The Architect's Newspaper

September 2019

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China's infrastructural geopolitics page 22

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ICYMI Eavesdrop 62 Highlights Marketplace

Drawing Rooms

Sam Jacob's Cartoon Museum opens with a bang. see page 8.



Deans List

The country's newest architecture deans on their visions, role models, and mascots.

For many architecture and design schools across the United States, 2019 marks a shift in institutional leadership. From Charlotte to Berkeley, new deans will assume the helms of some of the country's most challenging—and exciting—programs. The deans will have the opportunity to shape design pedagogy and practice in significant ways, potentially guiding how

academic institutions teach and address issues related to the built environment for years to come. But in an era of collaborative learning and community engagement, what does deanship look like? AN asked eight of the country's new deans about their plans for the future of their schools and their discipline. Here's what they have to say. continued on page 12

Forced Labor, Forced Out

A new group of experts wants to eradicate modern slavery in the built environment.



The 2018 Global Slavery Index estimated that 24.9 million people around the world are enslaved in forced labor. Although the practice underpins much of the global 21st-century building economy-for example, the index noted that of all imports to the United States that are at risk of being produced under conditions of modern slavery, timber was the fifth largest by value—its invisibility to many in the U.S. has kept the issue from attracting widespread professional attention. But as consumers become more concerned with where their pants are being made, who grows their coffee beans, and their electricity use, it's reasonable to expect them to demand that the architecture they inhabit is realized without slave labor, too. The U.S. garment industry-which last year imported \$47 billion worth of slave-produced pieces from China, India, Thailand, and Vietnam, among other countrieshas been slowly responding to awareness around its corrupt continued on page 20

Studio Visit: Akoaki

The Detroit firm talks about what's driving its work in the Motor City. see page 18.







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roducts wards See page 33.



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All-American Rejects

A new exhibition celebrates designs deemed not worthy.

A curious exhibition opened in August at the Banvard Gallery at The Ohio State University's Austin E. Knowlton School of Architecture. *Rejected* is curated by Cincinnati-based Team B Architecture & Design, which reached out to architects and designers for the show, which will give rejected work its due. The exhibit includes interiors, streetscapes from Denise Scott Brown, cabins, and mediations on what failure and rejected plans mean in the grand scheme of academia, when winning proposals are often the ones preserved for future generations to study.

I like the topic of rejection. According to urbandictionary.com, a "reject" is "Someone who gets rejected from a group of friends or basiclly [sic] life. For example, someone might say, 'Go away you f***** [sic] reject, you have no friends, we all hate you." This seems like a great starting point for a show.

Rejection is an important topic in today's world. A quick search on 2knowmyself.com generates a series of user-submitted questions, such as "Does rejection mean you are ugly?" A deep reflection on love and self-identity, this seemingly juvenile query seems to be at the heart of this show. What does it mean to be rejected and to be a reject?

Within our hyper-capitalist neoliberal society, technology has played an increased role in how we see ourselves. According to South Korean philosopher Byung-Chul Han's 2018 book Psychopolitics, smartphones and social media are commodified to the point where they have tapped into our psyches to exploit us. They accomplish this by creating a system where we exploit ourselves by constantly monitoring our own behavior, checking for likes and affirmation in the virtual sphere. It is like Foucault's panopticon, except even more abstract and sinister, as each of us is our own guard. Rather than a biopolitics-the organization and exploitation of bodies in an industrial world—Han calls this neoliberal technological exploitation psychopolitics, or the exploitation of the psyche. "Instead of forbidding and depriving, it works through pleasing and fulfilling. Instead of making people compliant, it seeks to make them dependent." If neoliberalism wants us to seek affirmation, then seeking and celebrating rejection must be a healthy alternative.

Team B is kind of like the incels of the architecture world. What is an incel? It is an involuntary celibate, a person who cannot have sex, despite wanting to. It is a state of constant and nihilistic rejection, which is referred to as "inceldom." In dark corners of the internet, the incels have created an online subculture. At its worst, these incels become radicalized and turn to violence, including mass shootings.

Rather than a violent band of murderous incels, Team B is more aligned with the original incels, a benevolent and supportive sexless bunch. The incel community did not start out as a twisted, sick group of internet creeps who threaten violence against people who are sexually active. The incel group was founded in 1993 by a Canadian student named Alana. "Alana's Involuntary Celibacy Project" was a sincere community

See images at archpaper.com.

for "anybody of any gender who was lonely, had never had sex, or who hadn't had a relationship in a long time." Alana eventually abandoned the project and handed it off to another user, but the group slowly devolved into the radicalized, misogynistic faction we know today.

Rejection at its best becomes a rallying cry for a community or an ideology.

Denise Scott Brown, in the *Rejected* show, describes how the rejection of three Venturi, Scott Brown and Associates projects was a systematic disavowal of the postmodern architecture style:

"We feel that renovation of Franklin Court and the planned renovation of the San Diego Museum of Contemporary Art exemplify a rejection not only of design but of a whole style. The renovations of these two landmark designs demonstrates a dismissal of the fun and playful spirit of postmodernism in favor of the minimalistic look of contemporary design "

tic look of contemporary design." Philip Johnson also presented rejection as a positive when he needled the Architectural League of New York, which eventually led to the International Style show at the Museum of Modern Art. According to Robert A.M. Stern:

"In 1931 [Johnson] cocurated (with [Alfred E.] Barr and Julian Levy) the independent show Rejected Architects, which created a public furor and paved the way for the International Style exhibit. It featured work by young architects that didn't meet the requirements of the conservative Architectural League. The show was staged in a rented storefront, and Johnson hired a sandwich-board man to parade in front of the league's offices with the message "See Really Modern Architecture Rejected by the League." The league was outraged and tried to have the man arrested, but the attendant front-page publicity ensured the show's success and brought modern architecture to the public's attention for the first time in the United States."

In the Rejected show, there is no stylistic agenda, because architecture today has no singular, dominant ideology. Rather, the exhibition is a performative rejection of the culture of neoliberal psychopolitical acceptance. While conventional, commercially successful architects actively rejected the invitation to be in the Rejected show, many of the participants proudly flaunt being rejected by the arbiters of institutional taste and the decision-makers of the capitalist development community. Who has the power to accept being a reject? For many of the participants in the show, the academic backdrop allows rejection to be taken as a positive, a winkand-nod that it is OK to fail. Outside of the capitalist modes of production, it is a much-needed respite and represents a strong bond between practitioners, if not stylistically, then in a way of operating within a certain lane of the current context. Instead of an architectural act of violence, what we have here is a group therapy session for the happy-go-lucky rejects who take pride in their status as architectural incels. Matt Shaw



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Editors' Note



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TIMBER SERIES

6 In Case You Missed It...

We corralled the top architecture and design stories buzzing about the internet this month.

Arquitectonica, Morphosis, HOK, Snøhetta, and more working on massive Qiddiya giga-project in Saudi Arabia

Saudi Arabia is thinking big. Last year, the nation unveiled plans for NEOM, a \$500 billion, ground-up "megacity," and now it's touting Qiddiya, a new entertainment, sports, and arts "giga-project." Twenty-one architects have been tapped to work on the project so far, including nine U.S. firms.

César Pelli, Argentine architect of the modern skyscraper, dies at age 92

Argentine architect César Pelli passed away on July 19 at his home in New Haven, Connecticut, at 92 years old. He was responsible for designing some of the most famous skyscrapers in the world, including the Petronas Towers in Kuala Lumpur, Malaysia, The Landmark in Abu Dhabi, and the recently completed Salesforce Tower in San Francisco.

World's first transnational cable car will link Russia and China

The Blagoveshchensk–Heihe Cable Car, for which UNStudio is designing a terminal, will be the first-ever cross-border cable car. The project will be built across the Amur River to allow passengers to easily move between Russia and China. Each car will have four cabins with a total capacity to carry sixty passengers plus luggage.

Rand Elliott-designed Oklahoma Contemporary Arts Center set to open in 2020

The Oklahoma Contemporary Arts Center will relaunch in January 2020 in a brand-new facility in Oklahoma City. Designed by local firm Rand Elliott Architects, the Oklahoma Contemporary's new location will offer significantly expanded space for exhibitions, performances, and educational programming.

London's mayor blocks Foster + Partners' Tulip tower

London mayor Sadiq Khan dismissed plans for the so-called "Tulip" tower designed by Foster + Partners, describing the building as "unwelcoming" and "poorly designed." The news signals a U-turn by authorities who had so far given the project the green light through planning, with the full go-ahead having been granted on April 2.

Pelli Clarke Pelli's massive tower complex will transform the Toronto skyline

A 4.3-million-square-foot, multi-tower development by Pelli Clarke Pelli could reshape the Toronto skyline and is expected to become the largest mixed-use project in the city. Located in Union Park, the \$3.5 billion complex will add 3.3 million square feet of offices, 800 residential units, and 200,000 square feet of retail space to the city.

Natural History Museum of Los Angeles County reveals La Brea Tar Pits concepts

Shortlisted proposals from Dorte Mandrup, Diller Scofidio + Renfro, and WEISS/MANFREDI have been revealed for improving the 12-acre La Brea Tar Pits campus in Los Angeles. While all three proposals are different, each seeks to better integrate the tar pits, and their scientific value, with the surrounding park.

Hawaii to begin construction on Northern Hemisphere's largest telescope

After a series of legal battles spanning several years, the Hawaiian state government officially allowed construction of the Thirty Meter Telescope (TMT) to begin. After Governor David Ige and other state officials announced that heavy machinery will be moved to the project site, indigenous protestors occupied the area to prevent the TMT from building on sacred land.

Widespread lead contamination stops work at Notre-Dame Cathedral

During the April 15 fire that scarred Notre-Dame Cathedral, 450 tons of lead from the cathedral's roof and spire melted, spewing particulates into the atmosphere of Paris. Tests showed that the lead levels near Notre-Dame were a whopping 500 to 800 times the safe amount, and two nearby schools have been shut down in response.

Foster + Partners wins competition to update the Bilbao Fine Arts Museum

Foster + Partners has been selected to design the future expansion and remodeling of the 105-year-old Bilbao Fine Arts Museum in northern Spain. The firm entered an international competition in collaboration with local studio Luis Maria Uriarte Arkitektura under a pseudonym, and the winning proposal beat out six other design teams.

For season three of Stranger Things, they built out an entire mall

The angular mid-1980s architecture of a derelict shopping center in Duluth, Georgia, has garnered internet fame after the release of the third season of Netflix's hit series *Stranger Things*. Avid local fans of the show may recognize that the decrepit Gwinnett Place Mall was transformed into the show's Starcourt Mall, where much of this season's action takes place.

Puerto Rican architecture students design counterproposals to Hurricane Maria memorial

Architecture students in Puerto Rico have responded with a counterproposal to Governor Andrew Cuomo's recent request for architects to submit ideas for a Hurricane Maria memorial in New York. Many of the students felt it was too early to memorialize a disaster the island is still recovering from.



7 In Case You Missed It...

For more information and images for all of these stories, visit archpaper.com/ICYMI

Venice fines Santiago Calatrava for slippery, inaccessible bridge

Santiago Calatrava is being fined \$87,000 for his Ponte della Costituzione, or Constitution Bridge, in Venice, Italy. An Italian court recently ruled that the Spanish architect needs to pay the city for cost overruns and "negligence" in faulty design.

Princeton University Art Museum acquires 5,000 drawings by Michael Graves

The Princeton University Art Museum has acquired nearly 5,000 drawings from the estate of renowned American architect Michael Graves. The donated drawings come from the three categories Graves identified as part of the design process: the "referential sketch," the "preparatory study," and the "definitive drawing."

West 8 will redesign 11 miles of South Baltimore's waterfront

Dutch firm West 8 will revitalize an 11-mile stretch of parkland in South Baltimore. The proposal from the studio's New York office was chosen as the winner of the Middle Branch Waterfront competition, a city-backed plan to reengage locals with an underutilized section of the Patapsco River shoreline.

