selective with what they show on maps to ensure the clarity of their ideas. Yet readers often forget that maps are highly edited graphic representations, showing only what the cartographer wants you to see. Even base maps on Google are syntheses of the real world of roads, structures, and businesses. When one searches for restaurants, Google returns the restaurants it thinks the user will be interested in based on previous search data. The map is not comprehensive, as the user is led to believe; rather, the cartographer is a Google algorithm selecting the information it thinks will be valuable to you.

Rankin makes the points that the accessibility of data and tools to manipulate and generate maps has allowed almost anyone to be a cartographer but reminds us that the real cartographer is one who creatively constructs a message. Rather than downloading data and visualizing its results as points on a map, he has curated data for the map reader. His map of universities' land holdings in Boston allows anyone to explore the city from a new perspective—ownership and use the visual to start a dialogue about the message it represents.

It is important to remember that anyone can be a message maker, and the way one chooses to represent data on maps exposes one's hidden story.

SARAH WILLIAMS

Civic Data Design Lab director at мтт's School of Architecture and Planning Cambridge, Massachusetts

William Morgan's very well turned review

of Americans in Paris, Jean Paul Carlhian's posthumous elegy to the École des Beaux Arts, contains an anachronistic typo that appears as a kind of beauty mark. This blemish—dating the sketch with which H.H. Richardson presented his revised plan for Trinity Church as 1892, six years after Richardson's death—prompts reflection on the tension for true believers between doctrine and datum and the distortions such tension can create.

Morgan deftly outlines the continuing culture wars between those who embrace the Beaux-Arts credo and those who revile it. Carlhian relished the role of defender of the faith in Beaux-Arts classicism, and his choir will be well pleased with the text he left us. But the delights of promulgating dogma through critique may have blinded Carlhian to his responsibility for historical accuracy. He cavils that an "ample preacher's balcony," visible during his lifetime at a corner of the nave and the transept, was "the dominant feature responsible for the basic ambiguity in the solution" provided by Richardson's plan for Trinity. This observation is itself anachronistic; the pulpit Carlhian describes did not appear in the church until after Richardson's death. The plan Richardson devised stayed in place for a decade and was the apotheosis of Beaux-Arts symmetry, with a clear processional to a black walnut communion table in the center of the chancel on axis with the nave.

DOUGLAS P. WOODLOCK United States District Judge, Boston



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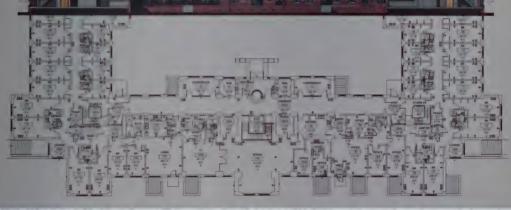
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IN THIS ISSUE

lean Carroon FAIA and Ben Carlson ("Old is the new green," page 36)



Christine Cipriani ("Remembering the room," page 42) is the coauthor of Cape Cod Modern: Midcentury Architecture and Community on the Outer Cape, which The New York Times called "an eye-opening history of an overlooked moment in modern architecture." Her work has appeared in The Architect's Newspaper, Architectural Record, and Dwell.

Jean Carroon FAIA is a principal at Goody Clancy, a Boston-based design firm committed to building social, economic, and environmental value through a diverse practice embracing architecture, planning, and preservation. The author of Sustainable Preservation: Greening Existing Buildings, her work focuses on the creative reuse of existing buildings to shape a healthy, resilient world.

Ben Carlson is an associate principal and the director of Urban Design at Goody Clancy, where he helps communities transform themselves to better meet rapidly accelerating social, economic, and environmental challenges. His work is animated by a passion for creating communities that are more livable, equitable, and resilient.



Max Page ("Values added," page 32) teaches architecture and historic preservation at the University of Massachusetts, Amherst, and is the author of The City's End: Two Centuries of Fantasies, Fears, and Premonitions of New York's Destruction and the forthcoming Why Historic Preservation Matters, both from Yale University Press. In 2014 he was a Rome Prize Fellow in Historic Preservation at the American Academy in Rome.



Chris Grimley ("The PoMo puzzle," page 40) is a graphic designer and curator with an education in architecture. He is a principal of over, under and codirector of pinkcomma gallery, which has produced several exhibitions about Boston's legacy of Modernism. His book with Mark Pasnik and Michael Kubo, Heroic: Concrete Architecture and the New Boston, will be published by The Monacelli Press in October.



Peter Kuttner FAIA ("Saving history," page 68) is president of Cambridge Seven Associates, serves on both the BSA and the BSA Foundation boards, and represents New England on the National College of Fellows Board. He has been involved in the adaptive reuse of buildings for immersive and interactive museum experiences in Boston, around the United States, and abroad.

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UN STRUCTURED

5 QUESTIONS Janet Echelman

Suspended 365 feet above the Rose F. Kennedy Greenway, Brookline-based sculptor Janet Echelman's As If It Were Already Here shimmies over a space where six lanes of highway once bifurcated the waterfront neighborhood. Indeed, its billowy colored bands pay homage to those pre-Big Dig ribbons of traffic, just as the sculpture's three voids nod to Boston's early history, when it was called "Trimountain" for the three hills around which the settlement was built. With its 100 miles of twine and a half-million knots, the weblike mesh is tethered between three skyscrapers along Atlantic Avenue in concert with the effects of wind and weather. Echelman's creation, which will remain up through October, is at once delicate yet resilient, a fitting manifestation of the experience of contemporary urban life.

Tell me about your favorite childhood toy or hobby.

I grew up in central Florida. I played classical piano, and Bach was my favorite. You can see that in my work—the counterpoint and structure and interplay among multiple voices, the tension and release of harmonics. In terms of play, it was my front yard; I would pick parts of bushes and flowers and make up fantasy scenarios. It was unstructured. There was no particular toy: just pieces of string, leaves, lizards, and the shrubbery. I had three older brothers whom I looked up to. I loved being their toy.

Of all the cities you've worked in, which one best celebrates public art in civic spaces and why?

People have expressed their past frustrations with public art in Boston. But the experience on the Greenway has been so rewarding, the sense of it bringing people together from different parts of the city, surrounding areas, and visitors from other countries. What interests me is how rapidly a space can change its meaning and how the way we use it can transform. Cranes arrived at 3 a.m. for the installation, and by 11 a.m., people were lying on the grass beneath it, having lunch and conversations. Thissharing a response to wonder—feels like a turning point. It was shocking in the most wonderful way. It feels like a greater meaning to the work because we are defining what our identity as a city can be. That it has sparked a conversation, one shared among strangers, is an authentic communal experience. If we can do this, we are capable of many things we have not yet unveiled.

You've said that the way fishermen in Mahabalipuram, a village in India, bundled their nets inspired your foray into netted sculpture. Describe that moment. I was waiting for my paints to arrive and they never did, so I started learning to cast bronze—the village is known for bronze casting—but didn't have the ability to express the gesture I wanted at the larger scale to fill galleries. I went for a walk on the beach, saw the mounds of nets there, and it occurred to me that it was another way to create volumetric form without heavy, solid material. I made little sketches, and my bronze-casting mentor came with me to talk to the fishermen to see if they'd knot these forms I was drawing, with twine. I took my mosquito net from where I was living and went to a tailor; we joined the mosquito netting with the hand-knotted fishing net and created a self-portrait-my first sculpture-called "Wide Hips." We lifted it onto poles on the beach, and I discovered that the wind gave it a breath of life. The scale of the work transforms the way we see air currents. Think of a small flag chopping in the wind versus a large, billowing sail.

From conception to installation, As If It Were Already Here is quite a feat. Any surprises or delights along the way?

How different it appears in changing weather and light. In the rain, it almost disappears, like a ghost; in sunlight, it's about the way the colors glow. The quality of light in the middle of a dense downtown is unique because the highway created a volume of air that allows for sunlight the way few cities have. But the nighttime illuminationpulsing slowly from vibrant oranges and pinks to muted blues—is when it comes alive as an illuminated beacon. Still, that dance with sunlight is extraordinary, and it's my favorite daylight piece of any sculpture I've created. Another delight is the dialogue with traffic and pedestrians, and what people are saying to me, that they walk to see the sculpture every day, that it makes them feel safer, which is not something I expected and makes me wonder: What is it that creates a sense of safety and comfort? When I lie down on the grass and look up, it's as if the sky is breathing.

What inspires you today?

During my childhood, I was inspired by playing with a piece of string and its transformation into a cat's cradle. My upcoming commission on the Sunset Strip in West Hollywood is based on a childhood dream catcher. These days I'm mesmerized by the fluid dynamics I observe in water and in air — and the transformative potential of humble materials and methods — as I braid fiber into twine, knot twine into mesh, splice ropes into architecture, and become a part of our city's urban fabric.

Interviewed by FIONA LUIS.

OPPOSITE Photo: Peter Vanderwarker

architectureboston.com ted.com/talks/lang/eng/janet_echelman

seen Saint Christopher

Boston

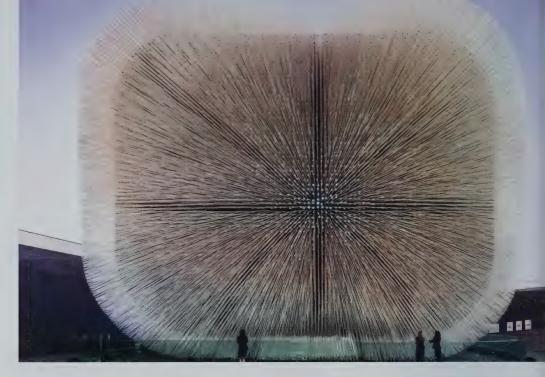
The photographs in my series called *Reconciliation* explore confessionals, the small rooms in Catholic churches where people confess their sins. Using available light and long exposures, I photograph from the perspective of the penitent, looking for what the spaces might reveal about faith and forgiveness.

I almost didn't photograph Saint Christopher because it was snowing. When I arrived, I was self-conscious about leaving snowy boot prints on the carpet. The confessionals were simple, with warm light, and the curtains were easy to pull back. I was surprised to find a missalette in one of the confessionals. I wondered about who had brought it and why it had remained. The green cover felt like a reward for trudging through the snow.

Alone in the church, I worked slowly, trying different camera tilts in order to capture the dust on the book's cover. The church quickly grew dark; outside, it was still snowing. Before leaving, I took a copy of the parish bulletin; it was almost time for evening mass, and I wondered how many people would make it.

S. BILLIE MANDLE is an assistant professor of photography at Hampshire College and lives in Massachusetts.





Provocations: The Architecture and Design of Heatherwick Studio

Cooper-Hewitt, Smithsonian Design Museum, New York City Through January 3, 2016

To fully appreciate *Provocations*, one might first take a trip a few miles south to the Morgan Library. Here, another exhibition celebrates the 150th anniversary of *Alice's Adventures in Wonderland*. The shifting scales and fantastical juxtapositions from the mind of author Lewis Carroll, aka Charles Dodgson, seem to be embedded in Thomas Heatherwick's own design DNA, as do Dodgson's interest in puzzles and scientific experimentation. The title *Provocations* refers to the challenging questions Heatherwick develops for every project, both as a guidepost and a kind of riddle to be answered.

The London-based studio's work would look just as intriguing through a microscope as it might through a telescope, and even a small sampling of Heatherwick's material choices can tell a big story. The prize-winning UK Pavilion for the 2010 Shanghai Expo, *Seed Cathedral*, is represented with a handful of the structure's 60,000 anemone-like quills. Look closely, and each of these fiber-optic rods has a different kind of seed suspended in its tip. And the architectural models on display aren't just the typical 3-D sketches in foam. These studies are meticulously detailed and occasionally even come to life a model for a Rolling Bridge transforms with the turn of a crank, the two sides curling up like twin caterpillars. (Heatherwick's original 2004 *Rolling Bridge* near Paddington Station in London was one of his first projects to receive international notice.) The show, which originated at the Nasher Sculpture Center in Dallas and then traveled to UCLA'S Hammer Museum, was tailored to fit the Cooper-Hewitt's third-floor gallery by a Heatherwick team. The most exciting aspect of the exhibition and, for that matter, of Heatherwick's 20-year-old practice, is the trajectories of long-term thinking that are laid visible across projects of all scales. The undulating topographic staircase for the Longchamp boutique in New York echoes the more diminutive design of the stairway in a reimagined doubledecker bus (set to hit London's streets next year). The idea for 240 individual copper cups that composed the 2012 Olympic cauldron resurfaces in the concrete underpinnings of the proposed Pier 55 in Manhattan, a design for man-made landscape that evokes a futuristic Ridley Scott set.

Simultaneously cinematic and tactile, *Provocations* offers visitors a rare gift: a sense of wonder.

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ABOVE

The UK Pavilion for the 2010 Shanghai Expo. Photo: Iwan Baan

Architectural Allusions

deCordova Sculpture Park and Museum, Lincoln, Massachusetts Through May 1, 2016

Approaching the museum entrance,

Monika Sosnowska's Tower, more than 100 feet long, rests horizontally in the landscape like the carcass of a Modernist façade succumbing to structural failure. With steel pushed beyond its limits, window frames (with handles intact) and supports are twisted in a way that would make any architect cringe. Just across the road sits the more conspicuous tower of Oscar Tuazon's Partners, where pristine reinforced concrete looks like it is either supporting or reflecting the sugar maple it is attached to. Its form, so direct, forces the question of how—and whether the natural and built world should coexist.

Each of the seven sculptures in this exhibition of recent commissions, permanent collection work, and long-term loans contains architectural elements in representation, materiality, or tone. And

each clearly addresses modern fabrication and the effect of its aesthetic. While Esther Kläs' Ferma (5) and Sol LeWitt's Tower (DC) both use composition and granite as the basis of their works. Kläs explores the texture of fabrication and cutting of the heavy stone, whereas LeWitt uses traditional masonry methods to express a formal equation. Notions of tension are explored through Kenneth Snelson's Wiggins Fork, which appears as a perfectly frozen balance of metal and cables, and the newly commissioned Beacon by Boston-based sculptor Stephanie Cardon, which one should walk through to glimpse the water of Flint's Pond below.

Although the exhibition could benefit from literature or wayfinding that guides the visitor through curatorial connections, the overall effect is a strong collection of works that challenges notions of scale, media, and constructability. The day I visited, Dan Graham's *Crazy Spheroid: Two Entrances*—the most architectural and interactive of the group—seemed to delight visitors; their reflections were grafted with the view of the landscape beyond. Like many of the works in *Architectural Allusions*, the visitor is part of a moment in time when artists are exploring the concept of building things in our modern world and questioning the materials we use in support of that goal.

EMILY GRANDSTAFF-RICE AIA is an associate at Cambridge Seven Associates and a past president of the Boston Society of Architects.

BELOW

Crazy Spheroid: Two Entrances (2009), by Dan Graham. Two-way mirror glass, stainless steel. Photo: deCordova Sculpture Park and Museum



MATTER OF COURSE Contingencies of Design

Northeastern University

How do you teach design? Good question!

Here is how professor Ivan Rupnik teaches an introductory course to architecture majors in Northeastern University's undergraduate program. "We use residential scale to teach architectural space," Rupnik explained to me over coffee before I visited two review sessions of "Contingencies of Design," the second half of Northeastern's introductory requirement. "We teach free plan versus *raumplan*, and at the end we throw in some contingencies—say, halve the plot size or increase the lot grade—to see how the students react."

I saw nine students each design a 2,500-square-foot house on a quarter-acre lot in a hypothetical residential development. The lots were unevenly configured, and the students were encouraged to work with the landscape contours rather than alter them.

John Davis, a doctoral candidate at Harvard's Graduate School of Design, oversaw their studio work. Classes met in Northeastern's—shall we call them—sui generis architectural classrooms, built into the Ruggles T station. Every 10 minutes or so, the building shook like a leaf as a subway train passed by but none of the students' houses buckled, I can attest. A's for structural engineering all around!

The initial designs were, no pun intended, all over the lot. One student created a four-story vertical box. Another designed "two sheds kissing," as one of the reviewers called it.

Jacqueline Diaz glossed Palladio's famous Villa Rotunda design. "It's bold of you to attack the Villa Rotunda," was Davis' careful reaction. Reviewer Marilyn Moedinger, founder of Runcible Studios, made an observation that applied to many of the models: "You need a more sophisticated understanding of symmetry. Symmetry doesn't have to mean equal, it can also mean balance."

The unexpected contingency for this class was that the client suddenly insisted that two homes be built on the lot, one for a small family, the other for a single working professional. So when I attended the final review for the eight-week class, a great deal had happened. Some of the students had clearly "hit Control-C," as reviewer Jenny French, a partner (with her sister) at French 2Design, said. Faced with a tight deadline, a few students copied their initial designs and jammed them close together to fit on the lot.

Davis put the instinct in context. "You didn't need a totally new concept for the second house," he said. "A lot of what architects do is variations on a theme. You're not reinventing the wheel every time you build a house."

First-year student Joshua Soto received some of the most detailed and positive feedback for a set of structures he built on a hilltop, the highest point of the class's hypothetical neighborhood. Before the assignment mandated a second house,



Soto had built four freestanding towers grouped around an outdoor dining and social space. Moving among the bedrooms and living room meant going outside.

It occurred to me that he might live in Southern California or Hawaii, where outdoor spaces can meld nicely with the "built environment." Soto does hail from the South—the southern portion of Norfolk County, Massachusetts, where outdoor living is possible only half the year, at most.

At the second review, his hilltop plan got rave reviews. "The bulldozers have been out!" Moedinger exclaimed, noting that Soto had done a lot more than just replicate his original idea. Two families were living in seven different buildings, with the homes separated by a change of elevation inside a central structure. From below, the project still looked like a hilltop fort or redoubt. "The outer perimeter of the buildings are like a bear cage," is how Soto described his revised neighborhood of two.

"What you've done looks like a hill town in Italy or Spain," Davis said. Moedinger offered some pointed criticism: "One of your bedrooms is really just a shipping container with a skylight over the bed. You walk up the stairway, and there's a toilet stuck on the wall." Then she trained her fire on one of Soto's outbuildings: "This is more like an artillery emplacement, not a bedroom—but I like it!"

Wait, they're not finished.

Moedinger, who taught at the University of Virginia (UVA), compared Soto's layout to Thomas Jefferson's famous campus plan, which slopes gently downhill from the famous Rotunda. "You and Thomas Jefferson are in the same boat," Davis remarked. Given that Jefferson was in his mid-70s when he designed UVA and Soto is 20, not a bad boat at all.

ALEX BEAM writes a column for *The Boston Globe* and is working on a book about Vladimir Nabokov. "Matter of course" visits exceptional architecture classes at New England schools.

ABOVE

A view of Joshua Soto's model. Photo: Joshua Soto

Ken Smith in Conversation with Charles Waldheim

The Isabella Stewart Gardner Museum June 11, 2015

Since 1053 the Amida Buddha serenely looks out over a segment of the Uji River in Japan. Fifty-two bodhisattvas accompany the Buddha, floating at varying heights around the enclosure of the Byodoin Temple. Ken Smith, the landscape architect who created *Fenway Deity*, cites this icon of Japanese architecture and its sacred inhabitants as the inspiration for his summer installation on the façade of the Gardner Museum.

In his recent talk, Smith allied his travels to see the gardens, palaces, and temples of the world with Mrs. Gardner's mission to collect art and bring it home to her museum overlooking the Emerald Necklace's Muddy River. From the Gardner's eclectic mix of Eastern and Western influence, Smith found inspiration and pulled from his own interest in the objectified deity—an Eastern idea given Western form. *Fenway Deity*, a 20-foot inflated talisman slung between the twin chimneys on the museum's façade by a semi-inflated plastic chain, is the latest—and largest—in a series of "deity" works by Smith. As in its Japanese precedent, this deity also is intended to play a protective role, overseeing the environmental health and beauty of the Fenway.

In placing the deity on the façade, Smith's stated intention is to redirect attention—pulled to the rear of the building by Renzo Piano's addition and new entrance—to the front. However, the power of the Gardner never lies in the anonymous, mud-colored façades, but rather in the unexpected verticality and light of the tropical landscape that lies within its geode-like shell. "I'm a crow by nature," Smith, a Midwesterner by birth, told Waldheim. 'I'm attracted to shiny things." The vulgarity or flashiness that Smith perceives in Buddhist temples is reassigned in the psychedelic spiral of color on the talisman, which is in keeping with the Pop-art inspiration of his oeuvre in public landscapes. Meant

to evoke conversation and elicit questions, Smith's work meets its goal and temporarily allows one to read the façade as encapsulating the whole of the building—a perfectly mundane shell with a fantastically temporal, otherworldly center.



MARK KLOPFER AIA ASLA, an architect and landscape architect and principal of Klopfer Martin Design Group in Boston, is also a professor of architecture at Wentworth Institute of Technology. *Fenway Deity* will be on view through September 28.

ABOVE Photo: George Bouret



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PAST IS PROLOGUE

As the National Historic Preservation Act turns 50, *ArchitectureBoston* delves into the questions percolating through the movement today.

ARCHITECTURE'S STEPCHILD?

by Daniel Bluestone

The notion of a "preservation architect" has often been treated as an oxymoron, subversive of architecture's fundamental professional identity as the creator of new buildings. And yet about 70 percent of architects' billable hours are devoted to existing buildings. The view of the architects doing preservation work as unimaginative, marginal figures is now completely anachronistic; but it still hangs about as a cloying vestige of the mindlessly wasteful go-go days of post–World War II urban renewal and sprawling development practices.

During that period, as schools of architecture embraced modern form and pedagogy, preservation seemed irrelevant and an "obstructionist" threat to architecture. Walter Gropius, as an architecture professor at Harvard, expressed impatience with the "tendency to stand wailing at the grave of the 19th century...dissipat[ing] our strength by fighting battles for...monuments to a particularly insignificant period...which, still unsure of its own mission, threw the Roman toga around its limbs to appease its nagging doubts." Gropius simply dismissed the 1963 loss of Pennsylvania Station, which preservationists view as foundational in inspiring the emergence of the modern preservation movement.