Morphosis designs a Korean American National Museum for Los Angeles

Morphosis has unveiled its design for the Korean American National Museum in Los Angeles. Slated for a small site in L.A.'s Koreatown district, the two-story cultural space and landscape will embody the past, present, and future of the Korean American experience.

Detroit's planning and development director Maurice Cox is leaving for Chicago

Detroit's director of planning and development, Maurice Cox, will be the next top planning executive for the city of Chicago and will depart Detroit later this month. Cox grew the city's planning staff from 6 to 36 and is credited with attracting world-renowned urban planners, designers, and architects to the city.

Renderings revealed for the Clippers' new stadium

The Los Angeles Clippers have released initial renderings of the team's new 18,500-seat, AECOM-designed arena, expected to open in 2024. Team owner Steve Ballmer and the city of Inglewood are moving forward with the \$1 billion, 900,000-square-foot NBA arena despite neighborhood concerns and lawsuits over the project.

Warren B. Kanders resigns from the board of the Whitney Museum after protests

In July Warren B. Kanders resigned as vice chair of the board of the Whitney Museum after Forensic Architecture and seven other artists in the Whitney Biennial withdrew their work in protest. Kanders is the CEO of global law enforcement and weapons supplier Safariland, whose products have been used to suppress protests in at least 13 countries.

Roger Scruton reinstated as chair of U.K. housing commission

Controversial conservative philosopher Roger Scruton is back in as the chair of the U.K.'s Building Better, Building Beautiful housing commission. He was fired from this position in April for what appeared to be racist and Islamophobic comments, which the interviewing outlet, the *New Statesman*, admitted were taken out of context.



The West Bank is getting its first contemporary design school

In Birzeit in the West Bank, the Disarming Design School, founded by the collective Disarming Design From Palestine, is the first contemporary design school in the Palestinian territories. It offers peer-to-peer learning programs for Palestinian students, as well as residencies for foreign students looking to acquire knowledge of local design and craft techniques.

Indonesia will build its new capital city in Borneo

Indonesian president Joko Widodo announced that the country will relocate its capital from the sinking megacity Jakarta to the island of Borneo. Rather than elevating an existing city, a new settlement will be built on government-owned land between Balikpapan and Samarinda.

Kengo Kuma bases design on a historic facade in Seattle

Kengo Kuma and Associates has gone to great lengths to preserve and highlight a Gothic Revival building in Seattle's Belltown, proposing a 42-story tower that compositionally incorporates the front of the five-story Terminal Sales Building Annex, designed in 1915 by Bebb & Gould. The historic facade will be preserved and will protrude from the new tower's base.

Hashim Sarkis announces the 2020 Venice Architecture Biennale theme

How will we live together? That's the seemingly simple, yet poignant, question posed by Hashim Sarkis, dean of the MIT School of Architecture and Planning and curator of the 17th Venice Architecture Biennale, and also the title of the show set to open next May.



8 Open

Sydney and Walda Besthoff Sculpture Garden at the New Orleans Museum of Art



The Sydney and Walda Besthoff Sculpture Garden, which adjoins the New Orleans Museum of Art (NOMA), reopened this summer after a major expansion. The renovated garden includes a variety of amenities for education and entertainment, including an amphitheater, a gallery, and an outdoor learning environment. Pathways and pedestrian bridges snake past groves, open fields, and lagoons to enable visitors of all physical abilities to fully explore the garden's art. NOMA maintains a particularly impressive collection of contemporary sculpture in the outdoor space, including pieces by Yinka Shonibare, Beverly Pepper, and Frank Gehry.

Working with Reed Hilderbrand and Lee Ledbetter & Associates, the museum has prioritized environmental sustainability throughout its expansion. An elaborate lagoon system, as well as ecologically conscious soil-management practices and hundreds of new trees, ensures that the garden's ecosystem continues to thrive. As has always been the case, the Besthoff Sculpture Garden is free and open to the public seven days a week. **Aaron Smithson**

1 Collins Diboll Circle City Park New Orleans	504-658-4100
Louisiana	
Architect:	Lee Ledbetter & Associates
Landscape Architect:	Reed Hilderbrand

Second Home Hollywood



Madrid-based firm SelgasCano has designed London-based co-working company Second Home's latest outpost in the heart of Los Angeles. The 90,000-square-foot campus is the latest product of a long collaboration between SelgasCano and Second Home; their partnership has proven so fruitful that Second Home purchased and installed SelgasCano's 2015 Serpentine Pavilion near the La Brea Tar Pits for use as an event space.

The L.A. campus is inspired by the city's iconic 20th-century bungalow court residences. The campus's 60 single-story oval buildings, called studios, fit in with the horizontality of the surrounding environment off Sunset Boulevard, east of Hollywood. All of the structures are connected by a continuous yellow roof, and wraparound floor-to-ceiling windows frame views of lush and colorful gardens that encircle -- the campus. Second Home Hollywood also features a suite of amenities, including a Libreria bookstore, public auditorium, restaurant, and cafe. **Jonathan Hilburg**

1370 N St Andrews 323-366-2554 Place Los Angeles

Architect:

SelgasCano

Cartoon Museum

International





Boom! Sam Jacob Studio has unveiled a punchy new home for London's Cartoon Museum that takes design cues from comic books' bold graphic tropes and cheeky humor.

Looney Tunes features abound: The museum's education room is accessible via a hidden door in a fake bookcase, and hilariously mis-sized doors channel visitors into galleries partitioned like comic strip panels. A 3-D explosion graphic marks the entrance, while a red stairwell is decorated with semi-solemn portraits of famous cartoon characters in a

display that's part Sunday strip, part Victorian mansion.

The \$2.5 million (£2 million) new building holds a 6,000-piece collection, and an 18,000-volume library of comics and cartoons complements the art on display. **Audrey Wachs**

63 Wells Street London	+44-0207-580-8155
Architect:	Sam Jacob Studio

9 Eavesdrop

Bloomberg's Tardigrade

We hate to fall into the reductive "this looks like that" criticism that is so prevalent today (critics should be elevating the conversation beyond simple visual metaphor), but we couldn't resist comparing The Shed (aka The Bloomberg Building, completed in 2019 by **Diller Scofidio + Renfro** with the **Rock**- well Group as a collaborating architect) to a tardigrade, those cute/ugly little micro-animals, also known as "water bears" or "moss piglets." With eight legs and a plump body covered in flappy skin, the little creatures bear a striking resemblance to New York's newest cultural venue.





Epstein Stains

Just before financier and alleged pedophile Jeffrey Epstein died in a New York City jail, New York Magazine published the contents of his contacts book. Along with business tycoons, foreign royalty, and powerful politicians, there were a number of names from the worlds of art and design-including architects and interior designers. Among them was Alberto Pinto, the interior designer known for his lavish-beyond-lavish creations for the superrich. According to the magazine, Epstein's \$56 million Upper East Side mansion featured silky leopard print armchairs and walls covered in custom-tooled gold-leafed leather. Interior designer and countess-by-marriage Muriel Brandolini—who dreamed up luxe spaces for the prince and princess of Greece, among other high-profile clients-also made the list. Joining Pinto and Brandolini in the book were luxury hotel specialist Jean-Michel Gathy, Mexican architect Ricardo Legorreta,

American architect **Peter Marino**, and the guitar-shaped Hard Rock Hotel interiors honcho **David Rockwell**.

Of course, association doesn't mean guilt by association—rich people hang out with other rich people, especially when working on a commission or asked to take on a project.

The last architect in Epstein's contacts list executed one of the most puzzling buildings in the entire Miami–Caribbean–New York City triangle of Epstein's real estate portfolio. In 2003, resort designer **Edward Tuttle** designed the centerpiece house for the late financier's private 70acre retreat, Little St. James Island. However, no designer has yet been named for the most enigmatic structure on the island, a blue-striped, gold-roofed "temple" on a white plinth that is surrounded by a red geometric pattern baked into the white plaza.

Back to the Futuro

Fifty years, ago, a type of futuristic prefab house aptly named Futuro hit the market in the United States. Originally designed in the 1960s by Finnish architect **Matti Suuronen**, the portable houses featured built-in furniture, a full bedroom and bathroom, heating and air-conditioning, as well as a living room and dining room. The fiberglass shell was punctured by oval windows, adding a little UFO-esque flair.

But despite their place in design history, very few Futuro houses remain. There are around 60 left; they have become a mix of residences, tourist-draws on Airbnb, and museum pieces, among other quirky uses. The most exciting might be in Tampa Bay, Florida.

Suuronen's company stopped production in 1975, partly due to rising production costs in the wake of the 1973 oil crisis. One house, a display model used in Clearwater, Florida, ended up in the hands of local Futuro dealership manager Jerry DeLong, who also happened to own 2001 Odyssey—a local strip club. The spaceship first appeared in ads in 1971, according to the *Tampa Bay Times*. The club was making big money until the Mob pressured DeLong to sell, and according to the *Tampa Bay Times*, it fell under the ownership of "the Trafficantes," or the Mafia crew led by Santo Trafficante Jr. In 1974, Pasquale "Pat" Matassini bought the club, but he was later convicted of distributing \$1 million in counterfeit cash, and in 1992 was accused of having ties to a Tampa crime family because he owned a bar called Godfather's on Trafficante-owned land.

These days, as the *Tampa Bay Times* reports, "the spaceship is entered via a carpeted staircase from the first floor of the club. There's a curved bar in the center, serving soft drinks and water. Black lace curtains hang over leather booths that wrap around the mirrored walls. The ceiling is adorned with glow-in-the-dark constellations and a disco ball." The Futuro house has become 2001 Odyssey's VIP room.

Well, this is one possible "future," but probably not the one Suuronen imagined for his visionary design. For more on where the other remaining Futuro houses have landed, check out thefuturohouse.com.



Fan Mail

We've gotten some good fan mail recently.

After contributor Audrey Wachs mentioned President Trump's military parade in a Fourth of July hot dog stand roundup, a loyal reader sent our publisher a note saying, "Please tell Ms. Audrey Wachs to keep her political opinions to herself and stick to writing about hot dogs." We passed the message along.

Some also reached out about our coverage of military infrastructures along the U.S.–Mexico border in our ongoing Border Dispatches column. In response to "Patently Immoral," a report on new technologies being patented to build border fences, one fan wrote in, "I demand that my name be immediately expunged from your files as I am literally burning this unsolicited piece of moronic trash in my driveway." Another enthusiastic reader exclaimed, "Please remove me from your mailing list! Stick to architecture you idiots! MAGA!"

We particularly enjoyed the poetic rhythm of this one: "Like your electronic newspaper, like learning new things. / Article I opened yesterday Products of boarder wall research may expand to rest of industry, is of interest to me as a product developer. / Very disappointed that you allow politics to creep into the article. / First thing that hit me 'xenophobic boarder wall project' is not anything to do with new technology / End of the article dips into Politics too / Then I scroll back to the top and see a sub text in the title 'Patently immoral' / Just want the technology not the politics / The wall section placement is interesting and the track hoes are cool. / How about the applications to tilt wall construction and manufactured Housing in the future. / Get enough politics both ways from network TV, please keep on subject. / I almost unsubscribed, but I will give it another chance."

10 News

Chicago CAB Drivers

Here's what we know about local acts in the 2019 Chicago Architecture Biennial.



City As Site, by Maria Gaspar.

It's almost time for the 2019 Chicago Architecture Biennial; this year's show opens to the public on September 19. Under the theme *... and other such stories*, participants will engage issues of land, memory, rights, and civic participation in installations and events throughout the fall. Although the biennial will bring together architects, designers, and artists from all over the world, it will specially spotlight several Windy City locals and stories.

"For this year's Chicago Architecture Biennial, the curatorial focus brings to light architectural stories that are often overshadowed by more familiar narratives," said Todd Palmer, the biennial's executive director. "The Chicago contributors' works for 2019 draw from their ongoing engagement with local communities working toward a more equitable architectural landscape in this city."

Artist and University of Chicago professor Theaster Gates will look at the complexities of landownership using vacant buildings he has purchased in Chicago as a lens. When Gates purchased the buildings, there was a severe lack of interest in their surrounding neighborhoods due to violence and disinvestment from the city. He plans to create found poetry from the legal agreements between himself, financial banks, and the city— documents that no one sees, he says, but that have personal meaning for him. Gates said, "I want to talk about my love of space, and how a commitment to contracts will ultimately create new opportunities for emerging artists and affordable housing."

Artist Maria Gaspar will exhibit an interactive installation inside and outside Cook County Jail, located in her childhood neighborhood on Chicago's West Side. "It will be interesting for me to see how my own spatial research engages with the broader field of architecture and how borders impact communities," said Gaspar.

Artist, architect, and musician Santiago x is partnering with the American Indian Center of Chicago and the Chicago Public Art Group to produce a large-scale installation that will express a vision of indigenous "future-scapes." "Participating in this year's Chicago Architecture Biennial is an incredible opportunity for me to contribute to the revitalization of indigenous landscapes throughout Chicago," he said.

Design practice Borderless Studio will examine social infrastructure in the context of the unprecedented closure of 43 public schools in Chicago in 2013. The studio's Creative Grounds initiative offers a framework for how art, design, and architecture can create a more inclusive process for repurposing closed schools.

The Chicago Architecture Biennial will run from September 19, 2019, to January 5, 2020. **Jamie Evelyn Goldsborough**



Low-E 4th Surface Technology

Durability is critical for coatings applied to the 4th surface of an IGU. Pilkington **Energy Advantage**TM is a proven durable, pyrolitic coating that is ideal for improving U-factor when applied to the 4th surface.



Lead Design Firm: HNTB New York Engineering and Architecture PC Structural Engineer: WSP USA, New York, NY

11 Obituary

Remembering César Pelli

1926-2019



César Pelli in front of the Pacific Design Center.

The death of César Pelli at the age of 92 on July 19 marked the end of an era, yet Pelli Clarke Pelli, the firm he headed with his son Rafael and cofounder Fred Clarke continues with dozens of important and innovative projects underway.

César's modest demeanor belied the fact that he and his partners built hundreds of buildings in the years since they founded the firm in 1977. Their best known built works are the Petronas Towers in Kuala Lumpur, Malaysia (briefly the tallest buildings in the world), the colorful glass-skinned Pacific Design Center in West Hollywood, California, the Cleveland Clinic's Crile Building, the U.S. Embassy in Tokyo, and the recent Salesforce Tower and Transit Center in San Francisco (the tallest building there). In New York, they built the 1984 addition to the Museum of Modern Art and its residential tower, the World Financial Center in Battery Park City, the unusually ornamented Carnegie Hall Tower, the Theodore Roosevelt Federal Building in downtown Brooklyn, and The Verdesian, a pioneering energy-efficient apartment high-rise in Battery Park City, along with numerous other buildings that fit into their surroundings so well that they are not easily recognized. An office tower for Trinity Church on Wall Street in New York, the Yale Science Building in New Haven, Connecticut, the millionsquare-foot Bulfinch Crossing development in Boston, the Chengdu Natural History Museum in China, a tower for Google in Austin, Texas, and the 4.3-million-square-foot Union Park complex in Toronto are among the dozens of projects in-process now.

Given the size of the practice, the complexity of its projects, its international range, size, scale, and sensitivity to place, it is surprising that Pelli Clark Pelli's work has not received more critical attention. It is not something the partners sought. Doing innovative work and treating colleagues well have been the firm's priorities.

César Pelli was one of architecture's real artists and intellectuals.

He was born in the medium-size city of San Miguel de Tucumán, Argentina, where one of the most innovative architecture schools in the world opened at the Universidad Nacional de Tucumán just before he matriculated. His father, Victor, was an inventive tinkerer who loved to make things. His mother, Theresa, was a professor in Resistencia, Argentina, and taught with the mother of the woman César eventually mar-

ried, landscape architect Diana Balmori. César and Diana got to know each other better in architecture school and then applied to various graduate programs around the world. They ended up moving to the United States where César earned a master's degree at the University of Illinois. It was not easy. Other young Argentinians they knew soon returned home. Diana once told me that they sold their wedding presents to make ends meet, but the fact that she spoke excellent English also helped. Then César's professor recommended that he join the very busy office of Eero Saarinen in Bloomfield Hills, Michigan. That move was not easy for Diana, but it was there, on the lush Cranbrook Academy campus, that she developed an interest in landscape design.

Saarinen's office, enriched by a commission to design the \$100 million, 320acre General Motors Design Center, had attracted talented young architects from all over the world. César soon became the one Eero trusted with some of his most challenging projects. Eero's firm was thriving with numerous enticing commissions. He had recently married his second wife, the journalist Aline Bernstein Saarinen, who wanted to move to the East Coast where her career, and increasingly Eero's, was centered. Lonely in Michigan, she often invited the Pellis to join them for lunch.

But soon after the birth of Eero and Aline's son, Eames, Eero developed a brain tumor and died within days. The firm moved to New Haven, Connecticut, as planned, to finish his work. César was in charge of two of the most challenging projects—the proto-postmodern Morse and Stiles Colleges at Yale, which imaginatively interpreted Gothic Revival buildings nearby on campus, and the TWA Flight Center at JFK (then Idlewild) Airport in New York, which has since been restored and turned into the centerpiece of a new hotel.

When Saarinen's work was completed, some associates formed a successor firm, Kevin Roche John Dinkeloo and Associates, but the Pellis moved to booming Los Angeles.

César went to work first for the pragmatic commercial firm Daniel, Mann, Johnson & Mendenhall from 1965 to '68 and then for Gruen Associates from 1968 to '76, often collaborating with young talented international architects he had known at Saarinen's firm, such as Anthony J. Lumsden.

By the mid '70s, Pelli, who had been teaching part-time at UCLA, decided he would like to commit to teaching. He was offered deanships at UCLA, Harvard, and Yale. He chose Yale and moved east. Soon he was invited to expand the Museum of Modern Art, so he opened an office in New Haven, which continued to grow after he stepped down as dean of Yale in 1984. The office still operates on an open-minded academic model.

Over the years, Pelli worked on and off with his wife, who was a partner in his firm before developing her own practice in landscape design. She died in 2016. César Pelli leaves sons Rafael and Denis as well as dozens of colleagues, friends, clients, former students, and admirers. His legacy is enormous. Jayne Merkel

koseiuszko à Gogo

The design of urban infrastructure affects city life as much as the design of its buildings. That's why replacing the **Kosciuszko Bridge**—a notorious pinch point in traffic between Brooklyn and Queens—was a high priority for Governor Cuomo. With heavy lifting from **HNTB**, **WSP USA**, and **Skanska**, a striking cable-stayed span has risen where the outdated bridge once stood, ensuring New Yorkers may still have trouble saying its name, but they never have trouble getting home. Read more about it in **Metals in Construction** online.



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12 Q&A

Deans List continued from front page



Vishaan Chakrabarti University of California, Berkeley College of Environmental Design (CED)

A former principal at SHoP Architects and founder of the New York–based Practice for Architecture and Urbanism, Vishaan Chakrabarti is currently a professor at Columbia University's Graduate School of Architecture, Planning and Preservation.

The Architect's Newspaper: What is your vision for CED moving forward?

Vishaan Chakrabarti: Given the spatial nature of our three existential challenges-climate change, social inequity, and technological dislocation—I believe that schools of architecture are as relevant today as law schools were during the civil and equal rights era. I am keenly interested in exploring with students, staff, and faculty the questions of how to reconcile the demands of professional practice-which takes decades to do well-with the understandable impatience of many students to radically and immediately change our world in light of the environmental, intersectional, economic, and political crises in which they have come of age.

AN: How is Berkeley different from your present affiliation, Columbia University?

VC: Because [Berkeley] is public, it serves disproportionately large numbers of first-generation college students, Pell Grant recipients, and other diverse groups relative to most private institutions. More broadly, Berkeley is part of the Pacific Rim and therefore exists at a healthy distance from the Eurocentric framework that still dominates many design schools.



Harriet Harriss Pratt Institute School of Architecture

Before assuming her role at Pratt, Harriet Harriss was the head of the postgraduate program in architecture and interior design at the Royal College of Art in London, where she explored new models of design education addressing gender imbalances that exist at many institutions. *AN*: What is your vision for the future of Pratt?

Harriet Harriss: The tradition of parachuting in architectural visionaries ready to superimpose their agenda and aesthetics upon an unsuspecting faculty—with little regard for the established expertise within a school of architecture- is no longer viable. The vision I have is the one I intend to codesign with the talented and dedicated educators, students, and administrators at Pratt. What's needed is a dean who is willing to facilitate, enable, and empower, who is committed to ensuring talented students' and educators' work gets the recognition and exposure it deserves, and one who will strive to ensure the work is realized across an expanded field of professional practices and public contexts.

AN: Whom would you consider a role model dean and why?

HH: Architecture's habit of focusing upon an individual's contribution over that of a collective does not reflect the reality of architectural practice or education. Instead, we need to recognize the achievements of collectives in shaping the most successful spatial outcomes and increase our capacity for collaboration in order to respond effectively to challenges ahead.

AN: What would you make your school's mascot?

HH: Do we need mascots? Or actions that lead to meaningful impact?



Branko Kolarevic

New Jersey Institute of Technology Hillier College of Architecture and Design

Previously a professor and administrator at the School of Architecture, Planning and Landscape at the University of Calgary, Branko Kolarevic is a designer and educator with experience at multiple universities across North America and Asia.

AN: How is your new school different from your previous institution, the University of Calgary?

Branko Kolarevic: The urban fabric and the demographics of [Newark and Calgary] are very different, as are the local economies and politics. The school in Calgary was based on graduate and postgraduate education, while Hillier College is mostly focused on undergraduate degrees, even though we have both professional and post-professional master's degrees (and also a PhD program). There are similarities, as both NJIT and the University of Calgary place great emphasis on research; both are in the top tier research-wise. *AN*: Whom would you consider a role model dean and why?

BK: My role model is the late Bill Mitchell, the former dean at MIT, who was my mentor when I was a doctoral student at Harvard GSD, and who provided unwavering support throughout my academic career. I also had the privilege early on to learn about leadership from two great deans: Marvin Malecha, who was dean of the Cal Poly Pomona College of Environmental Design in the early 1990s when I taught there, and Roger Schluntz, former dean of the University of Miami School of Architecture. They radiate positive energy that is infectious and are great minds and compassionate leaders who care deeply about the people around them.

AN: What would you make your school's mascot?

BK: That's a tough one. Given that New Jersey is known as the "Garden State," I would pick our state bird (American goldfinch) or insect (honeybee) as a mascot. Both the goldfinches and bees are designers and builders of their nests, so in my view they are appropriate mascots for a design school.



Lesley Lokko

The Bernard and Anne Spitzer School of Architecture at the City College of New York

Beyond her training as an architect and her tenure as head of school at the Graduate School of Architecture at the University of Johannesburg, Lesley Lokko is a Scottish-born, Ghanaian-raised writer with 12 best-selling novels.

AN: How is the City College program different from the one at the University of Johannesburg?

Lesley Lokko: Managerially and administratively, they are very different, but the hunger that drives the staff and students is very similar. Both places have a desire to say what has previously remained unsaid: that issues of class, race, gender, and power are central to architectural production, not marginal; that diversity strengthens architectural, landscape, and urban culture; that difference matters, not because it is "different," but because it enriches discourse.

AN: Whom would you consider a role model dean and why?

LL: Alvin Boyarsky [chair of the Architectural Association from 1971 to 1990]. He made the marginal mainstream and was committed to change.

AN: What would you make your school's mascot?

LL: A chameleon. Shape-shifter.