Today, 50 years after Gropius' pronouncements and despite the rise of new urbanism, Postmodernism, and an ethic of sustainability, preservation architecture is still often treated with condescension and hostility. Rem Koolhaas has complained about the "relentless" escalation of the scale of preservation work and the imagined effort to freeze place and identity, which, in his mind, frustrates the natural (and quite lucrative) evolution of architecture, cities, and landscapes. This position is increasingly untenable. Given architecture's interest in climate change, resource depletion, and LEED Platinum ratings, we can no longer avoid the basic reality that we do not build enough new



ARTIST AMANDA C. MATHIS, based in Brooklyn, New York, alters interiors by stripping away layers of vacant homes to uncover fragments of previous occupants who left their marks through repairs, adaptations to decor, and abandoned belongings. Her haunting photographs preserve these domestic spaces and the lives that once inhabited them. Photos: Courtesy of the artist

buildings in a year, a decade, or a generation to make a significant dent in energy consumption, resource depletion, or environmental pollution. We need to preserve our way out of environmental crisis. We need to imaginatively make maximum use of what we already have and build new only what we absolutely require. Historic preservation and adaptive reuse, not green building, should properly be conceived of as the keystone of sustainability. Creative and elegant recycling of buildings and cities, not an obsession with shallow fads and passing styles, needs to stand at the forefront of architectural pedagogy and practice.

Currently the National Architectural Accrediting Board does not require historic preservation training in schools of architecture. There is a requirement for education that helps students understand their responsibility for stewardship of the environment and natural resources, but no requirement for drawing the logical conclusion and teaching students how to approach existing buildings and places. Some schools pride themselves on their design-build operations, but we look far and wide to find similar studio or field-based work that starts with an existing building and dives in—not as mere context but as the stuff of architecture itself. Why should student designers have to leave architecture schools and find their way to Boston's North Bennett Street School or Canada's Willowbank to find the design challenges of existing buildings treated seriously and professionally?

Viewing preservation architecture as central to the profession, as cutting-edge work, would dovetail nicely with the social and environmental ethics, and community and cultural responsibility that architects cite as essential components of practice. So, advice for continuing education for today's architects and architects-to-be: Be edgy be a preservation architect.

DANIEL BLUESTONE directs

Boston University's Preservation Studies program. Formerly a faculty member in the schools of architecture at Columbia University and the University of Virginia, he is the author of the award-winning Buildings, Landscapes, and Memory.

THIS SPREAD

Stuffing (245 Varet Street), 2011. Ceiling tiles, metal and wood framing, cardboard fabric spools, wood column, drywall, paint. Dimensions variable.

IS GENTRIFICATION INEVITABLE?

by Justin Crane AIA

The formal preservation movement in the United States started inauspiciously in 1931, when South Carolina authorities moved working-class African-Americans into New Deal-funded housing and away from Charleston's "Old and Historic District." Preservation is no longer used as an excuse for such blatant removal of lower-income families; however, some argue that it still has the pernicious effect of eliminating economic diversity. In his 2010 City magazine article, "Preservation Follies," Harvard economist Ed Glaeser reports that housing costs rose disproportionately in Manhattan zip codes with historically protected neighborhoods, as the percentage of well-to-do, white, college-educated families likewise increased. In my home city of Cambridge, Massachusetts, approximately 3,100 buildings have historical protection via conservation districts, landmarking, or historic easements. This makes up one-quarter of the city's buildings, and it's hard to imagine this doesn't have an impact on housing costs.

Yet research on the question is inconclusive. Jacob Vigdor's study of Boston's South End observed that demographic change started sometime in the 1960s, while the neighborhood didn't become a landmark district until 1983. The study lists many potential causes of gentrification: increases in income disparity, an improved labor market, better public services, and property tax decreases. Preservation is not one of them.

In fact, the inverse of the original question appears to be true: Gentrification may lead to

preservation, used as a tool for establishing urban stasis. A typical local example is the Cambridge Historical Commission's attempt to landmark part of East Cambridge in the 1970s. The idea was defeated in the working-class community because of citizens' concerns about being told how to maintain their houses. In contrast, the first conservation district in the city was established only after Mid-Cambridge—the city's third-wealthiest and most educated neighborhood requested the designation in 1983. Residents were less apprehensive about increased maintenance costs and more concerned about retaining value in the midst of the construction of Modernist mid-rises.

So how do we maintain diversity in gentrified cities with far-reaching historic preservation statutes? Many cities dedicate funds to support the development of affordable housing. The trick is finding properties or lots in historic neighborhoods that can be used for such development. In May 2014, the National Trust for Historic Preservation released a study titled "Older, Smaller, Better," which found that blocks with a greater range of building ages had greater population density (and, in San Francisco, a greater mix of income levels) than streets with large new buildings. Dense infill development provides a good opportunity to create a diversity of building stock for a diversity of people while maintaining neighborhood quality.

The National Trust also backed recent initiatives, notably in Los Angeles, to lower regulatory barriers and facilitate the conversion of older commercial buildings for residential use, increasing housing stock in historic districts. In addition, cities should allow for supply elsewhere to take pressure off older neighborhoods. Economists often cite Chicago's lakefront or Miami's Brickell district as high-rise areas that have effectively reduced demand for housing in historic and working-class neighborhoods close to the city center.

Ultimately, historic preservation should be about diversity that offers a range of options for a variety of families and lifestyles. How we achieve a diversity of residents as well as buildings remains a challenge, but we would not want to live in a city without both.

JUSTIN CRANE AIA is an associate at Cambridge Seven Associates.

LEFT

Privacy Lace, 2013. Linoleum flooring, wood flooring, lace, archival pigment print. 30.5 × 15 × 5 inches.

DOES RESTORATION TRUMP RISK? by Matthew J. Kiefer

It's been to years this fall since Hurricane Katrina slammed New Orleans—the worst storm in its history, if you count the ensuing flood. Plus it ignited a conflagration afterward, with planners center stage, debating how and especially where to rebuild. The waters have long receded, but the fires still smolder.

When Katrina arrived, most New Orleanians lived below sea level. Soon after the levees and pumps that kept them dry failed catastrophically, planners descended on a city in crisis, declaring the folly of rebuilding flood-prone neighborhoods. Prematurely, lines were drawn on maps.

The flood devastated the Lower Ninth Ward, a low-income African-American neighborhood abutting the Industrial Canal. It became the focal point of a rebuilding debate pitting "abandonists" ecologists and planners mostly from out of town—against "restorationists"—passionate but self-interested local officials and activists.

Into the breach stepped Brad Pitt, who raised funds and recruited prominent architects like Thom Mayne and Frank Gehry to help rebuild the Lower Ninth. Today, dozens of "Make It Right" houses are occupied by families displaced by the storm, reflecting the unresolved incongruities of the debate.

On the one hand, good for them for building while others just brayed. But air-conditioned tour buses now troll the designer houses, which forsake climate-adapted vernacular forms and are tricky to maintain. From a slight distance, they hardly dent the surrounding devastation, their roofs barely visible above the rebuilt levee nearby.

Restorationists note that the Dutch devote a meaningful share of their gross national product to protecting Amsterdam. But the third of Holland below sea level produces most of the country's GNP. Abandonists, meanwhile, question why we should keep spending public money to perpetuate a mistake and protect neighborhoods that were struggling even before the storm. Katrina has sobering lessons about the role of planning. Since it fell from grace after urban renewal in the 1960s, the planning enterprise has struggled for traction. Although rebuilding New Orleans could have been a shining moment, consensus proved elusive. Some wanted to let private investment dictate where rebuilding would occur;

others wanted a universal "right of return." In the end, sound planning did not triumph: The levees have been rebuilt even more robustly, but the neighborhoods they shelter have been rebuilt only haphazardly.

How can the lessons of Katrina help "make it right"—or at least better—the next time a community recovers from calamity?

- Even after a crisis, plan deliberately. Experts from afar should learn how people want to live before asking them to make a difficult rebuilding choice or presuming to act in their best interest.
- It's untenable to spend public money to rebuild without asking the cost/benefit question; restoration can't trump environmental and economic risk every time. But it's foolish to think the debate ends there; it's only one factor among many.
- Forced relocation of residents is toxic, no matter how sensible. When the residents are low-income African-Americans, it wreaks injustice on top of that. Better to offer incentives—even seemingly extravagant ones—and active relocation assistance. The voluntary relocation effort should have as much priority as the planning and engineering.
- When designing prototype houses for lowincome neighborhoods, choose your architects wisely.



MATTHEW J. KIEFER is a land use attorney at Goulston & Storrs. Until recently the president of Historic Boston Incorporated, he now chairs its Council of Advisors.

ABOVE

Untitled (swans), 2014. Window, molding, wallpaper, archival pigment print, rope. 35.75 × 26.75 × 2.75 inches.

CAN TECHNOLOGY REDEFINE CRAFT?

by Robert Silman PE

ROBERT SILMAN PE is president emeritus of the structural engineering firm Silman and is based in its Boston office. He has been active in historic preservation activities for more than 40 years, working on more than 450 designated landmarks. He also teaches at Harvard's Graduate School of Design.

BELOW

Three Generations Plus Paint, 2013. Molding, wallpaper, paint, archival pigment print. 27.5 × 18.5 × 1.5 inches. When W. Brown Morton penned the Secretary of the Interior's Standards for Historic Preservation in 1976, he addressed the craft aspects of project planning and execution. He could hardly have envisioned that ground-penetrating radar, infrared thermography, and camera-wielding drones—not wood joinery or pointing brickwork—would become the dominant technologies in historic preservation efforts. Conservationists have new materials that can seal masonry and concrete against water penetration, coatings that will bridge active cracks without themselves cracking, and substances that protect iron materials from corrosion.

Perhaps the most exciting uses of these new technologies are in structural engineering. In Italy, the strengthening of unreinforced masonry heritage buildings to resist earthquakes has become legendary, showcased by the rebuilding effort at the Basilica of St. Francis of Assisi. All over the world, structural engineers have new computer-based analytic techniques at their disposal. Older buildings can be



mathematically modeled in three dimensions to determine their strengths and weaknesses, as well as to predict the effectiveness of a repair program.

In the United States, structural engineers often find themselves at odds with the Secretary's standards, which strongly advocate that all interventions be reversible. This is often impossible, as the actions required to save or stabilize a building are so invasive that they can never be reversed.

At Wingspread in Racine, Wisconsin, Frank Lloyd Wright's largest house, the walls of the octagonal Great Hall were being pushed out as the hip roof flattened. We designed 13 layers of carbon fiber fabric soaked in epoxy to be applied directly to the wood sheathing. This created a one-half-inch thin shell, much like an upside-down boat. The roof tiles were then reinstalled, and the building was fully stabilized.

At Wright's Guggenheim Museum, the original sprayed concrete exterior walls were badly cracked. The preservation plan required that the existing exterior finish be left visible. Bands of carbon fiber/ epoxy reinforcing had to be applied to the *inside* surface of the walls, a second-best location structurally. Over the past five years, the thermally driven cracks have not reappeared.

Perhaps the most dramatic use of structural technology was the repair of Fallingwater. After 65 years of continuous deflection, the living-room floor girders were found to be dangerously underreinforced. We called for steel cables to be affixed to each side of each concrete girder in a carefully draped geometry. When these were pulled tight, the stresses in the concrete and the reinforcing steel were significantly reversed.

Mies van der Rohe's 1950 creation of the ideal welded steel-frame glass box, the Farnsworth House in Illinois, is elevated on eight steel columns because the Fox River, only 100 feet from the front door, floods regularly. As flooding has become more aggressive, its present owner, the National Trust for Historic Preservation, commissioned a study that devised a way to raise the house on hydraulic jacks just prior to an impending flood and then lower it back to its original position post-flood. A number of detractors, including Chicago preservation architect John Vinci, voiced opposition to this well-established hydraulic technology, which uses off-the-shelf components, as inappropriate for this revered landmark. But I join the National Trust in strongly endorsing the hydraulic solution as the most effective in responding to all the preservation issues on the site.

Today's arsenal of technological skills, diagnostics, and products is redefining the art of preservation craftsmanship. Preservation professionals must embrace these new techniques—they are the future.



A GOOD DEATH? by Jason Forney AIA

Imagine jumping forward 100 years to visit a building you designed. Will it still be there? What will it look like? Will anyone want to preserve it? Imaginary time travel poses a tough question for designers. Can we assume the buildings we design today will be preserved? Our chances are better if we make our designs adaptable to future needs, but we certainly don't get to decide.

Architects can learn a great deal about adaptability from our 19th- and 20th-century cohorts. 1 get excited when asked to rework an old building with good bones, ripe for reinvention. Usually, that means its style has stood the test of time and its materials have the patina of gentle use. Simple forms and flexible structural systems allow for removals, insertions, and modifications. Wood, brick, and steel can be removed and recycled. If the building was designed before cheap energy, it might have passive cooling, heating, and daylighting baked into its geometry, orientation, and fenestration. Architects have become skilled at finding transformative new uses for buildings: mill to museum, power station to performance space, church to art school. But when designing new structures, we may be ignoring the need for future transformation.

The Living Building Challenge is a rigorous environmental design standard. Among other things, it asks 21st-century designers to consider the futures of their buildings by creating an end-of-life plan. This influenced our firm's thinking for an admissions building at Hampshire College in Amherst, Massachusetts, an institution that plans to care for it well into the future; our plan puts adaptation first. Timber frames and masonry exteriors last for centuries in New England, so we began with a laminated timber structure enclosed in locally quarried stone. The timber frame has regular bays and mechanically bolted connections for future changes. Fourteen-foot unfinished ceilings make room for exposed mechanical systems that can be serviced or replaced. Interior wood and concrete surfaces are designed for long-service lives. But, if necessary, the building's primary materials could be salvaged and the entire structural frame disassembled for reuse.

With all the energy and carbon that goes into constructing a new building, is it ever OK to end its life? Since reusing a building avoids new carbon expenditures, second and third lives are preferable to an end of life. However, I think a building can have a good death—if positive change will result.

In Boston, one- and two-story automobile industry and fast food buildings along Boylston Street have been removed to make way for a new "urban village." This group of new buildings supplies a portion of the housing our city needs in a location where people can live, work, and play without automobiles. In Seattle, a one-story pub was removed to make way for Bullitt Center, a six-story, net-zeroenergy building. At a recent lecture I attended, the Bullitt Foundation's CEO, Denis Hayes, called it a "template." When it inspires future neighborhoods and cities, the embodied energy of that pub will be offset thousands of times over.

We can't go back through time to un-design our buildings. The next best thing we can do is consider their future as part of the design process. JASON FORNEY AIA is a principal at Bruner/Cott & Associates in Cambridge, Massachusetts. He specializes in the transformative adaptive reuse of historic structures and the design of high-performing contemporary architecture.

ABOVE

And soon you too shall part, 2014. Linoleum flooring, molding, archival pigment print, 26.75 × 45.5 × 1.25 inches.

VALUES ADDED

IT'S NOT YOUR GRANDMOTHER'S PRESERVATION SOCIETY

I

-

by Max Page

I was born in 1966, the year the modern preservation movement was codified in the passage of the National Historic Preservation Act. But I hadn't really thought much about preservation until college. During spring break in 1985, I spent a week with an architecture firm in Boston. The project on hand was a multimillion-dollar renovation of a townhouse on Louisburg Square—the Holy of Holies on the temple mount we call Beacon Hill, one of America's earliest historic districts, chartered in 1955. The issue was the new elevator. From one corner of Pinckney Street, if you craned your neck, you might catch a glimpse of the elevator shaft on the roof. This was deemed unacceptable by the Beacon Hill Architectural Commission, and we were ordered to make adjustments. Here was a visual definition of preservation—the power to save the past, and the power to demand architectural purity.

A lot has changed since then. In Amherst, Massachusetts, where I live today, Emily Dickinson's grave site shares attention with newly

> The intersection of Columbus Avenue and Appleton Street in the South End on a sunny summer 2015 morning, inset with the 1885 view of Rainy Day. Boston by Childe Hassam Photo: Thomas Urell/Stoltze Design

restored headstones of veterans of the Massachusetts 54th, the African-American "Glory" regiment in the Civil War, segregated in a corner of the cemetery. Some of those men now have pride of place alongside the poet at the center of a 100-foot-long mural of Amherst history facing the cemetery.

In Holyoke, Massachusetts, the preservation of the city's industrial heritage is not couched so much in aesthetic terms but in terms of climate change: By saving those sturdy paper industry buildings from the 19th century and taking advantage of the cheap, clean energy produced by the 150-year-old canal

Filial piety should not prevent us from seeing that there are some things deeply wrong with the preservation movement and the world it has created.

system, the city sees preservation as the ticket to a more economically vibrant and environmentally sustainable future.

In Boston, a community land trust created by the Dudley Street Neighborhood Initiative anchors affordable housing in Roxbury. New transportation is boosting investment and easier access to downtown but not the familiar social upheaval. Because the land trust maintains in perpetuity the affordability of the 225 homes in the trust, gentrification is blunted. These homes may not be architecturally distinguished, but as the core of a social preservation effort, they are extraordinary.

Clearly, it's not your grandmother's preservation society. But as with all families, it is hard to disentangle ourselves from our grandparents' DNA. The preservation world built by our ancestors is deeply rooted in our cultural life, not to mention our laws and regulations. The problem is that the sources of preservation's successes are also the obstacles that will hold it back. Filial piety should not prevent us from seeing that there are some things deeply wrong with the preservation movement and the world it has created. It will take a young and feisty generation to continue moving preservation in a new direction.

The 1966 Act established the National Register of Historic Places and the process by which individuals, cities, and states could add important places to the Register. It demanded that every state have a preservation officer, it spurred the creation of local historic commissions, and it established guidelines for standards of preservation and rehabilitation. Later additions included tax incentives to encourage professional rehabilitation. The power to compel preservation is weak—listing on the National Register conveys absolutely no power to preserve, and most towns have little more than the ability to delay demolition of historic properties. Only true local historic districts, which are rare, have the power to restrict changes to buildings. But preservation is now seen as an integral function of local government and a subject of regular community debate.

This architecture-centric approach to preservation has

blossomed. There are now more than 100,000 properties on the National Register—Beacon Hill, sure, but also the South End, Quincy Market, Lowell's mills, and colonial homes all have been saved, drawing investment. The preservation movement gets its share of credit for encouraging a wider appreciation of the past and spurring a return to the city, with all its ordinary glories—the walkable neighborhood, the local triple-decker and the brick row house, the high density that anchors a vibrant community.

Still, the mainstream preservation movement remains consumed with *architecture*—with saving what is considered beautiful and preventing the construction of what could be considered ugly. The preservation movement created in 1966 was a reaction to decades of massive urban renewal and wholesale dismissal of the past, built, as critic Paul Goldberger has written, "as much out of fear of what would be built as out of love for what people were trying to preserve." In communities across the country, preservationists have too often devolved into fusy squabbles about the appearance of new windows and the color of shingles. They have worked to protect the homes of wealthy people, while allowing for the demolition of homes and neighborhoods of the working classes and wiping away the layers of history that make places meaningful.

For much of the past 50 years, preservation has been concerned primarily with places of *celebratory* history. Only very recently has it been pushed to preserve "difficult places"—the sites where slavery and segregation, violence and even genocide, have taken place. A whole ecosystem has been built around the "curatorial management of the built environment," in the words of James Marston Fitch, one of the fathers of modern preservation. It has tried to emulate the museum approach to preservation of precious objects. But what does that do to history that lacks architectural gems? Is the Shockoe Bottom slave market site in downtown Richmond, Virginia—intentionally paved over by Interstate 95—to be ignored because the site lacks "integrity," according to the US Secretary of the Interior's standards for preservation?

Scarred by the demolition of Pennsylvania Station (and versions of that debacle across the country), the preservation movement has done a lot to save old places and surprisingly little to tell the *stories* of those places. Few have engaged writers and artists to communicate the meaning of places of architectural and historical significance. Better to spend the money getting the original paint color just right rather than spend it creatively telling the story of what actually happened there!

Finally, the preservation movement is too often in bed with developers, a handmaiden to real estate development that allows for an appearance of preservation but in fact paves the way for displacement in favor of the wealthy. Preservation organizations celebrate the restoration of neighborhood homes, even if the entire community that once lived there has gone running for lower rents. The façades look spectacular, but the community is missing. Far too often, preservation has been just another tool for enshrining the inequality that is the stamp of our age. What would a progressive preservation movement for the next 50 years look like?

The exciting—if uneven—changes we are seeing in preservation are products of a new world, unimaginable by the drafters of the 1966 law. The greatest wave of immigration to this country, exceeding even the mythical migration of the late 19th century, was only just beginning. Millions of Asian and Latin American migrants have since joined the American polity and are now maturing into major political and cultural forces, demanding their place in our national story.

Economic inequality in 1966 was in decline, the product of economic growth and War on Poverty policies. No one would have predicted that 50 years later inequality would be as great as during the rapacious Gilded Age of the late 19th century. When Jane Jacobs advocated for preserving the small blocks and tenement buildings of her Greenwich Village neighborhood in *The Death and Life of Great American Cities*, she assumed a broad middle class and public investments that could maintain, off into the horizon, a mixed-income neighborhood. She couldn't have predicted that her neighborhood would become something of a Potemkin Village, home to a new clite, with her own modest home from the 1950s lovingly preserved by law—but selling for \$3.5 million.

The early environmental movement was focused on the spoliation of our natural environment—the pollution of smokestacks, the poisonous dumping of toxic garbage. But big cars and 30-cent gas was the norm, and virtually no one was thinking about how we might be causing catastrophe by warming the earth or that its effects would begin within a few short decades. Preservation was about beauty and buildings, not an unknown problem that would come to be called climate change.

A progressive preservation movement can be built out of these changes.

First, for preservation to flourish it has to stop being exclusively about architecture. Only when we place a full understanding of history and communal meaning at the center of preservation work will the movement tell the complete story of a more diverse America. Rather than ask, "What style is this house?" we should ask, as Tom Mayes of the National Trust has written, "Why do old places matter?"

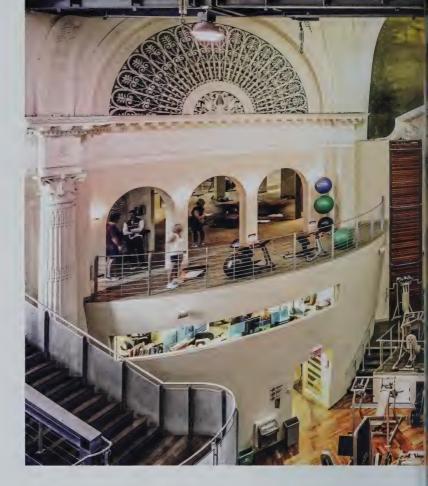
Second, saving historic sites and reusing them must be a cornerstone of environmental sustainability. Nearly half of all greenhouse gases are produced in the construction, demolition, and operation of buildings. How can the preservation movement join the conservation movement to achieve more sustainable communities? The answer will in part lie with examples from the past, including the Trustees of Reservations (older than Britain's National Trust) and the Society for the Preservation of New England Antiquities (SPNEA, now Historic New England). For the preservation movement to fully embrace its role in the fight against global warming, we need to jettison some of our concern with aesthetics. This means changing what we mean by "value" in old places. We should save and reuse old buildings because demolishing them contributes to the problem of climate change, no matter how high the LEED rating of their replacements.