Brook Muller University of North Carolina (UNC) at Charlotte College of Arts + Architecture

Brook Muller was an associate dean of the University of Oregon (UO) School of Architecture and Allied Arts, and his work focuses primarily on design theory and ecologically responsible practice.

AN: What is your vision for UNC moving forward?

Brook Muller: I seek to build a shared vision for the College of Arts + Architecture, so the idea is to shape it when I hit the ground. My priorities include (1) Introducing [students] to an expansive set of issues and asking them to assume active stances; (2) [Building] community partnership in the arts and design; (3) Promoting interdisciplinarity and other forms of intra-college community building; (4) Assuming a proactive stance in fostering equity; (5) Pushing the boundaries of sustainability and ecological responsiveness.

AN: Whom would you consider a role model dean and why?

BM: Frances Bronet, my former dean at UO, who is now president at the Pratt Institute. [An interview with Bronet is on page 14.] Frances was tireless, visionary, and enthusiastic, always one step ahead. I have seen many different models of leadership; hers was predicated on building effective collaborations and trust. It was a lot of fun to walk into work when Frances was at UO.

AN: What would you make your school's mascot?

BM: I like UNC Charlotte's current team nickname (49ers). This name came about as the institution was founded in the late 1940s after World War II in response to rising educational demand. Focusing on the city and on opening up educational opportunities for those who are deserving—that strikes me as a beautiful pairing.

See more images at archpaper.com.

13 Q&A



Dan Pitera University of Detroit Mercy School of Architecture

Dan Pitera served as the executive director of the Detroit Collaborative Design Center, a community-based nonprofit located at the University of Detroit Mercy. The center's website describes him as "a political and social activist masquerading as an architect."

AN: What is your vision for the school moving forward?

Dan Pitera: We do not need to abandon the tools of our discipline to engage a wider variety of people in a collaborative way. Working in this way is often viewed as an alternative practice. Instead, I propose that we are working to alter how architects practice. Our school of architecture will interrogate and craft methods to meaningfully incorporate community-driven practice throughout the profession.

AN: What would you make your school's mascot?

DP: A mascot for the Detroit Mercy School of Architecture would have to amplify and celebrate our values. It would stand for justice, be inclusive, have a global perspective, be daring, and be fun. After consulting several students, we came up with the Canada goose. Yearly, two Canada geese nest on a visible section of roof at our school on their daring annual journey. The geese are unaware of political boundaries of countries, cities, institutions, or buildings. They have welcomed us into their home.



Sarah Whiting Harvard Graduate School of Design (GSD)

Previously the dean of the Rice University School of Architecture, Sarah Whiting is a founding partner of WW Architecture.

AN: How is the GSD different from your previous institution, Rice University?

Sarah Whiting: The GSD is almost five times bigger than Rice, and it has three departments and multiple programs, whereas Rice was a one-department school. At the same time, both schools are filled with extraordinary faculty and students, and both schools situate design's importance within global culture, so they do share a similar ethos.

AN: Whom would you consider a role model dean and why?

SW: Two figures who immediately come to mind as role models include Robert (Bob) Geddes at Princeton (dean from 1965 to 1982) and Harry Cobb at the GSD (chair of architecture at the GSD from 1980 to 1985). Both did a remarkable job of building up faculties of diverse yet precise voices—resulting in specific, yet unpredictable conversations within their schools—during extraordinary moments for architectural education.



Meejin Yoon Cornell University College of Architecture, Art, and Planning

Before joining the faculty at Cornell in early

2019, Meejin Yoon led the architecture department at MIT's School of Architecture + Planning. She is a cofounding principal of the architecture firm Höweler + Yoon.

AN: How is the Cornell program different from MIT?

Meejin Yoon: [Cornell and MIT's] overlaps are probably more interesting than their differences. Specifically, I'm thinking of the underlying social and cultural values that drive creative imagination, breadth of scholarship, and depth of research across the domains of architecture, art, and planning at both schools.

AN: Whom would you consider a role model dean and why?

MY: I will never forget MIT dean William Mitchell's response when I anxiously conveyed the news that my students, in fulfilling a studio assignment, had caught the building on fire. He acknowledged that no one was hurt, assured me that insurance would take care of the physical damage, and concluded by sharing that experimentation means taking risks and that he was happy that I was stirring up things in the department of architecture. His level of encouragement and support for taking risks that push boundaries was profound, and I have always admired him as a role model for academic leadership.

AN: What would you make your school's mascot?

MY: A fire-breathing dragon.

Answers have been edited and condensed. AS



14 Q&A

Pratt-ice Makes Perfect

William Menking talks with Frances Bronet, the Pratt Institute's new president.

Pratt Institute began in 1887 in Brooklyn's Clinton Hill neighborhood as an affordable college accessible to the working class of New York. Founded by industrialist Charles Pratt, whose company, Astral Oil Works, was absorbed into John D. Rockefeller's Standard Oil Trust in 1874, it was run as a charity for many years. It still had a Pratt family member, Richardson Pratt Jr., as president in 1990, the fifth family member to serve in that position. Its ninth president, Henry Saltzman, who served from 1970 to 1972, was an urban studies specialist, but other non-Pratt family leaders came from the fields of education and academia. Now for the first time, the school has selected a president, Frances Bronet, who has degrees in architecture and civil (structural) engineering. This, in itself, is a unique background for someone leading a design institute, but of course she was also selected for her accomplishments in and out of design academia. In this interview we question Bronet about her design background, what it brings to the school, and how it informs what she hopes to accomplish as the institute's 13th president.

William Menking: You've had a distinguished 20-year career as an educator before becoming Pratt Institute's 12th president. You have degrees in architecture and civil engineering, and a diploma in management. This is not a common degree path to becoming a college president. How did it happen that you went from being a designer to a president?

Frances Bronet: I have always imagined what it would be like to be the head of a think tank, from the time I was 17. I may not have known exactly what that meant, but at this moment we can all agree that leading a college would qualify. In Montreal, I worked in prominent, faculty-led architectural offices, and ultimately in a partnership with two colleagues.

After graduating from McGill, I began teaching at McGill, Vanier, and Montreal Technical College in the evenings after working in practice during the day. It didn't take me long to realize that I wanted to continue in the academy, and I came to New York City to study at Columbia University for grad school. As an engineer and an architect with solid experience as a teacher, I was offered a few jobs, from the University of Texas to Rensselaer Polytechnic Institute (RPI), as a tenure-related faculty member. It's hard to believe when looking back, but I taught for almost 30 years. In my experience, the academy, somewhat like an ambitious office, offers an amazing amount of freedom. As a faculty member, you have an incredible bandwidth for experimentation, new ideas, and collaboration. In many ways, it is both an entrepreneurial environment and one that has manageable boundaries.

As soon as I was tenured, I became associate dean. (I was also a new parent!) This was a great experience. I love building relationships and brokering genius—and being in an administrative position lets me do that. There are certainly many architects who would avoid administration, but it can be unbelievably creative. And where else do you get to engage this extraordinary amount of intelligence and aspiration?

I then left RPI to become dean of the School of Architecture and Allied Arts (now



Frances Bronet, the Pratt Institute's 13th president.

the College of Design) at the University of Oregon. Being dean across domains—from painting to architecture to public policy gave me access to understanding the big picture. When an even larger university-wide landscape was made available to me as acting provost at Oregon, I couldn't resist. The ability to take opportunities across disciplines and connect remarkable people, projects, and places was key, as was designing teams where the unexpected can unfold.

From there, I went on to be provost at Illinois Institute of Technology (IIT) in Chicago and now have the honor of being the president of Pratt Institute. The school has a massive external face, leading through design—and as an extreme extrovert, this position is perfect.

WM: The next logical question is how did an architecture and engineering degree prepare you for your academic career? Did it give you particular and unique insights into design education?

FB: Absolutely. Studying and working in these environments exposed me to various ways of thinking and unique modes of defining complex problems and solving them. I was impressed by how distinct expertises came together to make it all work. We all have different modes of learning and teaching, and people self-select these disciplines. For me, architecture, although tough, resonated with how I experienced and performed in the world; engineering put me in a place that was unfamiliar, so that very precariousness opened up a new universe.

WM: Your resume highlights your publishing career "on multidisciplinary design curricula connecting architecture, engineering, STS (science, technology, and society), dance, and fine electronic art." You're now the president of an art and design institution of higher education. How will you expand or develop interdisciplinarity between schools at Pratt?

FB: Ah! That would be the provost's gig. And now that we have a strategic plan developed with all our constituencies, this very recommendation is central. I could guide, advise, and listen, but the provost is the chief academic officer. My work is how what is going on in the world impacts our strategic vision and how we share this beyond our own gates, building broad constituencies of support. We have 1,200 faculty members many of whom have their own practices already connected to the world at large and bringing the world here when they teach. How can these connections be magnified and supported? Many educational enterprises are building experiential, embodied, problem-based, and practice-oriented courses. Pratt has been doing this for more than 130 years. That is where we should take a leadership role.

WM: What are the challenges of directing an art and architecture and design academy in 2019? How do you hope to change or expand the institute?

FB: Some challenges transcend the institute—preparing students for careers that don't yet exist, accessibility, including cost, and wellness, to name a few. But for us, it is that excellence will be measured by how a private institution works for the public good, from social and environmental to cultural metrics. We are part of the economic and social engine that has transformed our neighborhood into a new, creative economy. And we must do more to create an academic institution that can collaborate to make a more equitable, inclusive, and sustainable community.

WM: What are the challenges and advantages of directing an institution of higher education for creative thinkers and makers in New York City?

FB: The world's best and brightest are here or are coming to New York City. It is also important to be aware that some great talent is outside of New York City, too. When thinking about the great diversity of this city, we ask ourselves, how do we represent the communities in which we sit? How do we collaborate with all this extraordinary talent and get out of institutional silos? How can we leverage our practice-based faculty, who bring both new ideas to their students *and* their students' ideas to bear on their practices?

There is an incredible opportunity to ask what are the key projects, and how do we partner and get involved? How are we part of a larger ecosystem?

Climate change, rapid urbanization, ethical practice, and so forth impacting our world will require research, working across many disciplines, universities, and other organizations. This infrastructure can serve as a frame for true participatory democratic practice. Pratt is uniquely poised to do this type of engaged work and be part of this ecosystem. Our goal is to equip our students as cultural, environmental, urban, design, and education contributors and leaders. We are sitting next to one of the great new emerging developments at the Brooklyn Navy Yard. That's where you'll find our Consortium for Research and Robotics. It's clear to me now that I was on the right track envisioning myself at a think tank. But in today's worldwith so much possible through technology and collaboration-we work in think-make tanks.

There is so much possibility for partnership that, indeed, it will be the only way to address some of the most difficult issues confronting us. Designers are optimists. As Nobel laureate Herbert A. Simon said, "Everyone designs who devises courses of action aimed at changing existing situations into preferred ones." William Menking





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16 Obituary

In Memoriam: Cristiano Toraldo di Francia

1941-2019



Cristiano Toraldo di Francia taking a selfie in Superstudio's 1972 installation at New York's Museum of Modern Art.

Cristiano Toraldo di Francia sadly passed away on July 30, 2019. He was the cofounder, along with Adolfo Natalini, of the Florentine radical design and architecture group Superstudio. Cristiano was incredibly open-minded, had a sharp sense of humor, and possessed a deep love for humanity. While accolades spread across the internet following the news of his passing, there was a lot to Cristiano that didn't make it into these postings, tributes, and memorials. What might have been most lacking in all these accounts was a sense of the way he shrugged off fame and shunned formality. Yet he never wasted a moment; he had infinite stamina, and to stick by him you needed to react fast and move quickly.

Cristiano was a perceptive and ever-present photographer, and it is thanks to him that so many historic moments during Superstudio's superlative adventure were captured for posterity. When I asked him in an interview at his house in Filottrano back in 2005 how he got into photography, he spoke about his father, Giuliano Toraldo di Francia, who was a renowned physicist. Cristiano recounted an odd story about his first camera.

As Cristiano told me, his father had designed lenses for Ducati. "At that time they made electronics; now they're making motorcycles. They made cameras, radios, and they made a micro-camera, which anticipated the cameras of today. Instead of the normal 24-by-36-millimeter film, they were using 24-by-18-millimeter film, so it was fantastic. Italy was poor at the time, and everything had to be reduced!" In another 2005 interview I did with Cristiano, viewable in Eva Sauer's Radical Architects documentary, he couldn't help but make a quip about the United States, and while proudly acknowledging that Italian technology was inventing incredible things that were "almost too advanced for their time," in America "everything was big—big cameras, big cars. But that camera was a jewel...Just to say that since I was a child I was initiated into the mysteries of photography-the images coming out of the acids, of the paper."

Probing further, I asked Cristiano what his relationship was to the burgeoning Florentine fashion industry in the early 1960s, when he worked as a professional photographer.

"I was making family portraits at the time to raise money. In Florence there is a big tradition around the Alinari family. Besides all the city portraits, they shot a lot of family portraits, but these were like paintings, all retouched, like Photoshop...I was trying to do a very different kind of photography. I looked more to the American model. A journalistic kind of picture, Diane Arbus...not so much Man Ray or the historical ones.

"I became quite successful at the time. All these noble mothers came to make photos in my studio. After a while I was asked to do fashion photography, but then Superstudio started, and I quit. But, of course, I had all the contacts and all the people—I was friends with Oliviero Toscani, for example," he said, referencing the photographer who would go on to produce controversial campaigns for United Colors of Benetton. With his usual irony, Cristiano pointed out that he also worked as a fashion model for the kind of magazines that were constantly referencing architecture.

It's hard not to talk about the origins of the Italian Radical Design movement without getting into influences, of which there were many. Cristiano clarified some of these in that same 2005 interview: "We started on parallel levels, looking at Archigram, but even more we looked back at Dada and then to Pop Art, which was bringing the Dada methods up to date. Fluxus artists were breaking boundaries and being completely interdisciplinary, fluctuating from one activity to the other. But on the other hand, Archigram had this political information as background, for which we could say maybe we were more idealistic than them. They were more pragmatic, more Anglo-Saxon."

Dan Graham connected his generation to rock and roll, and given the times, it is clear that music also played a considerable role for Cristiano. When I spoke to Cristiano about music when we met in December of 2002, he had this to say: "When I talk about the importance of music, we don't deny having discovered a person like Bob Dylan, or the Beatles. It was a time when popular music reached great artistic levels...Laurie Anderson, the whole group of Fluxus...back then there was a system of self-propulsion in every field." What is critical in understanding Superstudio is precisely this level of mixing passions, which the art and architecture curator Lara Vinca Masini has referred to as "contaminations." Cristiano stabbed at this point by bringing in Aldo Rossi: "Yes, the work of Rossi and others was interesting, but it was always inside a discipline with few confrontations with the world that went much faster than their own reasoning."

Getting back to the Florentine music scene, Cristiano credited his father with exposing him to experimental music when he was beginning university. In a conversation I had with him in 2005, Cristiano remarked: "My father was a scientist, and as a scientist he was traveling a lot and was, in a way, disillusioned and relativistic. He was asked in 1963 to become president of a young contemporary music association, one of whose members was Sylvano Bussotti [a Florentine native, musical polyglot, and noted dandy], one was Giuseppe Chiari [an atonal musician, close to John Cage and a member of Fluxus], and the other was Pietro Grossi [a Venetian electronic musician and composer living in Florence]. I remember they were making concerts of electronic music, and one concert was in the Conservatorio di Musica Cherubini, which is a traditional music conservatory. And after 10 minutes of this music people went crazy.

Evidently, for this generation of young architects living in Florence, the '60s were incredibly stimulating years. Superstudio detoured around the traditional tools of the architect, experimenting with alternative forms of expression and representation. Emilio Ambasz showed up in Florence around 1971, scouting for ideas for the upcoming Museum of Modern Art exhibition *Italy: The New Domestic Landscape*. The young curator specifically sought out experimental "environments," full-scale prototypes for living, accompanied by films serving as animated captions. I wanted to know just how Superstudio produced their contribution to this project, what kind of technology was used to build this elaborate environment, and how they created their 12-minute film *Supersurface*.

The main backer for Superstudio's environment was the manufacturer Print, but high costs forced the designers to look for other supporters as well. According to Cristiano, he and his partners found companies in Florence that produced the special reflective glass and electronic components key to simulating day and night inside the environment. It took 15 days to manually assemble the space before the show opened in New York on May 26, 1972.

The movie was made during the winter of 1971–72, and it was shot on 36-millimeter film. "I worked on that with Sandro Poli [a Superstudio member officially present between 1970 and 1972]. We found the music, made the soundtrack, with the professional help of a guy [from Marchi Producers] who made advertising for television...and in fact, we wanted it to be projected as if it would be an advertisement for *Supersurface*. The first part presents in a scientific way how the thing is done, and the second one tells how happy you will be living there."

Both making the environment and directing the film were very labor-intensive, hands-on processes. I asked Cristiano what role the Italian manufacturers had in realizing Superstudio's concepts. Cristiano's response was that these factories were mostly made up of artisans: "That is why we managed to make a series of objects from very different things and from really different materials. Most of these objects are coming out of a kind of bricolage. The factory made almost nothing. We had to find artisans who did the different parts. The industry would just put the parts together. We were doing a kind of bricolage cheapscape—as Frank Gehry would say—for the industries."

The Italian design industry seemed to work as an artisanal chain assembly. But it was still not clear why these manufacturers got behind a group like Superstudio, who made things that worked against the idea of mass consumption. Why would these manufacturers sponsor designs that were against their best interests?

"We thought these objects we were making were kind of Trojan horses that coming from inside the system would produce criticism, which means creativity, which means refusal, or incredible love. They were objects of poetic reaction for the people. They were not mass-produced, they were in little series, multiples, like works of art."

To this day I still think about Cristiano's Trojan horses and his incredible love. **Peter Lang**



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18 Studio Visit

Akoaki

Upon their arrival in Detroit four years ago, Akoaki partners Anya Sirota and Jean Louis Farges sought to understand the complex landscapes and narratives that coexist within the city. At the time, local design imaginations were fully entrenched in "ruin porn," and creative traditions like automotive industrial design and jazz music that had long thrived there continued to have national and international importance but little direct impact on city residents.

Their study of the Motor City led Akoaki (pronounced ah-ko-ah-kee) to focus on how architecture and art can contribute to equitable redevelopment. Their work goes beyond the ephemeral performances and occasions typical of conventional social practice. Instead, their projects are unabashedly physical. They eschew notions of "good taste" and embrace intense ornamentation that propels them beyond passing styles. By embracing beauty and pomp, Akoaki reaches for an aesthetic that is bigger and badder than what Detroit has recently had to settle for. **JEG**



Imaging Detroit

Akoaki describes *Imaging Detroit* as "an international film festival and pop-up agora." Supported by a Research on the City grant from the University of Michigan's Taubman College of Architecture and Urban Planning, the project investigates the many ways Detroit has been portrayed in film and publications over the last decade. Sirota and Farges, along with a suite of collaborators, researched the ways people construct narratives around the city and how others respond to those narratives. The team wanted to raise awareness about negative ideas of social degradation without contributing to them. The result transformed Perrien Park into a civic space with screenings, conversations, exhibitions, food, and leisure activities, along with a 36-hour public debate.

19 Studio Visit



Detroit Square

Detroit's Midtown Cultural Connections organized a yearlong competition for a scheme to connect the city's most significant cultural institutions. Akoaki and a team of landscape architects, urban planners, and technology experts took a chance and won by proposing an open-ended plan. The scheme envisions a framework of shared component parts that will adjust and adapt to each institution's idiosyncratic needs. The project will take issues of mobility, environmental sustainability, and stormwater stewardship into consideration and require sensitivity to placemaking, which has become a developer-driven strategy for forging economic growth in vulnerable neighborhoods. Upon completion, the project will create a unified, dynamic, and inclusive space that facilitates connections between the Cultural Center and Midtown neighborhoods.





Fertile Ground

Sirota and Farges's experience working on Detroit Cultivator set them up to work on a similar food-related project, this time in Mississippi. Supported by a \$1 million public art grant from Bloomberg Philanthropies, Fertile Ground: Inspiring Dialogue About Food Access brings together architects and artists with chefs, gardeners, food policy experts, and local institutions to facilitate a year of community-engaged interventions. Ultimately, the project aims to establish a nonprofit research lab on food access that will operate on a permanent basis to sustain the project's momentum. While Mississippi is known for its agriculture, a majority of the food grown in the state is exported, and Jackson is flooded with "food swamps" (areas with a plethora of fast food as opposed to fresh food). In the American South especially, attempts to return to a supposedly "idyllic" agricultural past may jog unpleasant reminders of the area's history. Instead, Akoaki aims for a "neo-rural" environment that has aesthetic value and brings the city's diverse aspirations together. The photo at left is from a site visit

Detroit Cultivator

In collaboration with the Oakland Avenue Urban Farm, Akoaki is designing a 6-acre urban plan that combines agriculture, culture, business, and environmental science to envision a neo-rural landscape that is both economically and ecologically sustainable. The project requires navigating pressure from developers, as well as issues of land ownership and water access. After working with the University of Michigan Law School to secure the land, a business plan was created with volunteers from the university's Ross School of Business. The plan presents two goals: prioritizing the farm's productivity to create a source of income and designing a flexible space for neighborhood entrepreneurs. The master plan retains existing structures that will eventually become public amenity spaces; a shoeshine parlor will reopen as a multi-tenant commercial space and performance venue. Rather than keeping the farm purely agricultural, Sirota and Farges seek to amplify other existing uses through building and site interventions. The project is an experimental urban prototype, and Akoaki is working to make the farm a permanent fixture in the neighborhood.

20 News



Forced Labor continued from front page supply chains, and the New Canaan, Connecticut-based Grace Farms Foundation (GFF) wants the building industry to be next.

The design world was recently clued in to the grave issue of labor justice when the late Zaha Hadid said she had "nothing to do" with the hundreds of migrant workers who died on the construction sites of World Cup facilities in Qatar. Many were outraged. Luis C.deBaca, a senior justice adviser at GFF with expertise in disrupting contemporary slavery and a Robina Fellow at Yale University's Gilder Lehrman Center for the Study of Slavery, Resistance, and Abolition, said the initial activism that stemmed from controversial megaprojects in the Gulf States shed light on a broader problem in the industry.

"For many in the human rights community, Hadid's tone-deaf response to the plight of those workers laboring on World Cup projects not only symbolizes the profession's abdication of responsibility," C.de-Baca said, "but is proof of an ivory-tower nihilism that undercuts architecture's claim to leadership in designing for community as opposed to wealth."

C.deBaca is part of an expanding working group of high-profile construction and design professionals, scholars, human rights experts, and industry association leaders gathered by Sharon Prince, GFF president and cofounder, and AN editor-in-chief Bill Menking. To address exploitation in building supply chains, the two brought together many of the principals of the firms that designed and built Grace Farms to educate the industry and develop better practices. They aim to create a LEED-like score sheet to evaluate forced labor's role in buildings and products, as well as guidelines on how to infuse antislavery language into design briefs, competition rules, contracts, and more.

"It is time to recognize our responsibility," Prince said, "and subsidizing construction projects with forced labor on job sites is only half of the slavery issue. Illuminating forced labor in building material supply chains, that design teams specify, has not yet begun. We must turn our attention to the built environment and eradicate modern slavery's permanent imprint."