The demands of a sustainability ethos ask us to abandon a museumish approach to architectural "integrity" while embracing layers of old and new, interwoven in a single building or landscape. Paradoxically, progress requires older ideas, or ideas from other cultures, where we accept layers of time, are more flexible on "authenticity" and "integrity," and value the architecture of adaptive reuse. Spend a week in Rome, where you might sleep in a Renaissance palazzo, have dinner at a restaurant carved out of a mountain built of ancient amphoras, and drink from a 19th-century fountain, and you'll recognize how much more comfortably other countries interact with their pasts.

At the same time, we will have to be more concerned with history, not less. One of the most exciting developments in historic preservation in the past quarter century has been the steadily growing interest in understanding the pain that inheres in difficult places, places of suffering and national disgrace, and sites of conscience. To help create greater unity in a stunningly diverse nation of immigrants, preservation must bring us face-to-face with the legacies of our controversial pasts. This courageous stance has already helped to infuse new life into the preservation movement, provoking dialogue at places such as the Tenement Museum in New York, the Manzanar Japanese-American internment camp in California, and newly interpreted slave plantations across the South.

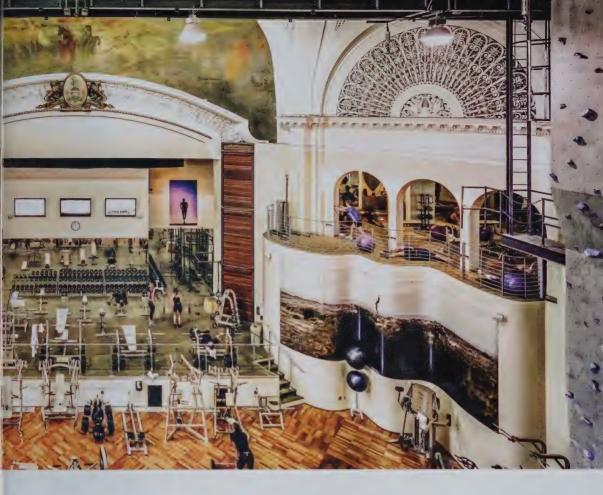
Perhaps most thorny of all, preservation will have to show that it is a path toward economically just communities. If we care about creating dense cities and towns, but reject the re-sorting of cities by class that takes places in gentrifying historic districts, we will have to offer a new model for saving buildings and communities. That means embracing public housing as well as new forms of property ownership, such as community land trusts and mutual housing, as a way to protect against waxing and waning tides of private investment. It means passing ordinances such as one in San Francisco that provides financial support to preserve essential long-standing community businesses. It means making mainstream the kind of work Historic Boston does to restore dilapidated structures as the basis for local economic development. And it means returning the "movement" to the preservation movement by taking to the streets to protest displacement in alliance with others. When the grassroots tenants rights organization City Life, in Boston, conducts acts of civil disobedience to prevent low-income residents from being evicted by multinational banks, they are acting as preservationists. Traditional preservation organizations should stand with them.

This is preservation's moment. It can finally shed its reputation—partly deserved—as elitist, the domain of the rich, standing in the way of progress, obsessed with architecture. And it can suddenly find itself offering solutions to some of the most pressing problems of our day, crafting a sustainable approach to climate change, honestly confronting our difficult pasts, and reclaiming a more equitable society.



OLD IS THE NEW GREEN

PRESERVATION IS CENTRAL TO A SUSTAINABLE WORLD



by Jean Carroon FAIA and Ben Carlson

"Radical common sense" is the term a fellow preservation architect uses to describe a mindset that values repair over replacement. Why is this radical? Because, while reuse of water bottles and grocery bags is rapidly gaining ground, reuse of buildings and building components is not. And it's not hard to see why: It is almost always less expensive and easier to replace a whole building and almost any of its elements—doors, windows, light fixtures—than to repair and reuse. Replacement also can offer measurable and consistent quality with product certifications and warranties not available for repaired items. Theoretically, a new building can ensure "high performance" and significantly reduce the environmental impact of building operations while creating healthier spaces. What's not to like?

Maybe the old saying applies: If it sounds too good to be true, it probably is. We want and need "sustainability." We want and need buildings, towns, and cities that are not bad for the environment nor the people who live and work in them. But is "new" the solution or the problem? In the last 50 years, humans have used more raw materials and created more waste than in all previous history. The statistics about individual and worldwide consumption are grim, reminiscent of the image of Al Gore riding a scissor lift to emphasize the exponential increase in greenhouse gas emissions. The Environmental Protection Agency estimates that 42 percent of total US greenhouse gas emissions are associated with materials as they flow through the economy—from extraction, production, and transport to disposal. The single biggest consumer of materials? The built environment, which uses about half of all raw material extracts.

Every product, no matter how green, has environmental impacts that include carbon emissions, water and energy consumption, pollution, toxicity, and waste. To quote that great environmental steward, Pope Francis, "The earth, our home, is beginning to look more and more like an immense pile of filth." Each year hundreds of millions of tons of waste—from mine tailings to lightbulbs—are generated through production and



end-of-life disposal. Much of this is nonbiodegradable and toxic. Upstream industrial waste, created prior to product use, is estimated at anywhere from 20 to 90 times the material of the actual product. In the United States, two-thirds of all downstream waste comes from construction and demolition.

Toxicity is not limited to waste. Building products are under increasing scrutiny because of the inclusion of toxic chemicals, such as lead, formaldehyde, asbestos, chlorinated solvents, petroleum distillates, toluene, xylene, and PCBS. Like almost everything related to material consumption, the trends are not good. In a 2013 Brown University study, more than half of women of childbearing age had median or higher levels of at least two out of three pollutants—lead, mercury, and PCBS that could harm fetal brain development. The US Centers for Disease Control and Prevention has concluded that nearly 100 percent of US citizens have brominated flame retardants in their bodies. Flame retardants are applied to fabrics, carpets, building insulation, and electrical cables, among other things. During the last 30 years, the level of flame retardant chemicals in humans has increased by a factor of 100-essentially doubling every five years. These chemicals are linked to DNA mutation, thyroid disruption, memory and learning problems, delayed mental and physical development, lower IQ, advanced puberty, and reduced fertility.

The good news for designers is that toxicity is becoming a highly visible issue. Thanks to the leadership of organizations such as the US Green Building Council, Building Green, the Healthy Building Network, and the Living Futures Institute, information about materials is easier to obtain. But even with more transparency about what is in a product, preservation professionals are probably leerier than most about new materials in general. Many of us have spent our careers removing the miracle products of the past, which are now deemed toxic. It's estimated that only a percent of existing chemicals are tested for carcinogenicity. We can only wonder, as new information comes to light, which miracle products of the present will be removed in years to come and where they will go. Removing toxicity, although obviously important, doesn't address the often hidden costs of pollution, waste, and worker illness created during extraction of materials, their production, and their transportation. Nor does it change the greenhouse gas emissions that happen at every stage of the process. It seems almost fashionable in the design and construction world to focus on the operation of buildings when discussing how bad they are for the environment. We cannot count the number of presentations we have sat through that make the claim that the greenhouse gases released or the energy used to make all the parts of a new building will ultimately be paid back many times over by the amazing new energy efficiency achieved in operations.

Skepticism reigns when we hear this because the argument misses important points: Environmental degradation is not just about greenhouse gases; water consumption and social equity issues in manufacturing are largely being ignored; many buildings (however green the claims) are car-dependent, oversized, and do not achieve the energy-efficiency goals claimed. Most important, this is a critical moment in history, as the rapidly increasing population of the planet begins to acknowledge the magnitude of climate change and our role in promoting it. We need to be selective about actions contributing to greenhouse gas emissions right now.

There is no question that new construction creates an immediate emissions deficit while the payback period is calculated in decades. A 2012 report by the National Trust for Historic Preservation, in partnership with Skanska and the Cascadia Green Building Council, found that it can take between 10 and 80 years for even an energy-efficient new building to overcome, through cleaner operations, the climate change impacts created by its construction. These are precious decades we cannot afford.

"Less is more" should be the order of the day. What are the actions that gain the best returns on resource consumption with the least expenditure? At the moment this is not a financial calculation. The direct costs of products, energy, and water do not reflect environmental impacts. This must change.



Clearly, new construction is not going to stop, and conversations analyzing how to reduce the climate impacts of structural systems—concrete and steel, which are the biggest culprits in emitting greenhouse gases—are increasing. We are striving to make our new buildings less bad, but we also should be striving to preserve what already exists.

Extending the service life of any object avoids the environmental impact of replacing it. To extend the life of buildings, regular maintenance is required, but this is hardly the norm. In the institutional and nonprofit world, fundraising for maintenance is exceedingly difficult. Having a new building or space named after a donor is much easier to sell than the Jane Doe Repair Plan. For government and private owners, maintenance is often the easiest budget item to cut, kicking the cost down the road. All too soon it becomes easier to replace than to repair. The new building might even achieve top billing for its healthy materials and net-zeroenergy consumption.

The reality is that we will probably never be able to completely negate the environmental impact of products nor ensure that every new building will meet the regenerative aspirations of the Living Building Challenge, which calls for the creation of building projects to operate as cleanly, beautifully, and efficiently as nature's architecture. Even if we could, doesn't a sustainable world need to value what already exists not only for environmental reasons but also to foster creativity, social engagement, and a unique sense of place?

In The Death and Life of Great American Cities, Jane Jacobs observed that "Cities need old buildings so badly it is probably impossible for vigorous streets and districts to grow without them." The Preservation Green Lab, which is part of the National Trust for Historic Preservation, produced a 2014 report—"Older, Smaller, Better"—which provides the most complete empirical validation to date of Jacobs' long-respected but largely untested hypothesis: that neighborhoods containing a mix of older, smaller buildings of diverse age support greater levels of economic and social activity than areas dominated by newer, larger buildings. Tested against 40 economic, social, cultural, and environmental performance metrics, the findings support the idea that retaining blocks of older, smaller, mixed-vintage buildings can help cities achieve sustainable development goals and foster great neighborhoods.

Radical common sense requires moving past our throwaway culture to a regenerative world that creatively and persistently embraces stewardship. The path to a healthy, sustainable world is complex and certainly not linear, and it may never be fully achieved. But we cannot consume our way to sustainability. We must flip this dangerous paradigm and place real economic and social value on what already exists and the stewardship required to maintain it.

The Theaters series, by photographers Yves Marchand and Romain Meffre, depicts spaces that were once grand centers of entertainment, now repurposed for other uses or crumbling into decay Photos: Courtesy of the artists

PREVIOUS SPREAD

Loew's Theater, Montreal, QC, 2013. 2-853 seats, opened (1917), subdivided into 5 screens (1976), closed (1999), used as gym (from 2005)

ABOVE LEFT

RKO Dyker Theater, Brooklyn, NY, 2009. 2,151 seats, opened (1926), closed (1977), subsequently used as retail shops and sporting goods store

ABOVE CENTER

Westlake Theater, Los Angeles, CA, 2008 1,949 seats, opened (1925), switched to second-run and Spanish language movies (1960s), converted to swap meet (1991), listed on the National Register of Historic Places (2009), closed (2011), waiting for reconversion.

ABOVE RIGHT

Paramount Theater, Brooklyn, NY, 2008. 4,124 seats, opened (1928), hosted artists such as Duke Ellington, Ella Fitzgerald, Miles Davis, Liberace and Frank Sinatra, closed (1962), used as gymnasium by Long Island University (from 1962).





SHOULD WE SAVE AN UNLOVED PERIOD?

by Chris Grimley

In October 2011, Michael Graves' Portland Building, at the sprightly age of 29, was named to the National Register of Historic Places. In ways somewhat reminiscent of Boston's own City Hall, the building was the first major commission for the architect, the result of a competition for a major city-services building, and entirely divisive in its reception. "People either love or hate the Portland Building; there's no middle ground," said Portland architect Peter R. Meijer, whose staff wrote the building's nomination. "But whether you love or hate it, it is still significant on a national level." Completed in 1982, the building itself is full of overscaled historic references, including whimsical nods to a Greek pedestal, and plagued by issues of accessibility and an underwhelming, underscaled lobby.

The building needed this designation because of increased calls for its demolition—repairing the building's structural and functional issues had been estimated at \$95 million—even though the listing alone does not guarantee protection. As the world speeds up, the pace at which we question the relevance of buildings is accelerating, partially due to the economic pressures of preservation but also because of fashion and taste. What used to be preservation decisions about thousand-year-old structures are now asked of buildings well short of 50. Graves was subsequently shortlisted for a competition in 1983 for the design of a museum on the campus of Ohio State University. Contenders included Cesar Pelli, Arthur Erickson, our own Kallmann McKinnell & Wood, and Peter Eisenman. Of the five, Eisenman's amalgam of fragmented urbanism, hermetic architectural theory, and awkwardly flayed turrets fought for relevance within an emerging framework of architectural "deconstruction;" the remaining four were heavily historicist, with Graves' mash-up of Egyptian and Ledoux-esque symmetry each gunning for the populist vote. Eisenman won, and the resulting Wexner Center came to symbolize the striking differences between the two competing sides of Postmodern architectural thought. The Wexner opened its doors to the public in 1989, a year after the Deconstructivist exhibit at the Museum of Modern Art.

Why is this relevant, this short tale of two buildings? Essentially, in tackling the preservation of Postmodernism, you have to first determine how you define what constitutes "Postmodern." Many would assume the mere appliqué of historic reference signifies the era, but that narrow definition belies the complexity of how the Postmodern period has been theorized. As cultural critic Frederic Jameson observed in his landmark book Postmodernism, or the Cultural Logic of Late Capitalism, there are two loosely framed positions in the production of Postmodern culture: the linguistic, interested in the framing of an argument through theoretical language, and the stylistic, interested in looking to a simulation of the past to frame solutions. All of this is a way of saying that most buildings produced in the late 1970s, '80s, and early '90s can be characterized as Postmodern in a series of increasingly schizophrenic historicizations.

Boston's dalliances with Postmodernism mark themselves clearly in the historicist tradition but with outbursts of differentiation (Philip Johnson's Boston Public Library addition of 1971 might be the ur-building of Boston's Postmodern turn, marrying Mies with overscaled, vaguely classical, and heroic exterior forms). How else could one assemble such a diverse group of buildings, including Philip Johnson and John Burgee's International Place (1985) with its Palladian windows, the same team behind the clumsy 500 Boylston Street; Robert A.M. Stern's 222 Berkeley Street (1991); Frank O. Gehry with Schwartz/ Silver Architects' 360 Newbury Street (1989); Graham Gund Associates' Boston Ballet (1991); Skidmore, Owings & Merrill's Rowes Wharf (1987); Architectural Resources Cambridge's John F. Kennedy School of Government (1984); and the Arthur M. Sackler Museum (1984) by James Stirling, Michael Wilford Associates with Perry, Dean, Rogers and Partners?

It is important to note that the buildings here are decidedly not a shortlist—and perhaps not even the exemplars or the worst offenders. Moreover, they are dominated by commercial addresses, sprinkled with the occasional cultural project. Postmodernism, taken strictly, was a commercial game or, as Jameson says, "the extraordinary flowering of the new Postmodern architecture grounded in the patronage of multinational business, whose expansion and development is strictly contemporaneous with it."

Building on the successes of the New Boston, private investment flooded the architectural market, and large, multitenant office buildings began to dominate Boston's skyline. In that sense, issues of preservation become mired with issues of real estate speculation and the going price per square foot for Class A office space, and also the costs of construction, which were essentially at the mercy of markets and pro formas. It seems unlikely that many of these buildings will be under the same threat as the Portland Building, whose function as a civic structure makes it as susceptible as our own City Hall to prevailing attitudes about public investment in our cities, but they were also built for short life spans, which makes their preservation argument more complex.

The decision, therefore, must be made on the basis of whether these buildings are considered ugly, nonfunctional, or historically significant, and what their legacy should be to the importance of understanding the inexorable ebbs and flows of architectural production. Or, as Rem Koolhaas eloquently stated when asked recently about the need for preservation of the recent past, "We should preserve some of it. It would be madness for an entire period of architectural history—that had a major influence on cities around the world—to disappear simply because we suddenly find the style ugly."

The implicit question raised, then, is how do we qualify the historic and cultural significance of any given building, shedding subjective arguments about taste and aesthetics? We have to be able to argue relevance for things that we personally consider ugly; otherwise, prevailing forces will relegate them to the dustbin of history. Do we have that capability? Only time— a briefer time than we might like—will tell.



REMEMBERING THE ROOM

WRESTLING WITH THE SHOEBOX IN THE NEW HARVARD ART MUSEUMS

by Christine Cipriani

Explaining his addition to the Isabella Stewart Gardner Museum, Renzo Piano called the Venetian palace "the constant object of your desire...you never lose it." At the Fogg Art Museum, he approached the arcaded courtyard in much the same way, said Maureen Donovan, deputy director of the Harvard Art Museums: "It's always in your mind, you're always seeing it. Everything leads back to the courtyard."

Like the Gardner, the Fogg courtyard was an intimate Italian reproduction, in this case a horizontal Renaissance rectangle topped by a translucent laylight. Piano's 2014 renovation and expansion removes the third story, adds three stories to the remaining two, and walls the interiors of those three in glass. The resulting stack is capped with a clear, dramatically angled skylight to form a spectacular atrium.

The problem is volume. Stacking a tower on top of a Renaissance plaza flips the horizontal space on its end. Where once your eye was pulled *across* the quadrangle to the arches, it is now pulled *up* to the gleam of the tower. Where once you were a person in a square, you are now a bug at the bottom of a five-story shoebox. The vertical space is no longer human-scaled, and the floor of the courtyard—unchanged in size at 55 by 42 feet—feels cramped. As awkward as the volume is the materiality, especially when viewed from upper floors. From above, the historic arches look rather pitiful in their glassand-steel well, like the little clapboard house whose owner refuses to vacate as skyscrapers go up around her. They have themselves become artifacts in a glass display case.

Everyone involved with this project, however the museums, Renzo Piano's team, and the Cambridge and Massachusetts historic commissions—identified the problems of volume and materiality at the outset. And, far from being blithe or insensitive, they spent years trying to solve them.

In the 1920s, charged with imposing some architectural unity on Harvard's diversifying campus, Charles Coolidge, of Coolidge, Shepley, Bulfinch, & Abbott, painted broad strokes with a red-brick Georgian brush. The Fogg (1927) was no exception—but indoors, eclecticism reigned. Partner Henry Shepley found a model for the courtyard while traveling in Italy: the two-story canon's house at the Church of San Biagio (c. 1534), in Montepulciano, designed by Antonio da Sangallo the Elder and clad in travertine. To form an enclosure, the architects copied the



ABOVE

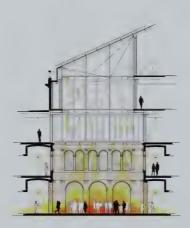
The glass roof over the Calderwood Courtyard brings controlled natural light into the museum's core. Photo: Michel Denancé

RIGHT

Partial East-West section showing the naturally lit courtyard. © Renzo Piano Building Workshop.

OPPOSITE

Renzo Piano (left) and Tom Lentz at Piano's outdoor workshop in Genoa, Italy, where full-scale mockups are built. Lentz is looking up at a scrim (not visible). On the ground is a section drawing that shows that variation.



house's facade four times at four-fifths scale.

A battle then broke out over travertine cladding on the arches. Harvard president A. Lawrence Lowell pushed for plaster, holding that imported stone, at seven times the cost, was an unseemly luxury, explains Kathryn Brush in her book Vastly More Than Brick & Mortar: Reinventing the Fogg Art Museum in the 1920s. But Fogg president Edward W. Forbes, "on both aesthetic and pedagogical grounds...vehemently opposed a plaster finish," Brush writes. "He argued that it would not only cheapen the look of the central architectural feature of the new art museum, but that its inferior quality and falsity taught values that were inappropriate" for Harvard's art department. Lowell agreed only when Forbes secured financial guarantees. Fascinatingly, "Forbes' memoirs record that he regarded the hard-won battle for travertine...as one of his greatest contributions to the fabric of the building."

The model had no third floor, but the Fogg needed classroom and studio space. In the courtyard, "The architects configured the additional storey as a simple attic," Brush writes, with plaster walls and small, travertine-framed windows. "Above, they placed projected rafter ends that fictionally supported the eaves of sloping roofs covered with Mediterranean tiles. The projecting eaves... were designed to halt the eye before it reached the glazed ceiling."

And there it is: the original solution to the volume problem. As quirky as the tiles now seem, they, along with the laylight, finished the courtyard, framed the rectangle. How, in the 21st century, could that effect be retained when the Fogg ballooned from one museum into three?

The first thing Piano's team wanted to do was blow out the plaster walls. Justin Lee, project architect, recalled, "We looked at it and said, for construction reasons, we cannot keep and don't want to keep the plaster [level 3] façade; and we don't think it works well with the travertine." But lopping off level 3 would truncate the building's historic base even as its program headed upward. The city and state historic commissions resisted "changing the proportions of a significant space," said Charles Sullivan, executive director of the Cambridge Historical Commission. Ultimately, said Lee, the design team was asked: "How do we preserve the memory of the room?"

So Piano suggested a fabric scrim across the courtyard, which would separate the Renaissance plaza both spatially and materially from the coming glass tower. Elisabetta Trezzani, a partner at Renzo Piano Building Workshop, said the concept was simply a version of the laylight: "It was part of an element that we needed to keep, so we started design with the kind of scrim that was [there] before." Tom Lentz, then director of the Harvard Art Museums, concurred. "From the beginning." he said in a June interview, "Renzo's idea was to re-create that kind of floating plane above. I'd seen his scrim systems... in other building projects, and I think I was intrigued." The trouble with fabric was keeping it clean: "We talked about maintenance issues so many times that at one point Renzo referred to me as 'the cleaning lady." They considered a retractable shade, but that seemed cumbersome. They moved on to metal mesh, "trading lightness for permanence," said Lentz.