To do this, the team is promoting total transparency from the ground up (and even from below the ground; 4 percent of forced labor occurs in the global mining industry, per the International Labour Organization). Brad Guy, former chair of the U.S. Green Building Council's LEED Materials and Resources Technical Advisory Group, recently joined GFF's initiative. He's also a member of the AIA Materials Knowledge Working Group and is developing a pledge that will try to channel interest in the environmental and social impact of building materials. This includes spreading the word on the "dirty dozen": bricks, copper, electronics, fiber and textiles, glass, granite, gravel, iron, minerals, precursor chemicals, tin, rubber, steel, and stone. He said these often-specified materials are at risk of being sourced unethically on job sites around the world.

"I'm pretty sure that most people would not consciously choose to purchase these building products if they were the product of forced or child labor," Guy said. "The core of an architect's standard of care is the health, safety, and welfare of the public, and the point of incorporating human rights as a fundamental criterion in the production of buildings and materials is for that reason."

According to Nat Oppenheimer, executive vice president of structural engineering firm Silman, highlighting a tight list of materials can help clarify how much easier it has become to track their origins. "It can change the frame for the design community, hopefully motivating others to ask about other materials and start doing their own research, which in turn may spur further innovation on tracking technology and the creation of new clean versions," Oppenheimer said.

Though the Grace Farms Foundation Architecture + Construction Working Group, as it's officially called, has been active for only a year, its efforts are moving forward quickly thanks to the diligence of its members and, in part, because there is already substantial awareness out there. "We're seeing increasing government regulation around the world, whether in specific modern slavery legislation, such as in Australia and the United Kingdom, or in broader business and human rights initiatives coming out of the European Union and the United Nations," said C.deBaca, who led the State Department's Office to Monitor and Combat Trafficking in Persons during the Obama Administration. "Anyone doing projects overseas or who has multiple offices, or even who sources materials from outside of the U.S., needs to know about this problem."

So the team is busy spreading the news. Oppenheimer and C.deBaca will present their work at the International Association for Bridge and Structural Engineering Congress in New York this September, while Deborah Berke, also a member of the working group, is planning a spring series of discussions on the topic at the Yale School of Architecture. Hayes Slade, 2019 president of AIA NY, and Ben Prosky, AIA NY executive director, will host a meeting to discuss existing antislavery laws and the more than 45 ethical product and materials certifications or reporting mechanisms that can be applied in the U.S. alone.

"As architects, it's impossible to look at our work from the products selected to the job site to the completed project and not think about how it all came together," said Slade. "We are also at a point where information is more readily available and so our expectations and aspirations for transparency are increasing."

It's an achievable goal, Prince believes, to get more people on board and boost consciousness of the issue in a short amount of time. She says it will take a serious communication and organization strategy, and that's why the more experts involved, the better.

"This is an opportunity for industry leaders to use their design and construction wherewithal for significant humanitarian effect through the material procurement and specification process," Prince said. "And we want to find new projects to test this on. Perhaps Amazon's new HQ2 in Crystal City, Virginia, is a good place to start since they have distinctly made a commitment to responsible sourcing and developed one of the most sophisticated data platforms that could be tuned to illuminate and audit the building material supply chain. We're looking for that kind of dedication." **Sydney Franklin**

Sydney Franklin is a member of the GFF Architecture + Construction Working Group, of which *AN*'s editor-in-chief William Menking is a cofounder.

For more information, visit: gracefarms.org/justice.

| architect: Gensler | landscape architect: OJB Landscape Architecture | photographer: Kyle J Caldwell |

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Tightening the second s



China's Belt and Road Initiative is tying the world together and bringing it closer to Beijing—but what is the end game?

In addition to the more infamous killing and pillaging conducted by its various hordes, the Mongol Empire, first led by Genghis Khan and later by his grandson Kublai, brought nearly all of Asia, much of the Middle East, and some of Europe under a unified system of trade and commerce in the 13th century. Consolidating ancient Silk Road mercantile connections, it brought currency into widespread use and generally sought win-win trade deals with conquered territories. While that empire faded by the mid-14th century, it gave the world a precursor to the modern-day state of China, which has embarked on its own ambitious—and, to some, unsettling—quest to link a considerable portion of the world through trade.

The Belt and Road Initiative (BRI), launched in 2013 by Chinese president Xi Jinping, includes hundreds of infrastructure projects financed and constructed in part or in whole by Chinese entities in lands far beyond China's borders. Projects include ports, airports, rail lines, utilities, industrial centers, highways, and even entire new cities and urban sectors. "Belt" refers to roads and railways while, paradoxically, "road" refers to sealanes; together they aim for nothing less than the unification of almost all of Asia and Africa.

The initiative segments the globe into "corridors" and involves differing levels of participation from host countries. There is no official count of participating countries, but estimates range from 60–covering nearly all of Asia–to well over one hundred. The BRI's six main economic corridors include the New Eurasian Land Bridge, the China–Central Asia–West Asia Economic Corridor, the China–Pakistan Economic Corridor, the Bangladesh–China–Myanmar Economic Corridor, the China– Mongolia–Russia Economic Corridor, and the China–Indochina Peninsula Economic Corridor.

Analysts estimate that trade generated by the BRI reached \$117 billion last year. The total estimated cost, by 2027: up to \$1.3 trillion. Whether that investment will pay off for China remains to be seen. Chinese banks and companies hope to profit from loan payments and contracts; the Chinese state hopes to benefit by opening markets and gaining influence. The World Bank estimates that the BRI could reduce transportation times on many corridors by 12 percent, increase trade between 2.7 percent and 9.7 percent, increase income by up to 3.4 percent, and lift 7.6 million people from extreme poverty.

Consisting largely of heavy infrastructure, these projects are unlikely to result in lavish Xanadus to stoke the architectural imagination. With the exception of some impressive new cities and city districts, such as Port City in Colombo, Sri Lanka, and some choice high-speed rail stations, BRI projects include workaday structures like cargo terminals, highway bridges, and the odd potash plant. The BRI recalls past geopolitical initiatives, like the Marshall Plan, by which the **continued on page 27**



SOM's conceptual master plan for Port City Colombo in Sri Lanka, designed with consulting landscape architects Grant Associates.



As massive as the Belt and Road Initiative is, definitive details on its total scope and individual projects are scarce. The Chinese government does not maintain a public account of the initiative, and projects are rarely, if ever, "branded" as part of the BRI. Some obvious investments are clearly tied to Chinese interests, but in many cases, they are hiding in plain sight as joint ventures with local entities or ordinary pieces of infrastructure that have no inherent connection to foreign developers or financiers. The following is an account of high-profile BRI projects.

Six Corridors

- New Eurasian Land Bridge
- China–Mongolia–Russia Economic Corridor
- China–Central Asia–West Asia Economic Corridor
- China–Indochina Peninsula Economic Corridor
 China–Pakistan Economic Corridor
- Bangladesh–China–India–Myanmar Economic Corridor

1 Port of Piraeus Greece

China-based COSCO took over operations in 2016 and invested €600 million to expand two piers. Piraeus ranks sixth in capacity among European container ports, and COSCO's takeover has raised security and economic concerns across Europe.

2 Zeebrugge Terminal

Belgium COSCO bought the rights to design, develop, finance, construct, own, and operate the port, which is the second-largest port in Belgium and will act as the northern hub of the BRI's European activity (Piraeus anchors the south).

3 Doraleh Multi-Purpose Port Djibouti

China State Construction Engineering Corporation developed the \$590 million project, which opened in 2017 and provides Ethiopia sea access by connecting to the Addis Ababa–Djibouti railway. China has aggressively pursued infrastructure development in Djibouti, which sits on the Red Sea and along maritime routes through the Suez Canal.

4 Khorgos Gateway "Dry" Port Kazakhstan

The Khorgos Gateway at the Kazakhstan-China border serves as transshipment point for transferring from Chinese-gauge trains to Russian-gauge trains, but also includes a special economic zone and a new city.

5 Gwadar Port Pakistan

The flagship China-Pakistan Economic Corridor project, which opened in 2016, includes a port terminal, business center, and free-trade zone operated by China Overseas Ports Holding Company.

6 Hambantota Port Sri Lanka

In 2017 a Chinese firm took control of the port's commercial activities as the Sri Lankan government tried to convert part of its debt to Chinese interests into equity. Regional powers have expressed concern that China could use the port as a military base.

7 Muara Port Brunei

Muara Port Company Sdn Bhd, a joint venture of Hong Kong's Beibu Gulf Holding Co., Ltd., and Brunei's Darussalam Assets Sdn Bhd manages the project.

8 Hassan Gouled Aptidon International Airport

Djibouti According to a Chinese development loan agreement, China Civil Engineering Construction Corporation was going to build the new airport 15 miles from the capital of the small African nation. The Djibouti government canceled the deal in 2017.

9 Mattala Rajapaksa International Airport Sri Lanka

The \$190 million airport with a 1-million-passenger capacity opened in 2013, and while it is owned by the government of Sri Lanka, it was funded by a loan from the Bank of China. The lead designer was AECOM.



Railroads and Highways

10 China-Laos Railway

Scheduled to open 2021, the \$7 billion railway travels 250 miles from the northern Chinese city of Kunming to Vientiane, Laos's capital, and could ultimately extend through Thailand and Malaysia to Singapore.

11 Jakarta-Bandung high-speed rail Indonesia

The \$6 billion, 88-mile track built by the China Railway Engineering Group is the first high-speed railway in Southeast Asia. Traveling at speeds of up to 215 miles per hour, trains can transport passengers and goods between Jakarta and Bandung, a provincial capital, in 45 minutes. It is scheduled to be completed next year.

12 Ethiopia-Djibouti Railway

The \$4 billion, 460-mile railway was the first electrified line in East Africa when it opened in 2018. It reduced travel time from the Port of Djibouti to Addis Ababa, Ethiopia, from three days to 12 hours. Although currently operated by China, it will be handed over to Ethiopia Djibouti Railway in five years.

13 Abuja-Kaduna Railway Nigeria

The 115-mile line, completed in 2016 and built by the China Civil Engineering Construction Corporation, was the first standard-gauge railway in West Africa and has transported 1.2 million passengers to date.

14 Temburong Bridge Brunei

Bridges

The 18-mile bridge, scheduled to open in November, is the largest infrastructure project in Brunei's history and is being developed by China State Construction Engineering Corporation.

Padma Bridg

Bangladesh Designed by AECOM, the 80-foot-wide, 6-mile-long, \$1.55 billion bridge is the country's largest infrastructure project and will shorten travel time between the capital Dhaka and southern city Khulna from 13 to 3 hours.

16 Peljesac Bridge Croatia

Connecting Croatia's southern exclave with the rest of the country, the 7,887-foot bridge carries a 4-lane-wide expressway and is projected to open in 2022. It was designed by Ponting Bridges, a Slovenian engineering firm.

Industrial Projects and Utilities

17 Yamal LNG project Russia

This \$27 billion joint venture of Russia's Novatek, France's Total, the China National Petroleum Corporation, and China's Silk Road Fund opened in 2017 and processes 5.5 million tons of liquefied natural gas annually.

18 China-Belarus Industrial Park

Belarus Forty-three companies, most from China and Belarus, will invest \$1 billion in the 35-square-mile park, which is the largest intergovernmental cooperation project between China and Belarus. Belarus's president and high-ranking officials are currently under U.S. sanctions for alleged human rights abuses.

19 Isimba Hydropower Station Uganda

Funded by the Export-Import Bank of China and built by China Water and Electric

Corporation Limited, this22\$568 million dam became\$the third-largest power plant\$in Uganda when it opened\$this year, increasing the\$country's power generationt

20 Uyuni 350KTPA potash plant Bolivia

capacity from 984 mega-

watts to 1,167 megawatts.

Bolivia The third-largest potash plant in South America opened in October 2018 and was built by China CAMC Engineering at a cost of \$170 million.

21 Punta Sierra wind farm Chile

Built by China State Power Investment Corporation, the \$150 million project comprises 32 turbines generating about 282 gigawatt hours per year. It opened in 2018 and is expected to supply electricity for 130,000 households and reduce carbon emissions by 157,000 tons per year.

Economic Zones and New Cities

22 Colombo Port City Sri Lanka

SOM master planned this \$1.4 billion project in Sri Lanka's capital city of Colombo that will reclaim 1,600 acres of land from the ocean. The first phase was completed in January 2019, and municipal infrastructure is expected to be complete in 2020. China Communications Construction Company, Ltd. developed the project, which is projected to create 83,000 jobs over the next 20 years.

23 China-Egypt Suez Economic and Trade Cooperation Zone

Located 75 miles east of Cairo, this economic development zone is operated by China-Africa TEDA Investment Co. and has attracted over \$1 billion in investments to Egypt and created over 33,000 jobs since its first phase opened over a decade ago before the BRI was officially announced. The Chinese government optimistically refers to the BRI as a 21st-century Silk Road, one that harmoniously links economies and increases prosperity for dozens of countries and billions of people, representing up to 60 percent of the world's economic output.



Photo from 2018 of a Chinese construction worker standing on land that was reclaimed from the Indian Ocean for the Colombo Port City project.

27



continued from page 23 United States revived, and benefited from, Europe's economy after World War II. But the BRI dwarfs the Marshall Plan, which comprised \$13 billion of investment, or around \$100 billion in today's dollars—much less than BRI's trillion-dollar scope.

As arguably the biggest collection of construction projects in human history, the BRI offers ample opportunities for architects, contractors, engineers, and other designers. Many, if not most, of the firms involved are Chinese concerns with close ties to the state. They include state-owned enterprises like China Ocean Shipping Company (COSCO) and China State Construction Engineering Corporation, the world's third-largest shipping company and largest construction company, respectively. Both are massive enterprises with numerous subsidiaries, and though they are publicly traded, they ultimately answer to the Chinese Communist Party.

In many ways, this effort to build soft power through hard infrastructure extends a domestic development strategy that China has followed for the past two decades. Itself a developing nation not long ago, China has built up its own ports, roads, and railroads in order to unify its national economy and give its manufacturing sector—which comprises 20 percent of the world's output of goods—access to global markets.

The Chinese government optimistically refers to the BRI as a 21st-century Silk Road, one that harmoniously links economies and increases prosperity for dozens of countries and billions of people, representing up to 60 percent of the world's economic output. China pitches these projects to host countries as tools of economic development. Analysts say that success, for China and BRI partners alike, depends on far more than concrete and steel. The onus falls on host countries to make use of China's largesse. Efficient trade relies on everything from effective local governance to mobility of workers to mitigation of environmental impacts. In the case of partners like Belarus (sometimes referred to as Europe's last dictatorship) whose governments are unstable, corrupt, or underdeveloped, reforms may pose greater challenges than does the development of megaprojects.

In many cases, benefits to host countries have not materialized. Many projects use little local expertise or labor; rather, they are boons for Chinese engineering firms, construction companies, and suppliers such as steel and concrete manufacturers. Once built, they take on a nearly colonial tenor, moving raw materials out of host countries and moving Chinese goods into them. And no matter how economists feel about BRI projects, the initiative has already alarmed environmentalists. The number and physical size of projects promises to remake urban landscapes, alter—and destroy—natural landscapes, and consume untold millions of tons of natural resources, building materials, and fossil fuels. Chinese environmental laws and practices are also notoriously lax compared to those in the U.S. and Europe. In 2017 the World Wildlife Fund (WWF) issued a report documenting BRI projects' numerous incursions into sensitive habitats. WWF identified "high impacts" throughout nearly all of Southeast Asia and "moderate impacts" in BRI corridors in Central Asia. BRI projects have also been associated with increases in the use of coal for power production in many host countries.

Beyond environmental effects, even when host countries own their assets, they are indebted to Chinese financiers. Reports indicate that many countries cannot pay off construction loans, leaving them indebted to China indefinitely. Many projects have turned into white elephants. Mattala Rajapaksa International Airport in Sri Lanka was designed to accommodate one million passengers per year. Though fully operational, Mattala currently serves zero passengers, while also servicing \$190 million in debt to Chinese banks. Having been a relatively poor, developing country so recently, China likely understands the pressure points of the Myanmars and Mozambiques of the world better than any other global power does.

The Center for Global Development estimates that as many as eight countries involved with the BRI are already at risk of debt distress. Some countries are in debt to China by a factor of as much as 20 percent of their GDPs. Others are now approaching BRI proposals more gingerly than they might have when the program launched. Malaysia recently canceled \$22 billion in BRI projects; other countries, particularly Kenya and Mozambique, are pushing back against proposals and renegotiating deals. Ultimately, economic domination via financing may not be a great strategy–flush with cash though they may be, Chinese banks want returns on their investments no less than Western banks do. Then again, even if they aren't repaid, the Chinese state might still get what it wants in the form of global influence.

In other words, the BRI is as much a geopolitical experiment as it is an economic development strategy.

Josh Stephens is contributing editor to *The California Planning* & *Development Report* and author of the forthcoming *The Urban Mystique: Notes on Los Angeles, California, and Beyond.*

28 Products: Purifiers

Surprisingly, indoor air quality can actually be worse than outdoor. Take immediate action with these new intelligent devices that monitor and control interior atmospheres while providing real-time insights. By Gabrielle Golenda

Glow C Awair

Breathe easy with this smart LED nightlight, equipped with technologies that monitor VOCs, temperature, and humidity in real time. Via the Awair app, users can track air quality and adjust the settings of "non-smart" HVAC systems connected to Nest, Alexa, or Google Home.

getawair.com

Pure Cool Me Dyson

Dyson's new personal purifying and cooling fan sifts out potentially unhealthy microscopic particles released by everyday household items, cleaning products, and building materials. The machine uses a hybrid-sealed activated carbon and glass high-efficiency particulate air filter that ensnares gases and pollutants. Meanwhile, the fan's aerodynamic convex surface can be adjusted to project concentrated wind streams.

dyson.com

Biotica800 BetterAir

Instead of using strong chemical additives, BetterAir's system releases microscopic probiotics that form a protective layer of microfauna on walls, floors, and furnishings. Pathogens, mold, and allergens are eliminated by the "good" bacteria before they can collect in hard-to-reach places. Just don't use it with an ultraviolet light purifier, which could kill the probiotics.

betterairus.com







Molekule Molekule

Fight mold, asthma, allergies, and chemical sensitivities with purified air! Molekule uses photoelectrochemical oxidation to break down pollutants and allergens. In the oxidation process, free radicals change the chemical composition of potentially harmful air, cleaning it on a microscopic level.

molekule.com

SLX High Output UV-C Fixture UV Resources

This fixture uses ultraviolet C light to destroy pathogens in HVAC channels, drain pans, and cooling coils. The SLX lamp provides 360-degree coverage to exterior supply and return exhaust ducts, killing harmful microbes.

uvresources.com

Healthbox 3.0 Renson

Using built-in sensors, Renson's smart ventilation system measures levels of carbon dioxide, VOCs, and humidity to direct airflow when and where needed. The SmartConnect duct links to an app so installers can track and manage their job sites, and to a user app that measures air quality in various rooms. With a "faster" setting that ensures higher ventilation levels, Healthbox 3.0 delivers filtered indoor breezes in a jiffy.

rensonusa.com







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29 Products: Ventilation

Easy, breezy, beautiful! These fans circulate sizeable swathes of air but are quieter than a

whisper. By Gabrielle Golenda

V-Series Patterson Fan Company

Featuring angled V-shaped blades, V-Series gearless ceiling fans move volumes of air either forward or in reverse at speeds ranging from leisurely to brisk. Various sizes—8 feet, 12 feet, 16 feet, 20 feet, and 24 feet—fit applications from warehouses to aviation to fitness to agriculture.

pattersonfan.com

Axiom Fan Axiom Fans

The Axiom Fan serves areas upward of 5,000 square feet by virtue of its monolithic curved blades. Perfect for indoor and covered outdoor areas, it is offered in three sizes, and eleven colors and textures.

axiomfan.com

AIR ST Boffi

Italian designer Giulio Gianturco teamed up with the kitchen manufacturer Boffi on its collection of ventilation products to create a wooden ceiling fan that comes in wooden, white, and black finishes. The blades spin at five different speeds and are controlled by a radio remote.

boffi.com





i6 Big Ass Fans

Featuring aircraft-grade aluminum blades, this "big ass" fan brings industrial-quality airflow to intimate-size spaces. The SenseME technology allows users to connect through Amazon Alexa and Google Assistant to set custom schedules, monitor temperature sensors, and use other features that help to conserve energy and minimize heating and cooling costs. It is offered in 60-inch, 72-inch, and 84-inch wingspans in custom colorways.

bigassfans.com

NORDIK EVOLUTION R 140/56" Vortice

Milan-based ventilation purveyor, Vortice, designed this ceiling fan to maximize airflow with just three 56-inch galvanized steel blades. It is available with a light and remote control.

vortice.com

Blow Luceplan

Turin, Italy-based designer Ferdi Giardini collaborated with lighting design studio Luceplan on an overhead fan he characterizes as the "rainbow thief." In one finish option, transparent blades "reveal the colors of the rainbow," while in another, colored blades blur and blend, "canceling the color."

luceplan.com







30 Products: Liquid Flashing The Architect's Newspaper

For those occasional sealing needs, such as repairs to oddly shaped pipe penetrations or irregular window openings, fluid flashing provides the best air- and water-tight coverage that can be easily applied—in a flash. By Gabrielle Golenda

Air-Bloc All Weather STPE Henry

Made with silyl terminated polyether (STPE), this fluidapplied air barrier system features a high solids content that cures in a jiffy. Meanwhile, its hydrophobic qualities mean it can be applied in the rain or snow without washing away—in temperatures down to 10 degrees Fahrenheit.

henry.com

SmartFlash ONE CertainTeed

This liquid applied protective flashing and repair resin provides seamless protection for steep or low-sloped roofs. Easy to apply in one step on-site, it is a cost-effective, time-saving solution for new applications or improvements. When patching asphalt skin and shingles, granules can be added to match the existing texture.

certainteed.com



ZIP System Liquid Flash Huber Engineered Woods

Featuring a chemical makeup of urethanes and silicones, this wet flashing solution bonds to masonry, PVC, glass, wood, concrete, and other building materials. When applied with a trowel or brush, the moisture- and UV-resistant membrane takes as little as 20 to 40 minutes to dry–rain or shine.

zipliquidflash.com



Icynene X-Wall System Icynene-Lapolla

This continuous spray-on insulation is applied directly to the exterior skin, delivering thermal insulation, a tightly sealed air and water membrane, and Class II vapor retardation—all in one solution. The closed-cell foam is ideal for sealing irregular surfaces, cracks, studs, and seams.

icynene-lapolla.com





31 Products: UV Protection

Sun damage remains one of the biggest threats to a building's exterior. These newly developed water and air barriers employ UV-protection technologies to maintain the integrity of building envelopes. By Gabrielle Golenda

DELTA-STRATUS SA Dörken

This self-adhering vapor-permeable weather and air barrier comprises two outer layers of spun-bonded polypropylene fabric and a subsequent UV-protecting inner layer. The additional UV-resistant acrylic coating protects the moistureabsorbing properties that would otherwise be damaged while the material is left exposed during construction.

dorken.com



Sto Gold Coat Sto Corp.