Lee showed me a rendering of a metal-mesh scrim in the courtyard, seen from ground level. Light sparkled through it as if from the heavens. Based on that image, Piano's team, in their Genoa, Italy, garden workshop, fashioned plywood into a full-scale bay of second-floor arches and projected a metal scrim from the top. "We actually used the real material, stood underneath it, and played with different porosities," Lee said. They added working light fixtures.

But volume and materiality were always at odds. A scrim above level two would separate stone from glass, but the space would feel squat. A scrim above level three would maintain the old volume, but the museum wanted glass for third-floor galleries, and a scrim that high would hit the glass tower in its middle. In addition, Lentz said he was always a bit skeptical of how a scrim would scan from above. Lee showed me a rendering of the scrim from an upper floor; it looked like a tarpaulin.

Finally, after two or three years, everyone came to the same conclusion. "We talked so much about transparency, especially about potential sight lines between different things," said Lee. "And the scrim, even though it's transparent, it's still kind of cutting you off. So we started looking for another way to conserve that sense of the volume without the scrim."

They never found one.

Scaffolding filled the courtyard for three years, hiding the arches while the building was demolished and rebuilt around them. Everyone remembers the day it came down. "I think we all wondered what it would be like to have that big volume," Donovan said. "Would it be too much, would the light be too much?" Lentz said the choice to scrap the scrim was "validated" the moment the rigs were removed: "It was literally as if everything in the building clicked into place around the courtyard." Trezzani was there, too, and remembered how "everybody was coming into the space, saying [with laughter], 'Are we sure about the scrim now?"

Today, the arches are sewn to the glass by subtle articulations on level three: Narrow mullions align with the travertine piers, pulling their rhythm upward before giving way to uniform panes on levels four and five. A small soffit above level three hints at the volume of yore. In practice, these are an intellectual exercise. Most eyes will not notice them. Now activated both vertically and horizontally, the Calderwood Courtyard is no longer the restful space it was. The new Prescott Street entrance gives circulation a pleasing symmetry, but the new, north-side ticket desk clutters it: People walk in, look up toward the light, and get in line. Ann Sussman, coauthor of *Cognitive Architecture: Designing for How We Respond to the Built Environment*, said, "Looking up takes extra energy...and when you look up, you still think about what's going on around you. So it's very dynamic." Before, the courtyard "was a point of arrival. Now it's a point of transition."

It was never quite feasible to maintain the human scale here. Driven skyward by an unwieldy program, the tower was designed to impress—and it is mesmerizing, especially the top-floor conservation aerie. Sullivan, whose historical commission gave the museums a preservation award for their efforts throughout the building, said, "The travertine walls were preserved, but the original architect's conception of that space has been destroyed and replaced by a different conception. And time will tell if that is as valid as the original." More likely, time will not remember the original. ■





The work of Susie MacMurray, a British artist who lives in Manchester, England, ranges from drawing to sculpture to site-specific installations. An engagement with materials—hairnets, feathers, barbed wire, shells—is central to her alchemy. To "tease out cultural and physical resonances between materials and place," says MacMurray, she blends form and context in architecturally significant spaces, from stately homes to industrial settings. Her interventions in these spaces reference their historic identities and can be a laborious process involving teams of volunteers. "Working on a large installation in this way has parallels with an orchestral performance," she says, "but also with the tradition of women gathering together to weave or sew, sharing knowledge and wisdom as they work." Trained as a musician more than three decades ago, MacMurray turned to art in the late '90s and has been exhibited widely in galleries and museums. "Making art has for me become a richer, more natural language than music for exploring what it means to be human."

AFTERLIFE

SHELL (2006/07)

20,000 mussel shells, red silk velvet Pallant House Gallery, Chichester

The shells are "crow-black, with an oily sheen, each a tiny death, a *petit mort*, and each stuffed with a deep burnt-red scrap of silk velvet. The elegance of Pallant House is expressed in the composition and creation of the fine oak staircase. [Its] profound references to *memento mori*, to mourning, to gender and class, its impenetrable façade, its representation of the rhythmic passage of time, or sadness and loss are intense, emotion-ridden, and pungent."

> CATHERINE HARPER University College for the Creative Arts at Epsom, England Photos: Courtesy of the artist

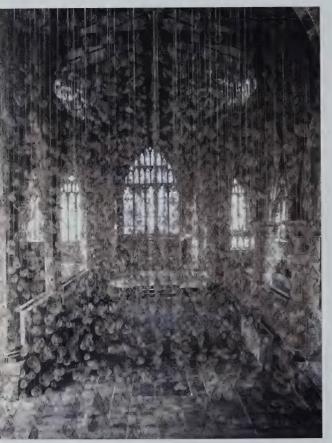


ECHO (2006)

10,000 hairnets containing strands of used violin bow-hair York St. Mary's, Castlegate

The netting "normally restrains human hair. [Hair] from horses provides the stuffing of the droplets. It has already been used to form the bow strings of violins. Unlike the marble, stone, and glass of the church, which has stood for hundreds of years, the hair netting and coiled bow strings will decay. MacMurray likens it to our own mortality: 'How can we be here, so strong, powerful, full of life and energy, so confident as a species and yet so desperately fragile?'"

CAROLINE WORTHINGTON York Museums Trust installation essay Photos: Susan Crowe









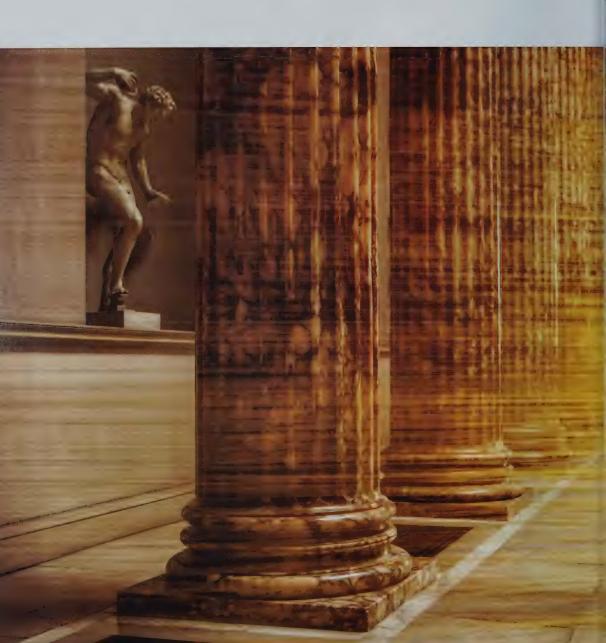


STRATUM (2012)

80 kilograms of white feather down Islington Mill, Salford

"White feather down coated the floor of a Salford Mill like a virgin snow-pelt, simultaneously a comfort signifier, a poetic evanescent mirage, and an unsettling absorbent layer for the blood, sweat and tears of years...A whispery soft counter to the crusted layers of pigeon-droppings in this abandoned mill, and a sublime and luminous 'other' to the hard industrial site, MacMurray used this seminal work to articulate her creative essentials: location, materials, history."

> CATHERINE HARPER University College for the Creative Arts at Epsom, England Photos: Courtesy of the artist







PROMENADE (2010)

105 miles of fine gold embroidery thread Kedleston Hall, Derbyshire

"Robert Adam designed a Roman-style atrium featuring innovative skylights letting the light in from above and flanked by twenty fluted columns made of alabaster mined from the family's quarries. The golden thread weaves between the columns to create a web that ensnares the downward-spiraling light... a reference to the Peacock Dress [made for] Lady Curzon, [as if she] has wandered through the Marble Hall whilst her dress has caught and unraveled behind her."

FRANCES GUY

The Hepworth Wakefield gallery, West Yorkshire, England Photos: Matthew Andrews



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BOOKS



The Future of Architecture in 100 Buildings Marc Kushner A TED Original with Simon & Schuster, 2015

Reviewed by Rami el Samahy

On the face of it, a book with such an audacious title should be a great read for those of us who gravitate toward the cheeky. It promises to push the discourse on architecture beyond the narrow confines of practitioners and professional critics in order to make it accessible and relevant — to the general public. And yet I find myself supportive of the mission but irritated by the message, the medium, and the messenger.

As cofounder of the New York-based firm HWKN and the online hub for architecture known as Architizer, Marc Kushner strives to "reconnect the public with architecture." His TED Talk, "Why the buildings of the future will be shaped by...you" (1.5 million views at the time of this writing), is an optimistic treatise (or, cast in a different light, an insipid infomercial) on new media's role in bringing architects and the public together. This book, a greatest hits of futurelooking projects, arrives on the heels of his spoken success. Each entry consists of one image (a really special entry gets two), a title posed as a question that ranges from the provocative ("Can small housing be great housing?") to the preposterous ("Can grass paint a city?"), a single paragraph descriptor, and a final

one-line summation—conveniently highlighted in red, should one find reading an entire paragraph too taxing.

Ultimately, the sensation of reading this book best approximates browsing through a website (Architizer, perhaps): glam shots accompanied by zippy descriptions and one-liners. It's a pocketsized book that aspires to bigger things, but because TED wants to make it affordable (\$16.99), it remains a coffee table book for short-attention-span Lilliputians. Most of the chosen projects (title aside, there are actually 123 of them, although many aren't buildings) are interesting, some even inspirational. However, without prior knowledge of the projects, it would be hard to tell from the limited presentation of content.

Some of us remain unconvinced that social media is the savior of architecture. No doubt it is a powerful tool in engaging public opinion, and what is now available online or in apps has widened the possibilities for design dramatically. However, the idea that future architecture will (or should) be fueled by Facebook "likes" seems fraught with practical and philosophical pitfalls. Can you imagine how absurd that last sentence would be if "architecture" were replaced with "medicine" or "law"? Should we really be pushing this complex profession into a simplistic popularity contest?

I also harbor doubts that the future of architecture is so radically different from the present that it necessitates a complete abrogation of the materials, forms, and tectonics of the past. For better or worse, these materials have a long history, the forms resonate with meaning, and the tectonics are dependent on existing economic structures—not to mention some basic laws of physics, such as gravity.

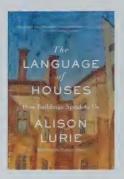
The book makes the claim that "we're asking more of architecture than ever before," but are we really? In my experience, we're asking more of architects (more is demanded in shorter time frames, with smaller budgets and smaller fees), but on the whole we're actually asking less of architecture. By and large our buildings are less meaningful, less interesting, and less well built than ever before.

The author's rosy view of the future is not just ineffectual, it's potentially detrimental. Unless addressed directly, the more likely scenario is one in which architecture further bifurcates into two streams: for the haves, mediocre and watered-down replicas of familiar forms, with disposable materials of limited shelf life; for the have-nots, an even shorter shelf life in increasingly dense surroundings. Engaging with the causes of these trajectories-as many of the best projects in the collection do-is the only way to avoid condemning us to a bleak future. A false faith in our processing speed will not.

Perhaps it is the medium. Can you repackage a website or a TED Talk in such an old-school format? Or does the medium merely lay bare the thinness of the other formats? The publisher touts TEDBooks as "small books about big ideas. They're short enough to read in a single sitting but long enough to delve deep into a topic." The depth of this volume is only milliliters more than the original talk.

If this seems like a depressing prognosis, it's partly a response to such a relentlessly cheerful prescription, facts to the contrary be damned. We cannot truthfully manage to face the future until we fully understand the degree of the problems we are facing. With all its plucky optimism and curatorial aspiration, this book fails to do what books are best at. It doesn't even begin to scratch the surface.

RAMI EL SAMAHY is a principal of the architecture and design firm over,under and an associate professor at Carnegie Mellon University.



The Language of Houses Alison Lurie Delphinium, 2014 Reviewed by Melissa A. Simonetti

For some, a house is just a simple shelter,

a space that accommodates. For others, it is a place laden with emotional significance. "There should be as many kinds of houses as there are kinds of people and as many differentiations as there are different individuals," Frank Lloyd Wright once said. "A man who has individuality has a right to its expression and his own environment."

Alison Lurie would agree with this statement. She uses the term "house" broadly and sees all dwellings as specimens that are layered with meaning and weighted with details, signs, and traces of the inhabitants that dwell inside. To explore this concept, she develops a series of vignettes that not only examine the significance of the structures around us but also reveal that dwellings are a two-way street, as they also shape us as humans. Lurie believes spaces can affect our physical health, the way we feel, and how we learn. Our environment can also determine everyday decisions, such as how much money we will spend or how long we will stay at a job

Lurie begins the vignettes by dissecting the actual house, explaining how houses communicate with us, describing the many materials that can be used in construction, looking at a variety of styles, and exploring spaces inside and out. Then she takes us on a series of explorations through houses of worship, schools, prisons, hospitals, restaurants, stores, and, finally, personal space. She breezes through their histories, giving an overview of spaces and places around us, but it is her personal reflection and opinion, interspersed throughout, that most strongly captures the reader's attention.

When she ponders how spaces and people are intertwined, she suggests: "Perhaps the ballooning of the American home is not only the result of a wish for self-aggrandizement, but also related to the more recent ballooning of the American physique." When she chronicles the mundane, her writing is straightforward: Like language, she says, architecture can be "beautiful or ugly," "simple or complex," and "regional," with different dialects.

Lurie's most compelling segments are those dealing with schools, social issues, and philosophical ideas about freedom and control. Our schools have progressively become more locked down and often have a "room without a view," she says, which compounds our tendency toward extreme supervision. Will we conclude that "excitement, adventure, invention, and freedom from supervision are only available secondhand, on expensive little game-playing devices?"

Although Lurie's writing possesses observational strengths, her musings are sometimes frustratingly vulnerable to generalization. For example, she is not immune to statements such as this: "As we grow up, we occupy more and more square feet" or "Most successful and ambitious people try to build large for both practical and psychological reasons." What are we to make of these insights?

Despite these nuisances, *The Language of Houses* reads like a good novel. Lurie coaxes us to look at our world differently, reminding us we are bound and shaped by the spaces we live in.

MELISSA A. SIMONETTI is an architect and writer in Boston.

Open Source Architecture

Carlo Ratti which Matstingwr Claudial

Open Source Architecture Carlo Ratti with Matthew Claudel Thames and Hudson, 2015 Reviewed by Sarah Radding AIA

In this concise and beautifully designed manifesto, the writers argue for a new type of architectural design, one that draws on the open-source movement to rediscover a satisfying social relevance. The book obliges the reader to acknowledge the rarefication of contemporary architecture and offers technology-based collaboration as a means to reunite the discipline with its communal roots. In doing so, it challenges architects to confront beliefs about how end-users can contribute to the design and building process.

Carlo Ratti and his colleagues, writing with an open-source process, shape their case over seven chapters, dedicating each to a particular concept. They start with an account of Le Corbusier's Esprit Nouveau and an analysis of Modernism's haughty idealism and the contemporary "starchitect." They examine anonymous vernacular architecture, the historic role of everyman in constructing our built environment, and the satisfying variety that resulted from this inherently social process. They relate failed attempts by 20th-century architects to marry these two approaches by creating a framework within which inhabitants might make their mark.

The authors then turn their attention to a history of the open-source movement, beginning with Linus Torvalds, a fitting parallel to Le Corbusier. What follows is a concise but thorough discussion of the sharing economy, the creative commons, and the materialization of open-source through fabrication labs and DIV hacker culture. The argument culminates with an account of the irrelevance of contemporary architecture to the masses and a call for its redefinition.

This book demands a reevaluation of the assumption that open-source is not a viable solution for architecture. Thoughtful analysis of recent architectural history and the open source movement strengthen the authors' position; however, the argument is incomplete. Although the arrogance of the Modernist movement no doubt contributed to the estrangement of architectural practice from society, the commodification of residential and commercial construction is equally responsible for this schism. This type of building, now treated essentially as a consumer good, is precisely where opensource architecture could make the greatest inroads. But the book steers clear of the quotidian in favor of critiquing the aloof mastermind architect, for whom

"the will to pure art is existentially incompatible with society." In fact, the collaboration that Open Source Architecture yearns for is alive and well in civic and institutional architecture, even that produced by the current generation of celebrity architects. The unasked question is "How can we reintroduce the spirit of participation and tinkering into commonplace building design so that it is not only the province of the privileged and sophisticated?" While perhaps more time-consuming and expensive to tackle than other DIY projects, our prosaic buildings are those most suited for hacking, both during design and after initial construction.

Also unfinished is a road map for how open-source collaboration could work in practice. The book identifies the need to create a structure for participation and advocates for the "choral architect," a conductor to guide (and ultimately end) a democratized design process; yet no specifics are offered for how this might work. Although the authors provide examples of Internet-based forums and pattern sources, they do not propose a framework for open-source design of a complex project; sharing ideas and soliciting critiques over the Web are not enough.

After a century or more of the commodification of most aspects of life, we are in the midst of a cultural shift. Mass production suppressed our inner tinkerers; now they are reemerging. Unsurprisingly, architecture has been slower to respond to this trend than other disciplines. It has always been a lagging indicator, by virtue of the expense and longevity of its component parts. Rather than the paradigm shift described in the book, the advent of open-source architecture is better understood as a course correction.

SARAH RADDING AIA is a senior associate at Anmahian Winton Architects in Cambridge, Massachusetts.





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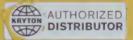
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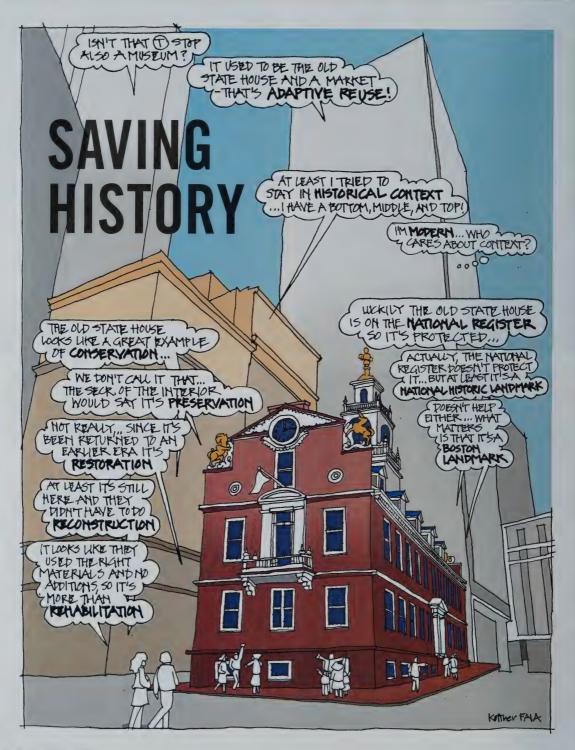
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Sample section of Cradle

to Grave, a British Museum

installation about the ways

in which people deal with sickness and try to secure

Photo: David Critchley

Interior with flowers, by the

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from a series of prints made

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mixes digital and hand-

which focuses on nature and spaces.

created images in her work,

Boils, who was born in Mexico.

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THE ART OF HEALING

A century ago or more, healthcare in America was an urban-planning exercise. Most infectious diseases were environmental-tuberculosis, cholera, yellow fever-and so treatments were as well: Cleaning the water and air of sewage and "miasma," improving ventilation and overcrowding, protecting people from the cold and damp. At the time, "public health was mainly concerned with sanitary reform and affiliated more closely with engineering than with medicine," according to sociologist Paul Starr in his book The Social Transformation of American Medicine. The emphasis on public health meshed nicely with social reform movements of the time, focused on improving housing, sanitation, and working conditions in the nation's increasingly crowded cities.

Then the science of bacteriology took hold at the end of the 19th century, and healthcare became increasingly medicalized and specialized, shifting from a shared social problem to one of personal responsibility. More emphasis was placed on personal hygiene and vaccinations, and then on surgery and drugs, and less on environmental hazards. Over time, the disciplines of medicine and public health grew far apart.

This issue of ArchitectureBoston brings them together again.

As we examined both the best new designs for medical facilities and the healthiest built environments overall, we consistently saw a return to the fundamentals of public health. Access to fresh air, natural light, nontoxic materials, and safe, verdant public spaces that invite exercise and social contact—these are the touchstones of wellness, and keeping them front of mind is the formula for an architecture that heals.

In the process, as several of our writers note, beautiful, innovative building and landscape design can happen. Trees, Gary Hilderbrand reminds us on page 29, are not only oxygenating, shade-giving, spirit-lifting carbon collectors but also structures that "define urban space like nothing else in our design arsenal." Daylighting, writes Brent D. Ryan in the same section, doesn't just boost mood and energy levels and save energy, but opens possibilities for new architectural forms and technologies.

Appreciation of the link between a healthy society and good design is growing; the click of recognition is almost audible now. Even the US Surgeon General is on board. This summer, Vivek Murthy issued a "national prescription" for walking, noting that one out of every two US adults is afflicted with a chronic disease, such as diabetes or high blood pressure, that can be controlled through this simple, cost-free activity. Murthy's Rx? More sidewalks, better zoning, enhanced public transportation, attractive and functional street furniture, and design decisions that make it easier to move. For a sedentary office worker who needs to get his heart pumping, a clean, well-lighted stairway can make all the difference.

Notably, Murthy did not put all the burden on the individual: his call to action recruits elected officials, school and parks departments, and what he called "the community design sector." Planning through a health lens is a social activity that requires a diverse array of viewpoints and a willingness to think holistically. A recent University of California, Berkeley, study found that children living in dense, mixeduse neighborhoods had activity levels 46 percent higher than those of kids in traditional postwar suburban neighborhoods. Still, the health gains of urban density can easily be wiped away if the parks and playgrounds aren't safe. When homicide by

firearm is the second-leading cause of death for people aged 15-24, you know that violence is a definite health hazard.

From city streets to world-class hospital rooms, our built environment needs a thorough checkup to discover what's making us sick and a return to the shared values and responsibilities of the public health era. In the 21st century, safe sidewalks may be the new indoor plumbing.

This issue of *ArchitectureBoston* is dedicated to the memory of Sho-Ping Chin FAIA, principal at Payette and a beloved member of the magazine's editorial board. She cared deeply about excellence and equity in healthcare design and certainly would have been a part of this issue. And, in fact, she is.

Renée Loth Editor











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ON "PRESERVE" (FALL 2015)

It is apt that the striking cover of the issue is a fallen angel among debris from the demolition of Penn Station 50 years ago. Its caption reminds us of Ada Louise Huxtable's advocacy for the value that historic buildings bring to our life in cities and towns. She was equally courageous and insightful about new architecture.

This collection of pointed essays demonstrates a new willingness within historic preservation to reassess its guiding tenets. Max Page's 1966 birth year coincided with the cover photo. Today, his "Values added" survey of outmoded concepts and promising new directions is as timely as it is cogent. His observation that the "mainstream preservation movement remains consumed with architecture" highlights the curatorial emphasis that seldom embraces the complexity of continuing uses in real buildings on real sites. Chris Grimley ("The PoMo puzzle") poses the awkward question of how one generation may legitimately dispose of bad buildings by famous architectsespecially when they mark important transitions in architectural style. The very question underscores the abstract stylistic and associational content of preservation values that too often prevailed in the past.

The pieces that focus on sustainability by Jean Carroon [and Ben Carlson] ("Old is the new green") and Jason Forney ("A good death?") could not have been written even as recently as 25 years ago, when Huxtable was at the height of her career. The photos of half-crazy adaptive reuse in dramatic historic interiors with [Jean and Ben's] story add wonderful torque to arguments about embodied energy. Jason speaks for a dignified demise for buildings that lack flexibility and quality. They turn our attention to varying shades of integrity and significance, words Peter Kuttner leaves implicit in his wonderful catechistic cartoon.

Historic preservation is a powerful way to strengthen places where architects detect potential. The movement is stepping into early adulthood having already made its mark on our world except, as Daniel Bluestone notes in his essay, in schools of architecture.

HENRY MOSS AIA Bruner/Cott & Associates Cambridge, Massachusetts

Preservation has been embedded in

leading contemporary design practice for generations. Inspired work by contemporary masters—Moneo, Piano, Foster has folded old and new together, with unabashed creativity. Even with clear distinctions, one vocabulary—and one vision—provides holistic design. If we isolate preservation as a specialty, we fragment this creative wholeness.

We know that vigorous advocacy shapes policy and practice. What takeaways do we glean from your issue to shape next steps and widen our cultural and political frameworks to address a more inclusive cultural heritage? Whose culture are we preserving?

As our politics and community diversify, what stories have been lost? How do we more deeply explore our 50 years of US preservation regulations?

Boston and other US settings are players, reckoning past with future, but wider, global settings and enlightened practices inspire and expand discussion. Work beyond our borders provides inspiration and breadth. Without these perspectives, we are parochial and limited. Design that seams together existing resources (land, buildings, context, and community) as framework for a sustainable world—that's the model.

Thank you for tilling this soil.

ANN M. BEHA FAIA Ann Beha Architects Boston

Max Page is right—this is "not your grandmother's preservation society." We have reached a moment of profound



creative ferment in our field. Fifty years after passage of the National Historic Preservation Act, we are no longer lonely voices in the wilderness. Historic preservation and adaptive building reuse are now correctly seen as powerful tools for managing change, spurring economic growth, promoting health and well-being, and contributing to the betterment of sustainable communities. Through key policy tools like the historic rehabilitation tax credit, we are helping to unleash the transformative potential of older building fabric in cities all over the country.

From this foundation, we are moving beyond protecting individual buildings to focus on neighborhoods, landscapes, culture, and the historic fabric of communities. We are engaging new partners to help cities achieve preservation solutions to the problems of the 21st century, from affordable housing to community displacement to climate change. We have evolved past a "John Hancock slept here" conception of preservation to embrace a more diverse national narrative, one that recognizes the complex chapters that make us who we are, and works with all communities to tell our American story.

STEPHANIE MEEKS

President and CEO, National Trust for Historic Preservation Washington, DC

As a preservation planner long steeped in what Max Page describes as an "architecture-centric approach to preservation," I was jolted by his provocative essay, which challenges the preservation community to rethink our fondly held 1970s-era principles of preservation and consider more progressive approaches that recognize how dramatically America has changed. I strongly agree that we must be honest about the limitations and potential harms of our old-school preservation tools and develop new ones that more effectively address issues of economic and social inequality, climate change, and sustainability—all the while asking, "Why should this place matter?"

The "Preserve" issue resonates from cover to cover and should have a permanent spot on the bookshelf (real or virtual) of anyone who cares about the future of Boston and the world's built environment.

LYNN SMILEDGE Chair, Boston Landmarks Commission

"Old Is the New Green" is rich with themes that make the case for a new paradigm in moving forward to create a more sustainable world. Architecture, technology, and energy-intensive systems are at a crossroads, facing critical challenges that will influence the objectives of our professional practice going forward. It is high time we act to address the building sector's responsibility in creating significant environmental impacts, whether carbon emissions, water contamination, pollution, toxicity, or a seemingly endless waste stream.

Equally important is the case for sustainable cities. The concept of "less is more" can be stretched to less "me" and more "we" space; smaller homes; better mixed-use zoning, with more urban green space and greater public amenities; [and] countering suburban sprawl, where the only mode of transportation is on four wheels. Much can be learned from preindustrial-age city fabrics, where the efficient organization of abutting townhouses defined the street edge, and the punctuation of these streets with parks provided for the common good.

Jean Carroon and Ben Carlson rightly expose the issue of toxicity in construction materials and furniture. Partnerships with university areas of research—engineering, science, public health—would go a long way in developing alternatives to our current models. Local governing bodies could be more effective in regulating and taxing the offending polluters, making it desirable to reuse instead of building new.

SHIRINE BOULOS ANDERSON AIA Principal, Ellenzweig Boston

The issue is a welcome reminder that creative use of existing resources is an essential part of a successful future. It also demonstrates that a singular focus on either new construction or, conversely, on preservation, fails to holistically consider what constitutes a successful city.

Max Page aptly states that the preservation community itself needs a shake-up. Too often, the preservationist's default mode is to focus solely on architectural details at the expense of bigger-picture issues. Architecture is certainly one piece of the puzzle, but a perfectly restored building will fail in isolation. Good preservation can be catalytic for a neighborhood, but it's imperative to take stock of the broader positive impacts, beyond one historic building alone.

Equally, the idea that new construction benefits the environment in a way that preservation could never match is simply wrong. As Jean Carroon and Ben Carlson note, a focus on the environmental impact of building operations alone misses the mark. There seems to be a failure to realize, as Daniel Bluestone states, that historic preservation and adaptive reuse should be the keystone of sustainability. Why do we feel the need to constantly demolish and rebuild? Boston has great examples of cohesive blends of old and new, such as the restored Burnham Building and Millennium Tower downtown. The vibrancy that results from a balanced built environment is what drives organizations like ours to support creative adaptive reuse and well-placed new development among old buildings. As Boston changes at an unprecedented rate, preservation has an exciting, central, and beneficial role to play in the city's evolution.

GREG GALER Executive Director Boston Preservation Alliance



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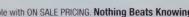
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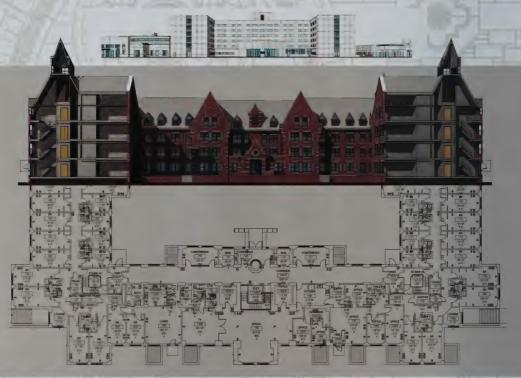


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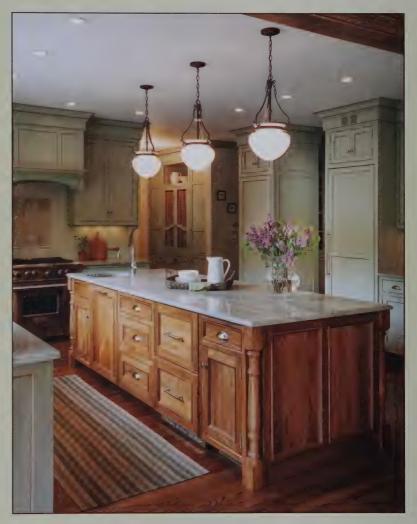
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IN THIS ISSUE



Robin Guenther FAIA ("Building health," page 32) is a principal at Perkins+Will and senior adviser to Health Care Without Harm. An expert in sustainable healthcare design, Guenther's projects include leading the expansion of the Lucile Packard Children's Hospital at Stanford and ongoing work with institutions such as Memorial Sloan Kettering Cancer Center. She co-coordinated the "Green Guide for Health Care" and released the second edition of Sustainable Healthcare Architecture, with Gail Vittori, in 2013.



Alyssa Haywoode ("Case study: Mattapan," page 36) is a freelance writer and former editorial board member of *The Boston Globe*. She has written about human services, homelessness, immigration, and the arts for *The Globe* and *The Des Moines Register*.

George A. Takoudes AIA, Lee Moreau AIA, and Walter Robinson MD ("3 takes," page 40)



George A. Takoudes AIA is a principal at the Boston-based architecture and design practice Isgenuity.



Lee Moreau AIA is a principal at Continuum, a global design and innovation consultancy.



Walter Robinson MD is a pediatrician, medical ethicist, and writer in Boston.

Michael McHugh AIA ("Project recovery," page 42) is a project architect and sustainability expert at Davis Square Architects in Somerville, Massachusetts. He has worked on sustainable design and planning projects, large-scale cultural facilities, multifamily housing, and nonprofit organizations. In 2004 he co-founded the Architecture for Humanity Boston chapter and has chaired it since.

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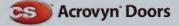
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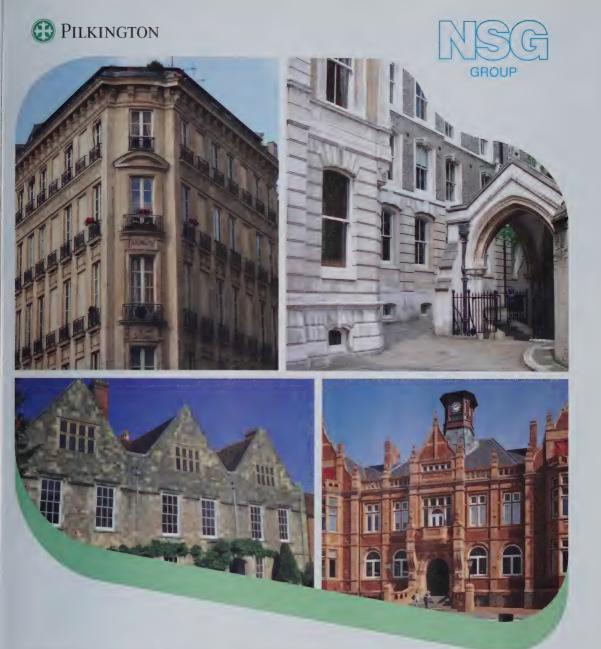


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Imagining the Modern

Carnegie Museum of Art's Heinz Architectural Center, Pittsburgh Through May 2, 2016

Pittsburgh's postwar era of Modern architecture and urban renewal lends itself to easy generalization. Shiny, diffident corporate boxes punctuate neighborhood-killing mega-projects in a relentless concrete landscape, precious few of whose irreversible changes materialized as actual improvements. Yet, *Imagining the Modern*, over, under's ambitious exhibition of architecture in that place and period, aims for a more multivalent presentation.

The innocence, or naiveté, of the immediate postwar era is present here,



sprouting in little-known publications such as Mitchell & Ritchey's *Pittsburgh in Progress* of 1947. Commissioned by retail magnate and Fallingwater patron Edgar Kaufmann, the pamphlet foresees a more vast clean-slate redevelopment of Pittsburgh than ever actually came to pass. Intended as an enticement, it seems cautionary now.

It is also emblematic of the rich selection of period materials—newspapers, professional journals, and pamphlets some under glass, some reproduced, and others open for perusing. These portray urban renewal as a much more episodic, contentious, and changeable entity than its current inevitability would indicate. Underscoring that sense, the curators meticulously document, in palimpsestlike site plans, the unrealized projects that were planned on the sites where constructions came to pass. These documents will delight specialists but perhaps befuddle novices.

The photography section is, by contrast, more legible. Here, Ezra Stoller's exquisite remove contrasts with Teenie Harris' dynamic engagement, as pangs of social justice emerge afresh.

Amid the Heinz's Postmodern galleries, the curators use one large space as a real

studio—Carnegie Mellon architecture students are at work on redesigns of the fortress-like Allegheny Center Mall of 1966 for course credit. They ambitiously repurpose an active gallery space, and the end results, even with preliminary sketches and models hanging up, are unknown. But the approach reflects an open and responsive attitude toward architectural process and the accompanying exhibit that Modern architecture itself had in small though insufficient amounts.

CHARLES ROSENBLUM is the architecture critic for the Pittsburgh City Paper and Pittsburgh Quarterly.

ABOVE

Brochure illustration from Allegheny Center: From a Rich Heritage, a New Way of Life c. 1962; Allegheny Center, Deeter & Ritchey, architect. Urban Redevelopment Authority of Pittsburgh; Helmut Jacoby, renderer.

LEFT

Charette: Tri-State Journal of Architecture & Building, May 1952; Alcoa Building, Harrison & Abramovitz, architect. Images courtesy of Carnegie Mellon University Architecture Archives.

MORE ONLINE

Strandbeest

міт Media Lab, Cambridge, Massachusetts September 10

In videos, the Strandbeests—wings out, interacting with nature come across as prehistoric, reptilian, and mesmerizingly engaged with their windswept, deserted-coast settings. So when I walked in to the Media Lab, my first reaction to the two static structures in the lobby was one of disappointment because of their scale (much more diminutive in reality than in the imagination) and their materiality (plastic tubing).

But then, as I listened to the humble and humorous Dutchman Theo Jansen talk about his creations, these sculptures became mystical again. Jansen, whose trajectory took him from physics student to painter to three-dimensional artist, described his initial engineering failures and how his Strandbeests evolved with him, as a designer. He explained his process using the inexpensive and readily accessible tubing to create the structures' "joint configuration," which allows them to "walk," the design of which he posted online so that his creatures could be replicated by others.

Tinkerers across the globe propagate these animalistic frameworks—with mutations akin to an evolving life form. For

Jansen, the sharing of this "DNA code" and the replication of his vision renders his kinetic art form all the more compelling than his initial creation. What makes these beasts so appealing? It's seeing their insides, how they work, and their locomotion pattern in open space.

At the MIT symposium, dismal weather and an absence of air currents meant volunteers had to propel the skeletal creatures about to demonstrate their movement, a less-thanevocative necessity for the standing-room-only crowd. If you head to the Peabody Essex Museum to check out the exhibit there, pray for wind.

KEITH MOSKOW FAIA is a partner at Moskow Linn Architects in Boston. Strandbeest: The Dream Machines of Theo Jansen will be on view at the Peabody Essex Museum in Salem, Massachusetts, through January 3, 2016.

BELOW

Animaris Apodiacula (2013). Courtesy of Theo Jansen. Photo: Uros Kirn





AHEAD Toothpick World: From Sliver to Skyline

Fuller Craft Museum, Brockton, Massachusetts December 19, 2015–March 27, 2016

When Stan Munro's wife fell ill a decade ago, restricting their travel, the artist became an armchair explorer instead, watching television shows that featured the world's monuments. He bridged that mileage by miniaturizing architectural masterworks all over the globe that caught his fancy—using toothpicks, a hobby that began when he was in the fifth grade, to create 1:164 scale reproductions of these structures. Munro's toothpick world became a traveling exhibition of more than 60 famous buildings, from the Taj Mahal to Big Ben to Fenway Park (above). "If I go through a museum and there's nothing that would entertain a kid, then there's nothing that would entertain me." This winter at the Fuller, prepare for an unusual journey.

ABOVE

Detail of 1:164 scale sculpture of Fenway Park (2014), constructed with toothpicks and glue. Photo: Stan Munro

MATTER OF COURSE Summer Academy

The Boston Architectural College

One probably shouldn't call the Boston Architectural College's four-week-long Summer Academy "summer camp for architecturally inclined high schoolers," but that is what I took it to be. I mean that as a compliment. The Summer Academy looked like a whole lot of fun, with the added benefit of introducing teenagers to some of the fundamentals of a little-understood profession.

The Academy convened for four weeks in July, from 9 a.m. to 1 p.m. in the BAC's vast, airy third-floor open studio. The building, an elegantly rehabbed Boston police station, is an inspiring place to hang out, design-wise, but never mind that. This year the Academy had 65 students, divided into six classes. A pair of teachers, most of them recruited from either BAC's own grad students or from Harvard's Graduate School of Design, oversaw each group.

Each of the four weeks had a separate theme, such as mapping the city, defining a neighborhood, or designing a living space using only containers. "We realize that not all of these boys and girls are going to end up being architects," says course director Henry Miller. "We want to teach problem solving. We're cross-disciplinary, with some industrial design, some computer boot camp, and some architecture. It's not Drafting 101."

I visited the Academy three times during the summer, and on each occasion I saw plenty of energy, creativity, and, yes, fun. Although it's true that the BAC studio commands a jaw-dropping, 270-degree view over Boylston Street and the Back Bay, the kids spent plenty of time tramping around various neighborhoods fulfilling specific assignments.

One of my favorites was Addition/Subtraction: The students examined a familiar Boston site, say Kenmore Square, and were asked to remove one item and substitute a better one. Mike Bibbey of Burlington, who attends Buckingham Browne & Nichols, installed a reflecting pool in the place of Kenmore's unsightly "transit hub" and threw some sky bridges across the square for good measure, to help pedestrians navigate the treacherous five-way intersection. "It's kind of boring right now," Bibbey observed.

Another team removed a six-story building at the corner of Hereford Street and Commonwealth Avenue in the Back Bay and substituted a recreational facility with a climbing wall and obstacle course in its place. Whatever happened to zoning, I asked John Simonetti, a Providence-based architect overseeing this team. "I understand that the Back Bay Neighborhood Association would throw us in jail for this," he answered. "It's what we call architectural license."

The Academy also offered some neat field trips, including a visit to NADAAA, the award-winning design firm in the nearby South End. "We expected them to be in a skyscraper, but they were in this really sketchy little brown building where you

had to buzz in," Shereen Lahlali, a rising senior at Winthrop High School, told me. "We had trouble finding it. I thought it would be 10 times bigger. It's smaller than the Apple Store."

The NADAAA visit revealed some inconvenient truths about the architecture profession. "I didn't realize it might take three months to build a model," said Bruna Bonnet, a rising junior from Medford High School. "I thought they could do it in three days." Another unpleasant fact: architects' salaries. "We thought it was a top paying job, paying about \$90,000," Bonnet said. "Turns out it's more like \$50,000."

Speaking of money, the 2015 Summer Academy cost \$1,500, with scholarship money available from the Robert Houseman Fund, intended to promote diversity in architecture (16 students received some aid this year). I know off-in-the-woods-withmosquitoes summer camps that cost more, and they don't have 3-D printers, laser cutters, and CNC (Computer Numerical Control) routers for the kids to play with.

The summer ended with a Friday evening party, the BAC studio jam-packed with students, mentors, and self-conscious parents all trying to navigate around the dozens of models and drawings laid out on tables and tacked up to the walls. I saw about 50 ways of mangling variously sized shipping containers into dwelling spaces and also a dramatic rethinking of the corner of Chestnut and Charles streets on Beacon Hill. Forget that dowdy frame store! Dorchester's Sasha Paul (Newton Country Day School), Priya Skell (Needham High), and Omar Selim (Cambridge School of Qatar) erected a spherical boutique concert hall in its place. The Beacon Hill Civic Association has yet to comment on their plans.

At the party, BAC vice president James Ryan delivered a short pep talk, praising the students' designs: "This work is as good as what we see in our first-year or second-year design studios," he said. That's probably right, and I suspect the summer fun quotient beats the regular school year by a long shot.

ALEX BEAM writes a column for *The Boston Globe* and is working on a book about Vladimir Nabokov. "Matter of course" visits exceptional architecture classes at New England schools.

BELOW

Students finish up studio projects during the last week of BAC's Summer Academy. Photo: Sam Rosenholtz



5 QUESTIONS Greg Murray

Charles and Ray Eames' *Mathematica*, one of the most popular exhibits at the Museum of Science, has been refurbished over the past two years; the exhibit, a visually arresting immersion in mathematical concepts with seven freestanding displays set in a rectangular image-clad gallery, is now on view in a new location. Marie S.A. Sorensen AIA, a Cambridge-based architect specializing in learning environments and modern-period conservation, spoke with Greg Murray, project manager of exhibit conservation and development at the museum, about how the finely detailed artifacts and their modular setting have remained materially robust and intellectually relevant 54 years after they were built.

Did you treat the exhibit as a significant work of Modernist design and popular culture?

It's part of the museum's permanent collection. We treated it the same way we would treat a dinosaur fossil or a piece of [a] space shuttle. We were handling hundred-pound steel beams with gloves because we didn't want to scratch the paint.

How was the decision made to move it, and is there concern the exhibit will be unavailable during electricity shows?

For us, the Theater of Electricity was a natural fit. You can look at it in two ways: One, we took this beautiful exhibit and tucked it in the back of the museum; two, we put it in the most popular gallery in the museum that has 500 people at every show.

Mathematica's exhibits are considered some of the first interactive exhibits ever created in science museums. What did they do that was innovative at the time? Probability is a good example in that it's able to illustrate an abstract concept beyond just a line drawn in a textbook. There's something tangible about a 12-foot-high machine dropping a stream of balls and laying them out in a curve. Before people had computers at home, they would come to the Museum of Science to interact with something called the Internet. Whether it's today or 30 years ago, the museum provides experiences you can't get at home.

What do you think of the quality of the materials and hardware that the Eameses chose, and what have you had to replace? All the major visual parts of the exhibition have not been replaced. The Eameses worked quite a bit in wood and metal. We did not refinish the wood; we just cleaned and preserved it. The iconic high-polish high-luster chrome around the Mobius strip interactive has held up well; there are only a few nicks in it. We kept the Masonite panels that the graphics are mounted on: They're 10 by



4 feet and weigh 100 pounds each. In the *Minimal Surfaces* exhibit, the string that moves the loops up and down is literally monofilament fishing line—and how long does that last? Ten years? So that's been replaced. On *Probability*, we replaced the chain drive and some of the aluminum baskets that lift the balls. They're big claws, and they dip down into the balls and lift them up and then flip them over the top. There are about 25 baskets mounted on a double chain drive. They start to wear out and get bent every once in a while.

Today, exhibit designers talk about getting visitors to collaborate. Some curators believe simpler content is best. The Eameses had a two-part approach: Some content is complex; other content is visually very simple. Do you think they were successful? Mathematica does a good job of creating both "quick-hit" and "active prolonged engagement" experiences. You see people run up and look in the eyepiece of Projective Geometry and say: "Oh, that's cool. I can read the words, but I couldn't read them on the cone"-and then move on. Other times you see people starting to have a discussion over an exhibit, and sometimes that discussion changes so that it's not even related to the exhibit anymore, but they've taken the content and extrapolated it to another point.

LEFT

Greg Murray, pictured with the Projective Geometry exhibit at *Mathematica*, Museum of Science, Boston. Photo: Marie S.A. Sorensen

architectureboston.com



It's Not Just the Buildings: Landscape in the Aesthetics of Mid Century Modernism

Lexington Historical Society August 16, 2015

Elmore Leonard, the late crime writer, strove for invisibility in his work. "If it sounds like writing, I rewrite it," he said. Modernist landscape architects can make a similar assertion: Excellent design is invisible.

When people look at the residential landscapes of midcentury Modernist homes built in Lexington, Massachusetts, in the 1940s and '50s, they tend to think that nothing has been designed, said historian Pamela Hartford during her gallery talk. The truth is that the unabashed relationship of the house to its environment is fundamental to Six Moon Hill and Peacock Farm, among the notable midcentury communities included in the Lexington Historical Society's *Lextopia* exhibit. The existing landscape was not cleared for house construction but rather used as a driver for the careful siting of the buildings. The houses were built with the minimum impact to the site, nestled in their woodland settings, often anchored to the ground by nothing more than a site wall or small terrace.

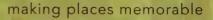
The design is there, powerfully so, both as an aesthetic language that reflects the Modernist desire for simplicity and as a communal idea that establishes a respected, shared living environment. Design isn't just an assertive and added-on operation; it is a set of decisions about what to keep and what not to do. The architects were trained in both building and landscape architecture, and designed the communities holistically. They understood that the design of what's inside and outside can't be separated. As a result, the developments' sensitivity to their environments comes across as contemporary. The designs feel ecological without working hard to try to be ecological.

Lextopia reminds us that in the end, the invisibility of the landscape is an issue of legibility and representation. Whereas previous landscape designs relied on horticultural exuberance and elaborate ornamentation, the clean lines and understated materials approach was undervalued. Even today, midcentury imagery tends to focus on the exterior view of the architecture, which objectifies the work rather than expresses its intent: honesty and livability. The landscape is integral to that lived experience and deserves to be valued, managed, and seen.

JILL DESIMINI is a landscape architect and professor at Harvard's Graduate School of Design, where she teaches students to appreciate wild and invisible landscapes.

ABOVE

The integration of landscape and architecture at 24 Moon Hill Road in Lexington, Massachusetts. Photo: Pamela Hartford, 2015



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CURES FOR How can design intervene to encourage healthier environments and promote wellness? ANALING WORLD

PERSPECTIVE

by Ann Sussman AIA

The quickest fix for unhealthy architecture is to realize the client is an animal and not a machine. All "cures" follow from that. Human perception is the threshold that determines what we see, and it occurs in a brain that evolved much more slowly than our current technology.

This disconnect between what we've evolved to see and what we can build today is at the root of much of the dysfunction in our modern environment. It's a biology and technology mismatch, not unlike our modern sugary diets or overly sedentary lifestyles. Just because we can do these things today—laze around or build blank, boxy buildings doesn't mean that it's good for us over the long haul. Mother Nature has a way of asserting her hegemony in the end, reminding us we haven't been following her rules.

Looking at ourselves as animals, we can see how wonderfully weird we are as a species. It's not merely that we have a huge brain—larger than any other creature on the planet when body mass is considered—it's how oddly that brain is put together. For one thing, we don't handle the senses democratically at all. Our brain evolved to prioritize one sense: vision.

While we "see" with our eyes, our brain processes the inputs to create a picture of the world. And though we traditionally talk about four other basic senses, 50 percent of our mental apparatus goes toward visual processing. No wonder the cat looks at you oddly when you can't tell there's a mouse in the kitchen or that the dog's marked the carpet; your vision bias preempts your registering other smelly stimuli.

Understanding our brain's voracious visual appetite can explain a lot of our architectural experience, including why strolling through the Back Bay can be effortless for blocks on end, while doing so around an office park is much less so. It can help us understand why tourists spend time outside Trinity Church but not so much outside the neighboring Hancock tower, arguably another significant Boston landmark. It's simple, really. The tower's glass façade doesn't feed our brain what it delights in seeing: rounded forms, diverse detail, symmetrical arrangements exactly what's on the church menu.



This doesn't mean that every building needs to feature granite and sandstone checkerboard motifs, but it does suggest that it's critical to consider our biological predispositions: how we love looking at natural materials and shapes, how we innately seek out shade and safe places to sit, how the best new buildings anticipate and meet our subconscious requirements.

And it suggests something else entirely: How much we gain by thinking "inside out." How much we have to learn about who we are, how we came to be, and what we're wired to do—since it has secured our survival—and how significant that is for building better places for people. Ironically, only by acknowledging our animal past can we hope to build the most humane places.

"The broader our understanding of the human experience, the better our design will be," Steve Jobs once said. This idea formed the foundation of Apple Computer's stratospheric success. There's no reason it can't do the same for architecture. ANN SUSSMAN AIA is the author, with Justin B. Hollander, of Cognitive Architecture: Designing for How We Respond to the Built Environment (Routledge, 2014).

ABOVE

Progressive Code of the Space, Carlo Bernardini, 2009. Fiber-optic installation and electro-luminescent surface. 13 by 36 by 27 feet. Velan Centro d'Arte Contemporanea, Turin, Italy. Photo: Courtesy of the artist

OPPOSITE

Platonic Spin, Nathaniel Rackowe, 2013. Shown with the artist standing within. Exhibited as part of Lumiere, Durham, United Kingdom. Photo: Courtesy of the artist

LIGHT by Brent D. Ryan



BRENT D. RYAN is an associate professor of urban design and public policy in MIT's Department of Urban Studies and Planning.

ABOVE

Dead Reckoning, Nathaniel Rackowe, 2006. Exhibited in Artificial Light, MOCA Mami. Photo: Courtesy of the artist Sunlight is a critical contributor to human health. While too much sun can be hazardous, sun exposure contributes to production of Vitamin D and also melatonin, thereby countering bone degradation, infection, and sleeplessness, and boosting mood and energy levels. Having evolved in bright sunlight, we need regular contact with our star's life-giving rays to maintain our well-being.

Architecture, which shelters us from precipitation and temperature extremes, is our chief mediator of sunlight exposure. And given that Americans work longer hours than citizens of almost every other developed country (the Germans and Dutch have it easiest), our workplaces quite literally stand between us and the sun. Considering the demonstrated benefits of sunlight, how is our workplace architecture performing? Is it helping our health, or hindering it?

Building technology made great gains during the 20th century, but these gains distanced us from light. The modern wonders of air-conditioning, available after 1932, and fluorescent lights, available after 1938, generated today's bulky, boxy office buildings and single-story warehouses, with vast interiors that are artificially lit and cooled, and correspondingly deprived of fresh air and sunlight. Fluorescents and AC transformed city skylines from dramatic to "inert," to use Vincent Scully's term, and converted expensive multistory factories into the faceless sheds that comprise contemporary manufacturing.

The average worker's loss of sunlight and fresh air was dramatic. While a worker in the Empire State Building was likely to be within 18 to 36 feet of an operable window providing access to daylight and fresh air, a worker in a corporate office park of the 1960s might be 70 or even more feet away from a window that could not open. The office buildings of Mies van der Rohe and SOM are monuments of Modern architecture, but also memorials to the diminished daylight of the contemporary age.

But all is not lost. Momentum is growing to encourage or even require minimum levels of daylight exposure for office and industrial workers. Germany is ahead of the United States, not only in reducing total hours worked but in requiring proximity to windows. Its national industrial standard specifically governs the provision of daylight to building interiors, emphasizing the psychological benefits of exposure to daylight for workers and residents. As a result, most German workers are effectively within 8 meters (26 feet) of the outdoors.

And while the US has no national building code at all, never mind one governing daylight exposure, numerous energy-efficiency codes mark the happy coincidence that increased daylight is also one of the best ways to reduce energy usage for lighting and cooling. One industry study indicates that new fenestration technologies alone could reduce energy usage in commercial buildings by up to 13 percent.

We stand at the edge of a revolution in improving health through building design, and architects will be key players. By integrating daylight and fresh air exposure into every new structure, designers can improve the quality of all of our lives while reducing energy waste. The formal outcomes may be surprising, as boxy, insensitive structures make way for lighter, attenuated, more responsive architecture. Bringing back the light is something that all building designers and building users can anticipate with joy.

TREES by Gary Hilderbrand FASLA

In this day of over-shared celebrity playlists, I offer my ballot of places in Greater Boston that exemplify the kind of space that promotes healthy cities. My list goes like this: Commonwealth Avenue, Boston Common, the Public Garden, Mount Vernon and Chestnut streets, East Broadway in Southie, the Wilderness in Franklin Park.

These spaces are filled with trees, and that's what makes them great—lines of American elms or London planes, groves of mixed hardwoods, lofty mature campus canopies, or many-storied successional forest species competing for space and light. I would not want to live in the city without trees.

Tree-lined streets and shady parks or wilds make our cities livable. Shade cools the city's surface by as much as 20 degrees, canopies and roots intercept rainfall and help harvest its benefits, healthy tissues provide for uptake of pollutants, leaves release oxygen to the air we breathe, and all this wood keeps massive amounts of carbon from escaping into the atmosphere and turning up the heat. And the part I like most: Trees define urban space like nothing else in our design arsenal.

Imagine Boston without trees. It's easy; just check out East Boston, where canopy coverage amounts to about 6 percent (compared to US Forest Service recommendations of 35 percent). For contrast, think of Roslindale and West Roxbury, where larger home lots and mature shade trees bring the coverage up as high as 49 percent.

A 2014 study by researchers at Boston University and Hofstra reported that Boston's overall canopy coverage measures at 25.5 percent, with an error rate of ±1.5 percent. That is significantly down from the previous mark of 29 percent coverage reported in 2006. The decline could in part result from recent improvements in the way data are analyzed, but an international downward trend is confirmed by other studies.

Yale Forestry Researcher Thomas Crowther estimates, for instance, that Canada possesses around 9,000 trees per inhabitant; the US, with its broad open plains and sprawling cities, around 700 per person. In the 2006 Boston study, the numbers were thus: around 1.2 million trees in total, or two trees for every citizen. Not enough!

In 2006, then-mayor Thomas Menino responded with a proposal to plant 100,000 new trees in the city, an increase that would get Boston closer to that 35 percent goal. *The Boston Globe* reported in 2013 that the city was far behind. The great recession had taken its toll on canopy expansion because the city's proposed increases rely substantially on private development, public park expansion, campus redevelopment projects, and homeowners. Now, with Boston's boom in construction, it's time to rally.

Here is what we need to do: Be vigilant in protecting the trees we have, and be opportunistic about where we can plant. Translate these goals into enforceable rigor in project approvals. Exceed Boston's Complete Streets guidance, which outlines provisions for planting in all but the narrowest streets. Plant trees on every project, and give them good life support below grade. Think of the living biology in the soil and root world as the reciprocal of the tree we see above grade—you can't have one without the other. Let's aim for higher than 35 percent coverage. That's the radically transformative project that will make the physical structure of Boston robust, resilient, and spatially beautiful. GARY HILDERBRAND FASLA, a founding partner of the landscape architecture firm Reed Hilderbrand, is a professor in practice at the Harvard Graduate School of Design.

BELOW

Spatial Code, Carlo Bernardini, 2009. Fiber-optic installation, 36 by 14 by 33 feet. Villa del Grumello, Como, Italy. Photo: Courtesy of the artist



HOME by Megan T. Sandel MD

DR. MEGAN SANDEL, an associate professor of pediatrics at Boston University, is a member of the board of Enterprise Community Partners, a national leader in affordable housing and community development.

BELOW

Black Shed Sliced, Nathaniel Rackowe, 2008. Exhibited at the Total Museum of Contemporary Art, Seoul, South Korea. Photo: Courtesy of the artist People sometimes ask me why, as a practicing pediatrician, I care so much about housing. But how can I not? For many of my patients, a stable, decent, affordable home is like a vaccine—it quite literally keeps them healthy. That's why it's essential for everyone, from architects and builders to public policymakers, to understand how important quality housing is to health and well-being.

When thinking about housing as a vaccine, you can think first about each part of housing that makes it so effective. Housing can be a stabilizing force, where families can get to know their neighbors, and children can attend the same school. Research shows that children who move more than once in their first few years of school are more likely to be kept back a grade. Our work with Children's HealthWatch, a five-city pediatric research center, shows that families who move more than



two times in a year look as bad off as homeless kids do in terms of general health, risks of hospitalization, and developmental delays.

Housing also needs to be of decent quality, which can mean the absence of things that make us sick, such as pests or mold, but also include things to make us feel well, such as natural light, exposure to green spaces, and fresh air. Deteriorating or unsafe housing poses risks of asthma, lead paint poisoning, and serious injury. We spend untold millions treating chronic diseases such as asthma, or the behavioral problems and learning disabilities associated with lead exposure, yet every dollar spent in housing can help prevent many of these negative outcomes before they happen.

Lastly, housing must be affordable. We know 20 million families in the United States are housing insecure, often forced to choose between rent, eating, or heating their homes, paying more than half their paycheck toward rent and having to go without other necessities.

The good news is there is a housing vaccine to make you healthy. Our research shows that families who receive a subsidy to help them pay rent are protected from the health stresses of moving frequently or living in overcrowded conditions. If unaffordable rents were leading to food insecurity, subsidies can also help protect them from stunted growth or other illnesses associated with inadequate nutrition. Similar to receiving one shot against multiple diseases, young children who live in stable, affordable housing are much more likely to be well: developmentally normal, not underweight or overweight, in good or excellent health, and with no history of hospitalizations.

Professor David Williams of the Harvard School of Public Health put it best in the documentary *Unnatural Causes:* "Housing policy is health policy." Housing matters, particularly to young children. Strategic investments in the critical developmental window from pregnancy to three years of age can change the trajectory of a child's life.

When administering childhood vaccinations, we make sure a child receives the right dose. The same goes for housing. Just as vaccines in early childhood have a lifelong payoff for a child and for society, making sure families can avoid housing insecurity is preventive medicine that will help put a child on the right path from the beginning.

CLARITY by Chu Foxlin AIA

The building and interior spaces we create communicate with users through their architectural elements: walls, floor pattern, ceiling configuration, color, lighting, and materials. Collectively, these elements tell people where to look, where to pause, where to go next. They shape how people will feel throughout their journey. When this communication is clear and cohesive, the result is a healthy space, stress-free and easy to navigate. The key to success is this: Less is more. Say less, and say it with clarity.

Clarity begins with clear edges. Where are the boundaries that tell me how big and what shape the room is? Where are the cues that tell me where to go next? Psychological studies tell us that humans perceive rooms with simple, clean geometry better than those with compound shapes. Clearly defined spaces, linked together, provide easy wayfinding. A visitor should arrive at a destination "naturally," using subtle architectural cues rather than signage, which poses issues for the visually impaired and those from different cultures.

An interior space should also refrain from saying too much. Visual clutter and sound chaos not only impede the clear reading of a space but also are major sources of stress in themselves. As designers, let's restrain ourselves from introducing too many "design ideas" into our projects. On the stage of architectural simplicity, there can be only one main character at a time.

In the healthcare sector, similar principles can ble applied to one special group of users-people with chronic pain. According to statistics from the National Institutes of Health, approximately 76.2 million Americans, or one in four of us, have suffered from pain lasting longer than 24 hours, and many suffer from pain on an ongoing basis. The physical environment plays a huge role in how we cope with pain and how we heal. For instance, we know that natural light is good for healing, but too much is harmful. In our firm's design of cancer hospitals, we take special care to arrange infusion bays so that patients have views to the outdoors but also have control over how much light is allowed in. Soothing interior colors, with low contrast, are also recommended.

Users of healthcare facilities include not only patients—suffering from pain and treatment side effects, and fearful about their future—but also family and friends who worry for their loved ones,



the hearing and visually impaired, the aging, and non-English speakers who navigate unfamiliar environments with diminished or challenged senses and/or language barriers. Another group of users, medical professionals, do important and challenging work on short timelines with tremendous consequences. Healthcare facility architects and designers need to recognize the importance of design that soothes, comforts, and reduces stress for users.

It's also important to acknowledge that healthcare facilities aren't the only place where one finds the sick, the disabled, the stressed, and the overworked. At any time, we all can fit into these categories, and we visit and navigate buildings of all types. While there is a place for building spaces that are stimulating and invigorating, there is also a need for public buildings that allow simple and easy dialogue with users.

When it comes to communicating with building users through architecture, say less but say it with clarity and consistency. Less is healthy.

CHU FOXLIN AIA is an associate and senior design architect at Tsoi/ Kobus & Associates, specializing in the healthcare and life sciences sectors.

ABOVE

The Light That Generates Space, Carlo Bernardini, 2009. Fiber-optic installation, 66 by 88 by 99 feet. Palazzo Litta, Direzione dei Beni Culturali, Milan. Photo: Courtesy of the artist

BUILDING HEALTH A WELLNESS PLEDGE FOR THE MEDICAL INDUSTRIAL COMPLEX

by Robin Guenther FAIA

Design is always about transformation to an imagined future. As a practicing architect who designs hospitals, I know that the world of green building and the world of healthcare share a common mission: to protect and promote health. And I believe we can transform healthcare by building health. How? It starts with this simple shift in perspective: If we use health as the inspiration to transform practice, we can heal our hospitals and the planet.

Every innovation begins with an inspiration, and the healthcare sector needs to own this one. We all know that wellness is more than healthcare and more than physical well-being. We also know that we won't have healthy people if we don't have clean water, air, and soil. Doctors take the Hippocratic Oath—"First, do no harm"—making it their basis for action. But if every system took this new and certainly timely pledge—"A health system shall cause neither human nor ecological harm"—what would healthcare look like?

Imagine a world in which the delivery of healthcare created nothing but health. Unfortunately, that's not the world we have today.

¹ For the last 70 years, US healthcare has been stuck in a massive industrial paradigm that has very little to do with health. It is a "sick care" system that is so focused on curing advanced stages of disease that it's largely irrelevant to the health needs of most people. Healthcare's ultimate delivery machine—the hospital—has evolved into an increasingly specialized tower of disease. No expense too great, no building too large. And when one hospital will no longer suffice, we build 21 side by side! The Texas Medical Center, near downtown Houston, is the largest in the world, with 7,000 beds and 106,000 employees at 68 institutions, clustered on 1.5 square miles.

Healthcare has become a 20th-century industrial system, like agriculture, chemicals, or fossil fuel energy. And like those systems, it creates waste, some dismal work environments, and a load of externalized harm. Our inconvenient truth is that the system actually *contributes* to the problems it is there to solve.

The system is energy intensive. According to JAMA (the Journal of the American Medical Association), US healthcare

puts 217 million tons of carbon into the atmosphere every year. Hospitals alone contribute more than 3 percent of the country's total output—80 million tons. The average US hospital operates at 2.5 times the energy intensity of European hospitals. Even as healthcare seeks to perfect its antiseptic care environments, it dumps pharmaceuticals in our water supplies, disposable plastics in landfills, and greenhouse gases in the atmosphere. All this waste contributes to environmental degradation and poorly affects health—and it's all preventable.

And how does it feel to inhabit these environments? Hospitals have endlessly deep floor plans where caregivers literally never see the light of day. Summer, winter, day or night—it's always the same inside. The buildings can't function without massive inputs of electric lighting and mechanical ventilation a permanent life support infrastructure. They are, to use a medical metaphor, comatose. It is certainly ironic that we task caregivers to keep us alive in buildings that feel dead.

So how do we transform this 20th-century industrial model from a system that delivers sick care to one that builds actual health?

Farmer and philosopher Wendell Berry reminds us that when health is the aim, "a good solution acts the way a healthy organ acts within the body." These solutions fix problems without making new ones. They create a cascading series of benefits instead of externalized harm. There is an emerging movement in architecture called "restorative design" that seeks these "good" solutions. Its ideas can be applied to virtually every operational system in healthcare, not just to buildings. Restorative design means moving from solutions that degrade health and the environment to solutions that do no harm and heal some of the harm we've already done. It's about solutions that stop making us sick.

Until today, we have focused on doing "less harm," but with health as our inspiration, we can become restorative. As architect William McDonough wrote in the seminal book *Cradle* to *Cradle*: "There's nothing exciting about being less bad . . . to be less bad is to believe that poorly designed, dishonorable, destructive systems are the best humans can do."

Think about a healthcare worker who walks all day on shiny

vinyl flooring. Healthcare workers account for more than 40 percent of adult occupational asthma, an issue linked to the cleaning chemicals used to wax and strip vinyl flooring. But it doesn't end there. In so-called Cancer Alley, Louisiana—an 80-mile length of the Mississippi River that's home to 150 chemical plants, including vinyl manufacturing—91 percent

Restorative design means moving from solutions that degrade health and the environment to solutions that do no harm and heal some of the harm we've already done.

> of residents have at least one health problem linked to chemical exposure. When we walk on a vinyl floor, we don't see the asthma connection or the health impacts on the people of Cancer Alley—and that's a problem. We won't have a healthcare system that creates nothing but health until that harm is made visible, until we connect our practices with their environmental and health consequences: land development and habitat destruction, energy and climate change, chemicals and toxic body burden. Unfortunately, today, most of the environmental and health costs of our healthcare system are not transparent.

But there is some good news: When the costs do become transparent, the healthcare community acts. In 1995, a nonprofit organization called Health Care Without Harm made the community aware that medical waste incineration was the second largest contributor to dioxin emissions in the United States. Within a decade, hospitals shut down 99 percent of their 5,000 medical waste incinerators.

Healthcare organizations are adopting restorative approaches to their energy choices, dramatically reducing both energy demands and greenhouse gas emissions. In Issaquah, Washington, Swedish Medical Center operates the lowest energy-consuming hospital in the country—60 percent below the industry average—through optimizing building design and energy systems. And in Greensburg, Kansas, Kiowa Memorial Hospital is the country's first carbon-neutral hospital, using wind instead of fossil fuel.

In October 2014, Gundersen Health System, based in La Crosse, Wisconsin, became the first energy-independent health system, generating more renewable energy than it consumes. Gundersen invested in a series of community partnerships that include wind farms and harvesting methane from brewery waste, local landfills, and cow manure to offset 100 percent of its energy needs—eliminating harm from burning fossil fuels while reducing the burden of these agricultural wastes on their communities.

Innovative healthcare organizations are adopting restorative approaches to their building design. More than a decade





ago, I worked with The Center for Discovery in Harris, New York, an outpatient and residential treatment facility for adults and children with severe developmental challenges, medical frailties, and autism spectrum disorders, to deliver the first LEED-certified US ambulatory healthcare clinic. The executive director, Patrick Dollard, told me: "My people already have so many challenges in their lives—and we don't really know what causes many of their health issues. Why would I want to put them indoors and surround them with chemicals?" We agreed on three principles to guide the design:

- Restore the land because nature can't help heal anyone if the natural environment is degraded;
- Examine every building system and material to achieve a building that supports environmental and human health;
- 3. Take responsibility, ignore the excuses, and just act.

The building, which opened in 2004, became a metaphor for what the center wanted to be. Within a year of opening, the staff parking lot was filled with hybrids instead of suvs. In the decade since the building opened, the center has planted an organic apple orchard on the site, extending the farm to embrace the building, and employed adult residents who live nearby. There's a new tagline: "Food is medicine."

So, is this building a healthcare facility? Or is this building health? Once you start taking responsibility to heal things, the positive effects just ripple further and further out. Or, to paraphrase Wendell Berry, you create a cascading series of benefits instead of externalized harm.

And how does it feel to inhabit these buildings? These are buildings designed by human beings for human beings. No one needs to be afraid to breathe in interiors built with natural and healthier materials that can be maintained with nontoxic cleaning products. They bring nature deep into clinical spaces. They are buildings that respond to the particulars of site, climate, and program, and celebrate local materials, culture, and craft. They blur the distinction between healthcare and health.

Surely, if this were affordable, all our healthcare buildings would deliver nothing but health. But it's not money that stands in our way, it's mindset—many of these solutions are cost neutral or actually generate savings. The reason we don't do these things? Sometimes, as with vinyl flooring, it's difficult to see the harm. And sometimes it's just more comfortable to continue to build and operate the way we always have.

Some healthcare systems have committed to building health: being carbon neutral, shifting the market for healthy materials, partnering with their communities. We can say no to the hundreds of negative environmental and health impacts we create every day, such as toxic building materials and fossil fuel emissions. It's not too expensive, it's not too radical; it's nothing more than common sense. We can transform healthcare by building health.





LEFT TO RIGHT

Harris, New York: The Center for Discovery, designed by Perkins+Will, is the first LEED-certified US ambulatory healthcare clinic. Photo: David Allee

Issaquah, Washington: The Swedish Medical Center, by CollinsWoerman, operates the lowest energy-consuming hospital in the country through optimizing building design and energy systems. Photo: Benjamin Benschneider

Greensburg, Kansas: The Kiowa County Memorial Hospital, designed by Health Facilities Group, is the first US carbon-neutral hospital, using wind instead of fossil fuel. Photo: Steve Rasmussen Photography

La Crosse, Wisconsin: The Legacy Building, a hospital of the Gundersen Health System, designed by AECOM. Gundersen generates more renewable energy than it consumes. Photo: Courtesy of Gundersen Health System



CASE STUDY: MATTAPAN

HOW GOOD DESIGN CAN BOOST A COMMUNITY'S PHYSICAL AND CIVIC HEALTH

Contractor of the second

by Alyssa Haywoode

Stand in Mattapan Square, and it's easy to see where good design is needed. Blue Hill Avenue traffic slices through the square. Cars are empowered; pedestrians are dwarfed. People hustle across this complex intersection of Blue Hill Avenue, Cummins Highway, and River Street, jaywalking when they have to because there aren't enough pedestrian crosswalks painted on the asphalt. And what hangs in the air like exhaust fumes is the lingering sense that Mattapan is just a place some people drive through to get to the suburb of Milton.

"We avoid the Square as much as possible because we don't think it's safe," says Vivien Morris, a Mattapan resident and confinition of the Mattapan Ford and Filmer Confident Increase the Square's safety, Morris suggests, and Boston's Hubway bike sharing system could be brought to the area, creating a healthy travel option and greater transportation equity. Morris is the director of the Office of Racial Equity and Health Improvement at the City of Boston's Public Health Commission.

The premise is enticing. Bike- and pedestrian-friendly streets could lower obesity rates. Parks could lower blood pressure. Empirical data to make this case may be limited. But Mattapan residents and community organizers are too busy building a healthier community to wait for statistics to confirm what they already know: that good design is good for communities.

Mattapan has more than its fair share of America's health and economic problems. Residents grapple with asthma, diabetes, Vitamin D deficiency, obesity, hypertension, high cholesterol, and depression. From 2008 to 2012, Mattapan's unemployment rate was 18.2 percent, much higher than Boston's overall rate, according to the Public Health Commission's "Health of Boston 2014–2015" report. Median http://www.actapaco.align.com/ecoles/famillo.tom as a whole.

Can health-promoting design tackle these problems? Yes, it can, says Azzie Young, CEO of the Mattapan Community Health Center. In 2012, the center opened its new "green" building in Mattapan Square. Staffers ask visitors who tour the building to describe it in one word. That word could be "light" or "colorful" or "windows" or "modern."

But it's closer to call it a vibrant human healthcare aquarium.





Daylight streams into the health center's buoyant atmosphere. The medical area is decorated in calm greens. The dental area is awash in Caribbean blues. Administrative areas are a cheerful orange. Patients and staff can see out, and the community can see in.

The point isn't that the health center is pretty. It's that the building increases patients' access to medical care. The number of exam rooms has doubled. There's more room for more doctors, which encourages more professional collaboration. Mammography services that were once provided in a van are now offered by Boston Medical Center in one of the health center's suites. The ventilation system provides fresher air, a benefit for asthma patients. And the bright colors appeal to the neighborhood's many Haitian and Caribbean residents.

The center also promotes the social determinants of health, Young explains, including employment. So it's a design victory that it has space for two tenants—cvs and Citizens Bank—and that all three entities hire local residents. This integrated approach is a result of involving the community in the health center's design, according to its architect, Kevin Neumann of Steffian Bradley Architects.

Residents are also working on health and design. On a humid night inside the Mildred Avenue Community Center, neighbors gathered for the August meeting of the Food and Fitness Coalition. People introduced themselves by sharing their favorite childhood activities, a range that included soccer, jump rope, cricket, biking, playing tag, and square dancing. Then the reports began: updates on events and projects, including Mattapan's farmer's market, the Woolson Street community garden, and the success of the previous month's Mattapan on Wheels 5th Annual Bike-a-Thon.

PREVIOUS SPREAD

A section of the mural Taste of Home (Gou lakay mwen [Haitian Creole] or Sabor de Casa [Spanish]), 2015, by the Mayor's Mural Crew. The 122-by-10-feet mural is located at America's Food Basket, a grocery store in Mattapan Square. Photo: Heidi Schork

ABOVE

Hakim Carnes works on *Taste of Home*. Image from an ongoing series documenting the Boston Creates initiative. Photo: Leonardo March

A group of "Healthy Community Champions"—grassroots community ambassadors supported by federal funding reported on their efforts in three areas: increasing access to healthy food, campaigning for smoke-free housing, and increasing physical activity.

Suggestions and offers were made. There's a bike lane in Truman Parkway in Milton, someone said. Couldn't it be extended into Mattapan? And does anyone need the extra worms that have been used for the community garden's composting?

An undercurrent ran through the

meeting: Well-designed environments can boost a community's physical and civic health. That's also a major initiative of the American Institute of Architects. "When people think of health, often the first thing that comes to mind is the medical industry and treating illness when individuals are unwell. However, architects can help create healthy communities," according to a 2012 AIA report, "Local Leaders: Healthier Communities Through Design." "Preventative strategies for improving health can be designed into our cities in a way that could lead to better health outcomes, helping people from becoming sick in the first place."

What's next for the neighborhood? Mattapan Square Main Streets, which was founded in 2011, is working on plans to develop and promote the area's cultural and economic assets. Mattapan will also be engaged in Mayor Martin Walsh's Imagine Boston 2030 initiative, a planning exercise that asks residents to "Share Your Vision" to "Shape Our City." And the Neponset River Greenway is being expanded to add Mattapan and Milton to its bike and pedestrian pathway, which will run from Dorchester to Hyde Park.

Residents and community organizers also have a wish list of more projects they'd like to see in Mattapan, including:

- Creating a central gathering place in the heart of Mattapan Square, where people could meet and information could be shared. This could include periodically closing off Fairway Street, a small side street just off Blue Hill Avenue, to host events.
- Turning the beige brick building that sits empty on Mattapan Square into a visitor's center or a canoe launch on to the nearby river. The building is owned by the state's Department of Conservation and Recreation, and officials there are evaluating how it can be used to support the Neponset River Greenway.
- Incorporating healthy design into whatever gets built on the Mattapan station commuter lot, which is being sold by the MBTA.
- Increasing the number of community gardens. These provide learning experiences for children and, more crucially,

fresh food for people who may not be able to afford it.

 Adding bike lanes, enforcing rules that ban double parking, and slowing down the traffic on Blue Hill Avenue.

Then, there's the matter of what could be called soft design, promoting the civic organization it will take to encourage people to use what gets built.

"I am adamant that when this baby opens, we've got to be out there," Vivian Ortiz said, walking along River Street beside the Neponset River Greenway, where she wants community members to walk and bike and enjoy the scene once the Greenway is completed. Ortiz is the project coordinator for Mattapan's Let's Get Healthy, Boston! initiative. Funded by the Centers for Disease Control and Prevention, the grant is being managed by the Boston Public Health Commission. Recipients include the Mattapan Food and Fitness Coalition and 11 other community organizations in Boston.

It's not simply a case of *if you build it, they will come.* Ortiz says it takes outreach and programming that informs people and gets them out into the community.

Architect David Lee, of Stull and Lee, agrees. "Design can do some things, but it has to be combined with programming. It has to be combined with common sense." Lee says Mattapan—and Boston—should be thinking about multiple forms of mobility, not just cars, and about equal access to reliable transportation. Traffic and driving patterns need attention, especially because, as Lee says with simple clarity, "Getting hit by a car is a bad health outcome."

He points to the Southwest Corridor Park, which he codesigned, saying it has become "a set of lungs" for the Boston neighborhoods it connects. And he notes that New York City's elevated High Line park has opened up new options for moving around the city.

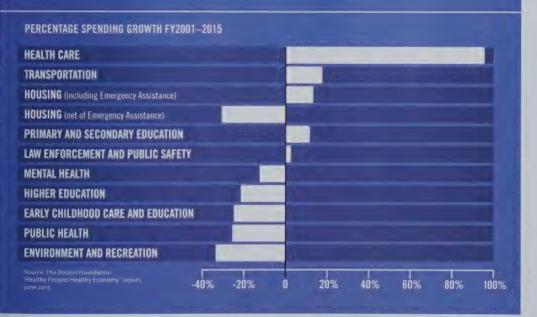
"I'd like to see more spaces where we can come together across neighborhood boundaries," says Lee, citing Downtown Crossing in Boston as an example, as well as New York City's Washington Square Park, where African drummers and chess players peacefully coexist.

As for Mattapan, it's on its way to creating well-designed, healthy spaces that can be shared with residents and all of Boston—an ongoing effort that could use the insights of architecture and design professionals who have a keen interest in the community's conversations.

Stand in Mattapan Square amid the traffic, the stores, the people, and the dreams, and it's easy to feel how much potential there is to make Mattapan a model of urban well-being.

Massachusetts State Spending - Healthcare and Other Determinants of Health

We spend so much money on "sickness care" that there is less available for the things that keep us well such as recreation or public health nutrition. The numbers on this chart need to be reversed.



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3 TAKES

AN ARCHITECT, A DESIGNER, AND A DOCTOR WALK INTO A HOSPITAL ROOM ...



ARCHITECT CREATE A SPACE, AND CONTROL IT by George A. Takoudes AIA

Hospitals are places of profound human activity: exuberance and solace, solitude and community, interaction and introspection. Prognosticators tell us of a future full of wearable technology and real-time biometrics delivering big data to medical centers. Telemedicine will allow surgical teams to collaborate with robotic surgery across the globe. Such innovations, we are told, will transform hospitals and improve medical outcomes. Future spaces for healing will challenge this generation of architects to accommodate technology's warp speed and invent patient spaces that synthesize these complexities of human-centered design.

But health, quite simply, is about people: a caregiver's compassionate touch, a parent's concerned gaze, a moment of courage in the face of a diagnosis. How do architects translate the patient experience into spaces for healing? Perhaps it's in the way recent projects offer wireless control that allows patients the choice to leave their room white or "paint" it with LED lighting technology. Or how simple, uncluttered rooms void of beeps and buzzes will have flexible furniture systems tucked into walls to allow family to comfort an expectant mother. Or the way a young cancer patient—dressed up as Batman or a Disney character—receives chemotherapy in an active, open space that looks more like a living room than a sterile hospital space.

Healthcare architects readily consume complex guidelines and metrics that establish many of the necessary and inevitable rules of engagement in design and planning of our hospitals. But in our future, successful healthcare spaces might be more about the nuanced interplay between patient and physician, technology and structure, regulations and creativity. Even within the highly regulated world of healthcare design, architects will create spaces that protect and heal, are private yet open to possibilities, and express the passion and optimism of architecture to affect not only the built environment but also the human condition.

DESIGNER SIT UP, THEN HEAD ON OUT by Lee Moreau AIA

The inpatient room is all about getting out.

What's the goal of the inpatient hospital stay? Ultimately, it should be a speedy and full recovery—and, to that end, we need to reconsider the design of our inpatient facilities. There needs to be a clear pathway in a patient's mind (and through the clinician's processes and tools) out of the hospital and toward the patient's home. Many elements of contemporary hospital design conspire to obstruct that pathway: shared hospital rooms that have been proven to lead to increased infection rates, a lack of calming artwork or views of the outside, or the location of supplies and equipment requiring nursing staff to enter and leave a room multiple times.

Our team at Continuum has been working with Herman Miller on a range of healthcare projects focused on the inpatient experience. Ethnographic researchers talked with clinicians, hospital administrators, architects, and designers and realized that a key aspect of the journey to recovery involved getting people to transition out of their beds, where they often feel immobilized and helpless. Patients recover faster when they can start moving.

One outcome of our research process is the Nala Patient Chair, designed to propel the user upward and outward, to help speed recovery. Functionally, the chair helps caregivers minimize the risk to their health, as well as the patient's, when transferring the patient from bed to chair. Emotionally, its welcoming design encourages the patient to get out of bed and continue the healing process. Once seated, the patient is comfortable and can relax; the body is well supported, and movement is easy and natural.

According to a 2010 study by the US Department of Health and Human Services, an estimated 27 percent of patients suffer an adverse event or an experience that results in temporary harm while hospitalized. Although modern medical breakthroughs abound, the physical space of a hospital is statistically more dangerous than a typical county fair. There are times when a stay in a hospital room is unavoidable, of course, but whether it's a chair, a room, or a supply closet, there's much we can do to advance hospital room design and help accelerate recovery.



ILLUSTRATIONS: Elena Boils Details from The Akershus Hospital (bed) and Maggie's Centre (sofa), from a series of hospital illustrations originally created for Mosaic magazine.

DOCTOR DESIGN A BETTER SYSTEM by Walter Robinson MD

I have worked as a doctor in every manner of hospital room: 12-bed open wards for men stabbed by a stranger outside a bar, single-bed private rooms for a hospital trustee's kidney stone, delivery rooms with a crucifix positioned so that the laboring woman could not help but gaze upon her suffering Savior, spaceship-like intensive care units with rows of blindfolded infants in brightly-lit plastic wombs, and drab rooms full of the sorrow of a dying teenager and his family. There is a hard but human truth about hospital rooms: They are better or worse not because of the amenities they provide or the money they save, but for their ability to help the staff ease the suffering of the sick and cure the illnesses that can be cured.

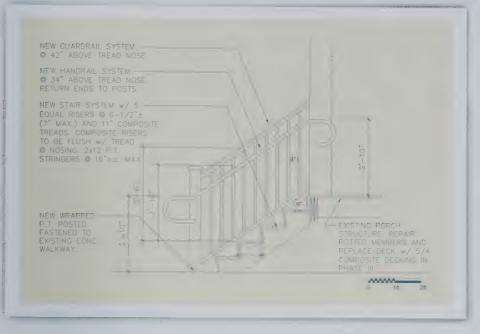
The best hospital rooms can make it easier for a nurse to console a fearful child, easier for a housekeeper to clean quickly so that the next occupant need not linger on a stretcher in the ER, easier for a physical therapist to assist an elderly patient into a comfortable and washable chair, easier for everyone to do their work without having to enter and leave three times, easier for patients and clinicians to get help when needed. The best hospital room is one that helps all the people who care for the sick do a difficult job in a compassionate manner, and that may not be the most private, the most comfortable, or the most visually appealing room. To think of a hospital room as a hotel room with nurses is to miss the modern truth that being well enough to care much about amenities should mean being well enough to leave the hospital; a hospital room today must help facilitate compassionate human contact with the seriously sick who have no other refuge.

Designing a better hospital room means designing a better healthcare system, one that provides skillful and compassionate care to the sick wherever they may be. We need a system that values the work of caring over the profit of promising luxurious cures, one that would give caregivers at all levels the space to do their job well and the respect to do that job with pride. We really don't need better hospital rooms; we need a better approach to healthcare that will work in all the rooms we have now.

PROJECT RECOVERY



AFTER THE BOSTON MARATHON BOMBINGS, DESIGN VOLUNTEERS UNITE



ABOVE

Porch step section, courtesy of Architecture for Humanity Boston (AfHB)

OPPOSITE

A Somerville, Massachusetts, triple-decker was renovated for a third-floor resident injured in the Boston Marathon bombings. Photo: Michael McHugh

by Michael McHugh AIA

A looming deadline kept me from my usual spot a few blocks from the Boston Marathon finish line on April 15, 2013. When I heard the news that a bomb had exploded, my thoughts turned to friends whom I knew would be in the area. The random nature of the bombing spared those friends, but it shattered the lives of people I was soon to meet.

Boston galvanized quickly. Emergency responders and bystanders fashioned tourniquets from anything handy. Medical tents became triage hospitals. The city and state established the One Fund to collect donations. And then quietly, behind the scenes, the state Department of Public Safety created the Boston Survivors Accessibility Alliance to provide home renovations to those who would be needing big changes to their physical environments. The design community also rallied, with many ideas and offerings of support. At the Boston Society of Architects, this energy coalesced into a committee, Renovate for Recovery, which brought together architects, designers, and accessibility consultants to provide volunteer design services to make homes accessible for those who lost limbs and suffered other traumas.

My team was matched with a survivor who had lost a leg and lived on the third floor of a Somerville triple-decker, where she wanted to remain. She was faced with front porch steps that were worn, uneven, and without handrails. Getting up the narrow and twisting stairs to her apartment was another obstacle. Because the climb was so challenging, we recognized a need for a place where she could access fresh air and sunshine without the struggle of all those stairs. There was an existing roof deck, but the railings were flimsy and it could barely support one individual under the best of circumstances. The apartment itself had limited maneuvering space and a tiny bathroom, whose door swung into the room and barely cleared the toilet as it opened.

To maximize accessibility within the existing bathroom and entry spaces, door swings were reversed and new fixtures were installed. Simple yet thoughtful changes can make all the difference in the world.

> So the project was divided into three phases that volunteer construction crews could complete swiftly. The phases were: 1) the steep, uneven front exterior stairs; 2) the new roof deck; and 3) improvements to the building interior to make it more accessible.

> My team set right to measuring existing conditions and producing a set of design drawings. The alliance coordinated with contractors willing to do the work, and crews from the PBS television series *Ask This Old House* picked up Phase 1. They were soon on site with construction and production workers discussing the porch stairs. These needed to be rebuilt so that she would be able to use railings and firm surfaces for support in all kinds of weather.

Filming construction in multiple takes for television slows things down quite a bit. More than a few local handymen stopped by to comment that it wouldn't take *them* so long to build a few steps! By the fall, the steps were finished and the segment aired.

Phase 2—the roof deck—took a little longer to get going with the cold weather setting in. The existing deck was just a railing around the roof of the second-floor porch. The roof had to be opened up to evaluate the existing structural conditions. There wasn't much to evaluate: It turned out that the roof structure was practically sawdust and had to be rebuilt. Volunteer structural engineers joined the team; together, we designed a new deck. The contractors worked around the tricky winter weather and a reviving building market. By spring, the deck was ready, becoming a small haven to step outside and enjoy the sun without worrying about safety.

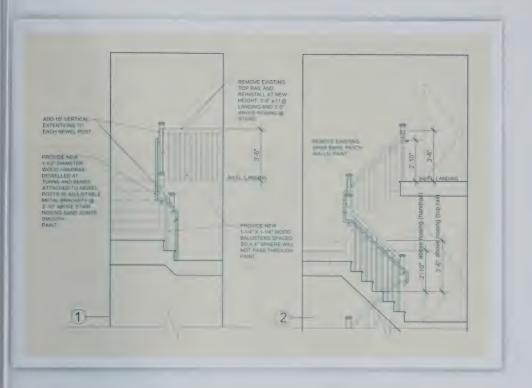
Phase 3 was more complicated still. Carpenters, plumbers, electricians, painters, and flooring installers needed to coordinate in a small space to rebuild the interior stair's handrails and guardrails at an accessible height that could support a newly disabled person as she learned to make her way up and down. The railings were rebuilt to match the details of the existing newel posts and balusters to preserve the character of the existing building and to avoid an institutional look.

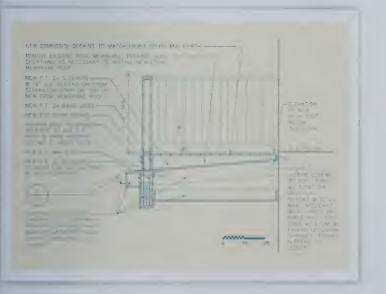
To maximize accessibility within the existing bathroom and entry spaces, door swings were reversed and new fixtures were installed. The flip of a door swing from one side to another made the difference between the door being a barrier and being able to reach the toilet. Simple yet thoughtful changes can make all the difference in the world.

The final phase was complicated by the fact that this was yet a third construction team, with a different general contractor in charge. By the spring of 2014, the construction industry had greatly recovered; although the project leaders were still committed, coordinating volunteer subcontractors was becoming increasingly difficult. Numerous starts and stops between trades working in tight quarters slowed things down. The priorities of the volunteers were being strained by other commitments. As the project dragged on, everyone got frustrated. Even on nonvolunteer jobs, it is often difficult to get those last punch list items finished. The same held true here; the volunteer nature of these projects is both their blessing and curse.

Renovate for Recovery and the alliance represent a valiant effort by the local building and design industry to meet the needs of those injured by the bombings. The key elements to making it all happen: the leadership of the Massachusetts Department of Public Safety and the cooperation of the local building departments. The Community Design Resource Center's professional liability insurance covered ad hoc teams of design volunteers and paved the way for many designers to participate. The design and building community should continue to examine how this unusual model of volunteerism and donations might become a framework to build on, to meet the next hurricane, flood, earthquake, or disaster.

The Boston Survivors Accessibility Alliance program is still accepting applications. Visit www.mass.gov/dps.





PROJECT TEAM (LISTED ALPHABETICALLY)

Allen & Major, structural engineers Architecture for Humanity Boston Community Design Resource Center (CDRC) Davis Square Architects S+H Construction Structure Tone

ABOVE

Stair details, courtesy of AfHBoston

LEFT Roof section, courtesy of AfHBoston

CAPSULE REVIEW

The artists Susie Freeman and David Critchley and doctor Liz Lee give new meaning to the phrase "body of work." Over the years, the British trio has collaborated on art that riffs on how we respond to medical issues, armed with a dispensary of drugs to boost our sense of wellness. Calling themselves Pharmacopoeia, they incorporate pills and their packaging into fabric by a process known as "pocket knitting," creating objects and installations that seem to beg the question: In the overmedicated world we live in, have we created landscapes of healing—or of harm? Their creations conjure up a worrying world, one that synthesizes and then explodes the idea of treatment, cure, and well-being.

RIGHT

What Once Was Imagined (2015) 10-metre circular installation illustrating medicine in the 21st century

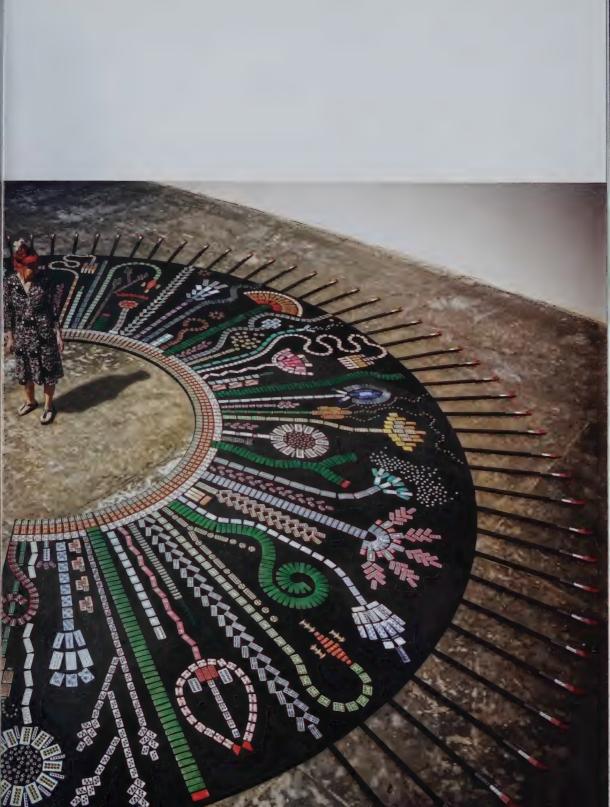
Susie Freeman and Liz Lee

Commissioned for the exhibition INVENTO, at OCA Museum in São Paulo

Inspired by global plant sources for medicines and fashioned in the form of a *mantilha*-a Brazilian headdress-the artwork reconfigures more than 9,000 pills and packets into a richly composed amalgam of plant life.

Photo: Marcelo Elídio





RIGHT

отс Veil (1998) Monofilament-knitted pockets encasing nonprescription pills

Susie Freeman and Liz Lee

The first collaboration by Freeman and Lee is a not-soveiled commentary about "political prescribing," or how women were given sedatives because it afforded society an easy way of dealing with poverty and domestic violence.

Photo: Chlöe Stewart

OPPOSITE

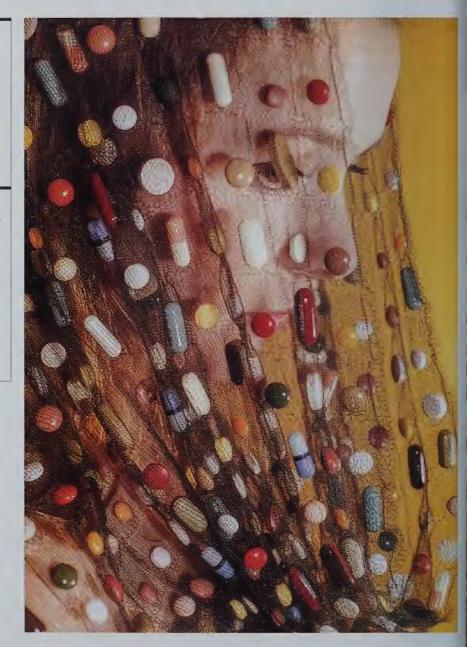
White Pain (2007) The packaging that remains after a lifetime of painkillers

Susie Freeman and Liz Lee

For Medical Mesh, Museum of Decorative Art, Bergen, Norway

Mesh pockets chronicle the array of drugs one mat takesstarting as a child with pills for earache, toothache, and sore throats through painkillers and antidepressants in adulthood to opiates for cancer at the end of his life.

Photo: Susie Freeman









Wieg tot Graf (2009) Fabric under glass contains all the pills that "everywoman" and "everyman" living in the Netherlands today have been prescribed.

Susie Freeman, Liz Lee, and David Critchley

LEFT

A Dutch version of The British Museum installation Cradle to Grave, Wieg tot Graf reveals the story of a typical man and woman through the medication they have taken in their lifetime, accompanied by family album photographs, documents, and objects. On permanent display at CBG-MEB (Medicines Evaluation Board), Utrecht, Netherlands.

Photo: Susie Freeman

ABOVE

The installation at the exhibition *Daglig Dosis*, Silkeborg Art Centre, Jutland, Denmark, in 2011.

Photo: David Critchley





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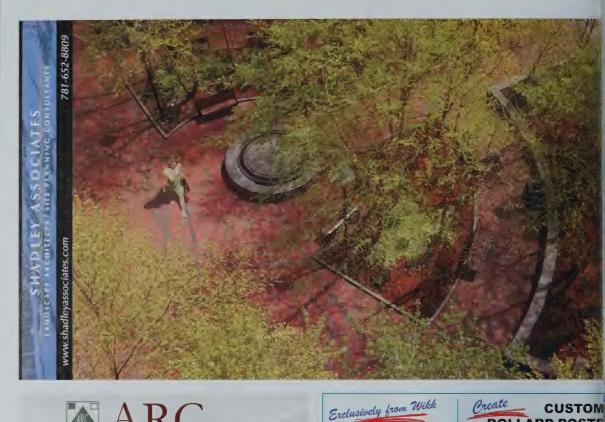
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- Architecture Cruises
- Family Design Days
- Student Design Days
- Teen Workshop series
- KidsBuild!
- Film series
- Book talks
- Architecture tours
- CultureNOW Public Art
- LEGO^{*} Design Challenge

Asian CDC (Boston)

A-VOYCE: A summer youth leadership program that teaches concepts in community-driven planning.

Boston By Foot

Scholarships for underfunded schools to attend Boston By Little Feet Tours.

CareerPoint (Holyoke)

Youth participants learning about architectural history and historic building restoration.



- Typewriter Orchestra
- Letterpress workshop
- Artist talks
- StereoType open house
- TypeCast: Twelve Quick Talks on Type
- · What the Sketch?
- Building Blocks series
- INTER/SECTIONS: The Work of Janet Echelman

CDRC (Boston)

Adaptation of the Living with Water design charrette into a series of neighborhood workshops in East Boston.

Coelho Middle School (Attleboro)

Let's Go Outside! Designing a Community Park: A program that enables 100 middle school students to develop and share their design ideas.

- WalkBoston conference
- IDeAS Boston conference
- BSA and BSA Foundation
- Civic agenda
- ImagineBoston 2030 Youth
 Housing Urban Design Brainstorm
- resiliency scan
- Living with Water Pecha Kucha

ImagineBoston 2030 Youth Brainstorm

- City Sketch: An Urban Drawing Walk
- "Tactical Urbanism + The Lawn on D"
- Back Bay's Evolving Skyline
- "Olmsted's Legacy: Landscape + the City"
- BSA Foundation Golf Tournament
- Dining with Design series

Community Boat Building (Boston)

Hands-on, interdisciplinary curriculum of experimental learning.

Future Prep 101 (Boston)

Half day seminar providing Massachusetts teens with design school prep.

Hawthorne Youth (Roxbury)

Build Up! Build Down! Build All Around!: A project that engages vouth in a design curriculum.

- Living with Water Semifinalist Reception
- Living with Water Pin-up
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 - Designing Boston series
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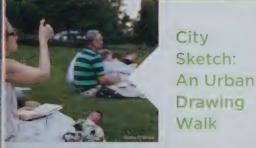
Grantee programs

More than \$46K in grants were awarded in 2014 for 2015 programming.





n Typograatiy



MassArt Community Build Studio (Boston)

Community design workshops culminating in the construction of garden elements to support activities at the new Woolson Street Community Garden.

HighWaterLine (Boston) Creation of a participatory public art project that creates a community working to build climate resiliency.

Preservation Worcester (Worcester)

A replicable after-school program for students to envision themselves in roles that develop and preserve the built environment.

Sociedad Latina (Roxbury)

experimental, hands-on, STEAM that uses design, sustainability, programming.

Somerville Neighborways (Somerville)

A resident led initiative that will transform quiet, residential streets into a network of familyfriendly, low-stress corridors.

Southeast Asian Coalition of Central MA (Worcester)

and building, to transform a street.

KidsBuild!

The Discovery Museums (Acton)

Backyard Builders, a yearlong, building-themed program integrating STEM learning.

Wentworth Institute of Technology (Boston)

Co+Build and several small 150 middle school students with Youth Street Project: A program design/build projects that will improve the educational environment within three Boston public schools.

Thank you to the Foundation's Legacy Circle members for supporting initiatives that illuminate the ways in which design affects everyone's quality of life.

To learn about the impact of Foundation programs on individuals, communities, and city systems, and to keep updated on Foundation programs and volunteer opportunities, visit BSA Space, 290 Congress St., Boston, or online at architects.org/foundatium.



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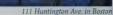
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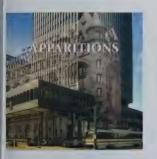


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BOOKS



Apparitions: Architecture That Has Disappeared From Our Cities T. John Hughes Images Publishing Group, 2015 Reviewed by Peter Vanderwarker

In a remarkable photomontage, a ghostly pyramid from Memphis, Egypt's capital during the Old Kingdom, sits next to the Parthenon. The location of these unlikely neighbors is even more strange: The short text identifies the site as Nashville, Tennessee. The Parthenon is a replica that exists today, and the pyramid was built next to it for the 1897 Tennessee Centennial Exposition.

Apparitions is a photography book about buildings, like the pyramid, that have disappeared from American cities. It documents examples from more than 60 cities, using semitransparent black-and-white images of lost structures that hover over color images of the same site today—the specter of the past hovering over present-day America.

In another hilarious image, a hotel tower that looks like an alien spaceship from a 1950s sci-fi movie hovers over a present-day bus stop in front of the Las Vegas Convention Center, as if it is sucking up Sin City. The tower is the ghost of the Landmark Hotel, which opened in 1969 and was once owned by Howard Hughes. (On November 7, 1995, the Landmark was demolished for construction of the new convention center. The implosion was filmed and used in *Mars Attacksl*, the 1996 sci-fi spoof film by Tim Burton. Sadly, this footnote was not included in the book.)

Some of the photomontages do justice to the idea that our past always haunts us, with the best ones reminding the viewer of pentimento—that wonderful layering that happens when an artist paints over an old canvas with new paint. But the book suffers from technical (and conceptual) issues that make it frustrating for the reader.

"Then and now" images play upon our gauzy notions of a romantic past. The city of the past never looked as good as it did in the old print: It was probably done by a photographer who was interested in taking a "beautiful" image. Conversely, the new view often looks quite random: The photographer could make no aesthetic choices about how to frame his subject, and most often the new city appears far worse than it is.

Not surprisingly, the best of these "then and now" pairs happens when a staunch old building survives from the old image to the new one. This is when you want to stand up and applaud the preservation movement.

Apparitions suffers when old views are rendered as semitransparent Photoshop layers, presumably registered over the new views. So much rich detail is obscured by fresh ink. Scale is also an issue: Old cities were much smaller and more finely grained than new cities, and Apparitions fails to communicate this. Some of the old views are heavily pixelated, a look that happens when a small image is enlarged to fit a much larger canvas. Since the author covered dozens of cities for this book, no single, powerful story or lesson emerges.

Our cities change quickly, and our attitudes toward architecture change, too. When it was first proposed, Harry Cobb's design for the Hancock tower in Boston was the target of scathing criticism by the Boston Society of Architects. Recently, the tower was given the Twenty-five Year Award by the American Institute of Architects, one of its highest honors.

To quote Heraclitus: "No man steps in the same river twice." The city isn't the same, nor is the observer.

PETER VANDERWARKER is a photographer with an interest in urban history whose prints are in major museum collections. He is the author of four books on Boston architecture and has won Institute Honors from the American Institute of Architects.



Architecture by Moonlight: Rebuilding Haiti, Redrafting a Life Paul E. Fallon University of Missouri, 2014 Reviewed by Gerard Georges ASSOC. AIA

After the devastating 2010 earthquake $\ensuremath{\mathrm{in}}$

Haiti, Paul E. Fallon resolved to help rebuild the island he had visited the year before. Over the course of 17 trips that spanned three years, he channeled his efforts toward constructing an orphanage in Grand Goâve and, in the process, absorbed lessons about perseverance that he chronicles in this absorbing book.

With a writing style that is captivating and colorful, the Cambridge, Massachusettsbased architect evokes an environment that immediately draws readers in and piques their curiosity to learn more. His story—the quest to design, plan, and build an orphanage with the Gengel family, in honor of their daughter who died in the 2010 earthquake—unfolds panoramically, like a well-directed movie, and is infused with socioeconomic analysis as well as heartfelt moments and humor.

Chapter titles are cleverly reminiscent of a construction schedule (from Chapter one, "Demolition: January 2010" to "Paint: November–December 2012") and mirror a process familiar to building industry professionals; they also create a logical framework for the detailed saga of reconstruction in a chaotic, unpredictable environment.

Fallon draws parallels that infuse the

book with a reflective soul. He describes feeling transfixed as he observes Haitian women sweeping dirt in a "quiet, futile dance" and likens their quest for order with his graduate school all-nighters, building models and debating architecture's truths with other students. "Because architecture is an art burdened by pesky realities of construction and function, not every endeavor will succeed." This, in turn, effectively describes the collision of the American "can do" work ethic-creative, organized, formulaic-with the potentially chaotic yet resourceful Haitian's mantra—"Do what I can with what I can get."

As the book draws to a close, yet another wonderful passage describes how many of the characters, with their varying perspectives and personalities, can band together for a common purpose and achieve something special. Fallon has asked to address local congregants during a prayer service: "Every person in this church is a person with strong beliefs. We hold many beliefs in common. We believe in man's ability to improve his lot here on earth. We believe that when we work together we can create something greater than when we labor alone. We believe in constructing our buildings strong."

This memoir, itself solidly crafted, deftly captures the many facets of working in a resource-limited setting, which can provide an intimate understanding of the relationship between design and construction. Fallon successfully weaves together the flavors, attitudes, and cultural nuances of living in and working in Haiti.

Although it's framed primarily around architecture and construction, *Architecture by Moonlight* is about so much more: examining the motivations behind engaging in humanitarian endeavors, dispelling preconceptions, and discovering richness in the human spirit.

GERARD GEORGES ASSOC. AIA, who was born in Haiti, is a project manager at Shepley Bulfinch in Boston. He is currently working on several rebuilding efforts in Haiti.



Breaking Ground: Henry B. Hoover, New England Modern Architect

Lucretia Hoover Giese and Henry B. Hoover, Jr. Friends of Modern Architecture/Lincoln in association with University Press of New England, 2015 Reviewed by Lucy M. Maulsby

The recent focus on midcentury Modernism in New England, evident in the publication of recent books and exhibitions, has brought critical attention and new points of view to the ways in which architectural Modernism and the personalities associated with its dissemination shaped the region, a landscape that continues to be most often associated in the American imagination with an idealized colonial past.

Breaking Ground offers a significant contribution to this body of work through an analysis of the Lincoln, Massachusetts-based architect Henry B. Hoover, who received his master's degree from Harvard University in 1926 and explored his own brand of Modernism in the postwar period. The monograph, written by Hoover's children, traces his professional life from his student years at the University of Washington to the establishment of a vibrant practice through examples of his work, the majority of which are single-family homes in towns west of Boston.

The authors are concerned with the ways Hoover used modern forms, materials, and building technologies to create structures carefully attuned to the environment and their sites. The resulting narrative gives only passing attention to the activities of figures associated with the interwar European avantgarde (especially Walter Gropius, who moved to Lincoln and built his own house there in 1938) that have dominated much of the literature. *Breaking Ground* thus argues for a re-evaluation of the Modernist tradition in New England, one that considers the ways in which local practitioners, shaped by very different cultural, political, and economic forces, helped define a modern residential architecture in the region.

One of the strengths of the book is the authors' attention to the ways in which larger shifts within the region spurred Hoover's practice, which was expanded to create a partnership with Walter Lee Hill in 1955. Among these was the substantial federal and state investment in highway infrastructure around Boston (including Route 2 in 1955 and Route 128 in 1959). These changes, alongside the rapid expansion of the economy in the postwar years, encouraged substantial residential development. Professionals, businessmen, and academics with connections to MIT and Harvard were drawn to Hoover's comfortable lightfilled homes placed within rustic settings in towns, especially Weston, Lexington, and Lincoln, that were now easily reached by high-speed roads.

Like many other architects working in a Modern idiom in this period, Hoover made vernacular themes a focus of his architectural practice. His approach was undoubtedly informed by his experiences in the office of landscape architect Fletcher Steele but was also a consequence of the still-rural character of the properties in the communities where he was most active. In Hoover's early prewar buildings, low, often single-story, flat-roofed houses take advantage of the contours of the land and exploit significant views. These themes persist throughout his long career but are enriched by more complex geometries, solutions devised to meet the needs of a variety of different sites (including those without dramatic topographical features), and the incorporation of a diverse range of local materials.

The publication of this volume represents an opportunity to begin to clarify the many approaches to Modern design found in New England in the postwar period as well as a means to consider Hoover's particular contribution to the reshaping of that landscape.

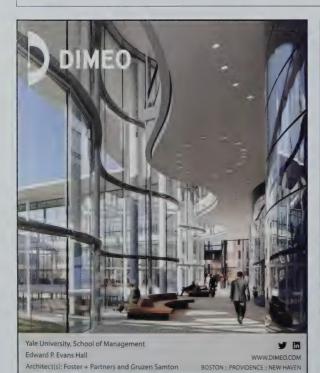
LUCY M. MAULSBY is an associate professor at Northeastern University's School of Architecture.



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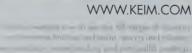
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SHELTER FROM THE STORM

by Elissa Ely

Sometimes, serenity presents itself where it has no right to be. One night a week, for more than 10 years, I sat in an office without windows or much ventilation and looked at a stalk of pussy willow that never grew. The mental health clinician at the homeless shelter had clipped it from his backyard and placed it in a glass on top of a filing cabinet with drawers that didn't close. Those drawers were filled with hundreds of intake folders; people who came for help, disappeared, reappeared, changed their names, changed their genders, changed their habits, or, because their lives were impossible, didn't. The pussy willow never grew-but it never died, either.

Strictly speaking, the office was a mess. It was just off the shelter dining room, by the women's dorm. When my colleague needed to find one of the female guests, he would open the door and holler a warning down the rows of bunk beds: "Man in the dorm!" There was intermittent lighting overhead, and the floor was sticky. We argued over a small desk fan, and because he was a gentleman, I usually won. Once, after I'd been sitting in a chair all night, my colleague suddenly remembered to warn me that its last occupant had been struck down with Norovirus a few hours earlier.

Originally, the office had been a neutral color. Then someone painted it dark evergreen. The color created a false sense of verdancy—but also, a true one. Something worthy grew there. It had to do with the piles of plastic garbage bags that filled every corner. Each was stuffed with personal clothes, books, photos, journals, cosmetics, hospital discharge summaries-no sharps, weapons, or drugs. One held a suitcase. Another held art supplies.

They all looked the same—who can tell this Hefty from that one?-yet my colleague kept them all straight. He knew exactly which unmarked bag belonged to which client. It was a miracle of professionalism.

All night, people would pound on the door, interrupting our scheduled appointments (and blessedly letting a little fresh air in), to ask for their bag. They were also looking for their first conversation of the day, even though it was 7 o'clock at night, or for respite from chaos or for a mostly clean chair to drop into. Often they were reluctant to leave. The room itself was grim and overgrown, but the visitors wanted to stay, and my colleague never hurried them. He seemed to have all the time in the world. He knew what was in each bag, and he knew what was in each person.

Over the years, the bags changed in size and shape, of course; one pile was continually replaced by the next because departures and arrivals in a shelter never end. Some bags went unclaimed for weeks, but he didn't throw them out. That would have been a negation of existence.

We sat in an evergreen, windowless room, among garbage bags filled with lives—an odd place for promoting mental health. And yet, it did. On top of its filing cabinet, in its low-key, unfussy way, the pussy willow neither flourished nor faded but somehow, survived.

ELISSA ELY is a psychiatrist.

ABOVE Figure in the Woods, by Melissa Olson, 2012

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