Sto Corp.'s tried-and-true liquid applied membrane provides extended UV-protection time, allows for low temperature application, and increases opacity to hide sheathing. The barrier is directly applied to wall paneling or concrete masonry and is combined with a waterproofing StoGuard sheathing-joint treatment where needed.

stocorp.com

TRASPIR EVO UV 210 Rothoblaas

This UV-resistant monolithic barrier for siding applications has two layers: a top breathable acrylic film with a bottom polyester fabric for reinforcement. The pairing bolsters thermal performance and structural stability to prevent swelling during construction.

rothoblaas.com



Window Bucks

It's not enough to have thermally broken windows and doors; create unbroken, insulated building envelopes using window bucks, air-tightening and waterproofing products that extend around

OpeningS. By Gabrielle Golenda

ThermalBuck BRINC Building Products

This insulating system acts as an air and water barrier while simultaneously supporting the weight of a window or door, which prevents sagging in the exterior membrane. It is sold in lengths of 8 feet and available in seven depths: 1 inch, 11/2 inch, 2 inch, 21/2 inch, 3 inch, 31/2 inch, and 4 inch.

thermalbuck com

Fox Blocks Series Fox Blocks

Fox Blocks are made of an outer shell of expanded polystyrene foam panels tethered together by interior injection-molded plastic ties. Besides protecting the building envelope from moisture, the insulating concrete form wall blocks dampen noise. The system is offered in a plethora of shapes, sizes, and concrete core thicknesses for exterior and interior applications.

foxblocks.com

PVC Beveled Window Buck Supreme Window Bucks

Most window bucks have a square cross section that causes a gap to form between the window opening surface and the window frame. With a patented trapezoid cross section, this PVC window buck uses a beveled edge that allows the insulating layer to be positioned closer to the window opening surface. The drywall can then installed in such a way that the interior frame is still fully exposed.

windowbucks.com









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After hours of careful deliberation over five hundred entries from our largest ever Best of Products Awards, we are excited to share the Winners, Honorable Mentions, and Editors' Picks. Eighteen diverse categories cover a wide range of sectors, including building materials, acoustics, furnishings, finishes, tech products and tools, kitchens, baths,

and more. Our judges evaluated submissions for originality, innovation, functionality, aesthetics, performance, and value, and selected one winner and two honorable mentions in each category. New this year, our editors also picked their favorite products in all 18 categories.



Fiona Raby Cofounder Dunne & Raby



Alda Ly Principal and Founder Alda Ly Architecture & Design



Founder Boym Partners



Lora Appleton Founder kinder MODERN & Female Design Council



William Menking Editor in Chief The Architect's Newspaper



Gabrielle Golenda Products Editor The Architect's Newspaper

ExCinere

Best of Products

Winner

PELLETTI/COURTES

Indoor Finishes and Surfaces

Winner

Dzek

The ExCinere tile collection was designed by Italian design duo Andrea Trimarchi and Simone Farresin of Amsterdam-based Studio Formafantasma to evoke Sicily's Mount Etna. Produced by architectural material brand Dzek, this new versatile surface incorporates volcanic matter. The tile is available in two unconventional rectangular dimensions and four volcanic-ash glazes. The new design is suitable for both outdoor and indoor use, and can cover everything from kitchen counters to bathroom floors and facades.

dzekdzekdzek.com

"It's fascinating how this product brings the outside in, and then back outside again. It evokes an actual landscape in a way that's subtle but special; a great talking point for your clients." —Lora Appleton

Honorable Mentions

Matte Collection Callidus Guild **iD Mixonomi** Tarkett North America

callidusguild.com





Editors' Picks Magna Recycled Glass Slab Walker Zanger

walkerzanger.com

Soft Onyx Fiandre granitifiandre.com

Indoor Lighting and Electrical

Winner

Noctambule FLOS

The Noctambule modular lighting system was imagined by renowned German designer Konstantin Grcic for Italian lighting design brand FLOS. The collection of ethereal lights is made from large, uniform, handblown glass vessels that appear invisible during the day. At night, the single component or combined train magically illuminates thanks to the LED technology carefully hidden within the vessel's connecting rings. Up to six different modules can be joined together to create an impressive floor or pendant lamp.

flos.com

"The scale of this product is grand for a modular component. It's monumental enough to look great in a large-scale palatial setting but can also be scaled down to an urban residential context." –Lora Appleton

Honorable Mentions

Dorval Lambert & Fils

lambertetfils.com

RAY Sconce Stickbulb stickbulb.com



Editors' Picks Plena Foscarini

Haller E USM ^{usm.com} Fascio Medium Linear Chandelier with Crystal Visual Comfort & Co. visualcomfort.com



Stille

Best of Products Winner

COURTESY STADNARD ISSUE

Residential Interior Furnishings

Winner

Standard Issue

The Stille collection by Brooklyn design studio Standard Issue is a bright, modern collection of occasional tables and easy-to-assemble shelving units to showcase household objects with contemporary sophistication. The modular system was inspired by the functionality and timelessness of midcentury Danish architect Poul Cadovius's Abstracta system. Standard Issue adapted the system's signature joinery and elegant lines with updated bedside table, side table, coffee table, shelf, and media console configurations.

standardissuedesign.com

"The product is interesting because the manufacturer was able to produce something that is familiar but still new. It shows that shapes don't always have to be reinvented. It represents a sort of aesthetic recycling." –Constantin Boym

HonorablePoMentionsHe

Portal Armoire Henrybuilt Beanie Sofa NEA Studio

neastudio.com





Editors' Picks 5M Chair soft limits

softlimits.studio

Hull Collection O&G Studio

oandgstudio.com

Hillock Console Skylar Morgan Furniture

36

skylarmorganfurniture.com
Best of Products Winner

Commercial Interior Furnishings

Winner

Meredith Lounge Chair Poppin

The colorful Meredith Lounge Chair by Poppin is an elegant seating option for collaborative work spaces and is a perfect fit in any reception area, lounge, breakout room, or other corporate environment. Consumers can mix and match the dark gray or brickcolored metal base options with a dark gray, dusty rose, or teal seat unit in velvet or polyester upholstery for a semi-custom look that integrates seamlessly into any design.

poppin.com

"If I saw a bunch of these chairs in an airport, I'd be very happy." -Matt Shaw, The Architect's Newspaper's executive editor

Honorable	Divy Mo
Mentions	3form
	3-form.com

bile

Racer Collection Blu Dot

bludot.com





Editors' Picks

Swing Pair madebypair.com Landing

COURTESY 3FORM

Wilkhahn

wilkhahn.com

Acoustics

Winner

Trypta Luceplan

Celebrated New York designer Stephen Burks designed Trypta to be a colorful and modular suspension lamp that could also be an acoustics solution. A central column channels a spotlight downward while anchoring various sizes of soundabsorbing, flame-retardant, knit fabric panels, attached on three equidistant hinges, distributed on a 120-degree axis. Produced by Italian lighting brand Luceplan, Trypta can be combined in a multitude of configurations that respond to different decor needs.

luceplan.com

"With more and more open ceilings in commercial offices, there hasn't been a lot of innovation in how we deal with noise. This product is a good example of lighting that integrates acoustics panels." —Alda Ly



Honorable Mentions Kula Glass Unika Vaev unikavaev.com Blade Luxxbox





VaporSoft® Arktura arktura.com

Editors' Picks **Open Spaces 2.0** CertainTeed Ceilings



VaporSoft[®] Acoustic Wall & Ceiling Panel System

VaporSoft[®] acoustic torsion-spring panel system has been named a 2019 Architect's Newspaper Best of Products Awards Editors' Pick, recognized for its innovative combination of features, including powerful noise control and integrated lighting options, in an easy-to-use, versatile, modular system. It significantly reduces the impact of noise across spaces thanks to its fully recyclable, high-performance PET Soft Sound[®] acoustical facing, NRC rated up to 0.9. Installs across ceilings and walls are made a breeze through compatibility with both standard grid systems and our Vertika[®] wall channel system. Add available InLine or Backlighting illumination, and choose from a wide array of Soft Sound[®] color options, including natural wood textures, paired with a growing library of beautifully designed seamlessly tileable patterns to achieve the look you need for your next project.





Best of Products Winner

Home Accessories

Winner

Alaire Collection Atlas Homewares

The Alaire Collection by Atlas Homewares introduces 18 new angular handle pulls to the interior hardware market. Available in brushed nickel, matte black, and polished chrome finishes, the new series adds contemporary lines to any design. The collection includes pulls ranging from 3¾ to 12 inches.

atlashomewaresdirect.com

"This product could be very dramatic in the right application. It's nice to see a hardware brand that has thought beyond the linear L-shape. The product is almost human and appears to be crawling." —Lora Appleton

HonorableSideMentionsFink F

Side Table Fink Furniture

fink.furniture



latoxlato.com





Editors' Picks Smooth Operator Kit Garden Glory

Soffio Foscarini foscarini.com

Textiles

Winner

VEER Wolf-Gordon

The VEER collection was developed by conceptual Dutch designer Aliki van der Kruijs for American textile brand Wolf-Gordon. An antique kimono textile from Arita, Japan, inspired van der Kruijs to explore 2- and 3-D space through a deceptively simple grid motif. The designer first applied the graphic to porcelain vases, which resulted in distortions of the original grid, and these new patterns were applied to a Wolf-Gordon upholstery collection.

wolfgordon.com

"There's a subtlety to the combination of textures in this product that makes it strong. There's something beautiful about the transition between its 2- and 3-dimensionality." —Fiona Raby



Honorable
Mentions

Scaramouche Dedar dedar.com

Tatami System Tarkett North America

tarkett.com





Editors' Picks Gradation Shaw Contract The Bauhaus Project Designtex designtex.com

Best of Products

Baths

Baths

Winner

SONAR Wave Double Basin Laufen

The SONAR Wave Double Basin was designed by Milan-based Spanish designer Patricia Urquiola for Swiss bathroom products manufacturer Laufen. For this sink, the designer sought to explore the formal options enabled by the brand's ultrathin SaphirKeramik porcelain technology. Pushing this innovation to new limits, the SONAR Wave Double Basin offers urban dwellers living in tight quarters an unobtrusive double bowl option.

us.laufen.com

"The scalloped edge creates a nice, soft touch." —Gabrielle Golenda

Honorable Mentions

Petra Agape

agapedesign.it dominteriors.com





Elan Grid Shower Door VIGO

vigoindustries.com



SteamVection Steamhead ThermaSol thermasol.com

Editors' Picks SideKick Shower System Peerless Faucet

peerlessfaucet.com

Kitchens



Heritage Induction Pro Ranges Dacor

The new Heritage Induction Pro Ranges by Dacor combine the efficiency of induction with the performance of the brand's Four-Part Pure Convection oven. While most induction ranges only feature four cooking zones, both Heritage 30-inch and 36-inch Induction Pro Ranges can operate all five induction cooking elements concurrently, without needing extra electrical equipment. With its BOOST mode, the new range effectively increases the maximum output of a single element by up to 3,700 watts. Its sleek, minimal design works in a variety of contexts, thanks to Dacor's Match Color System.

dacor.com

"There's a stereotype that induction cooktops aren't powerful, but it's rice to see this technology as an industriallevel product." —Alda Ly



Honorable Mentions

Space Theory Space Theory

Emerald Finish True Residential

spacetheory.com

true-residential.com





Editors' Picks Gunmetal Kitchen Amuneal Professional 7 Series Range Viking Range vikingrange.com

Touchless Kitchen Faucet Kohler kohler.com

Outdoor Lighting and Electrical

Winner

LP Xperi Louis Poulsen

The new LP Xperi street lamp by Danish heritage brand Louis Poulsen brings futuristic style to residential streets. This new luminaire was designed both to be functional at night and visually appealing during the day. In the daylight, the outdoor lamp's open, geometric design filters sunrays while also offering an everchanging view of the sky through its ribbed head. As darkness falls, the LP Xperi ignites a luminous mix of modern design, materials, and technology, exuding a powerful stream of light in all directions.

"This product has both uplight and downlight functions, so it goes beyond the typical scope of a streetlight and considers more ephemeral types of illumination."

louispoulsen.com





Honorable Mentions

Pursuit Architectural Area Lighting

hubbell.com/architecturalarealighting

Uma Mini Pablo Designs

pablodesigns.com





Editors' Picks KFL Collection KIM Lighting

Outdoor Furnishings

Winner

F100 Flycycle

The F100 bike rack by Flycycle is user-friendly, spaceefficient, and improves the experience of parking a bike, whether on the street or in an office parking garage. This attractive solution for property owners has an elevated shoulder that allows cyclists to slide the front wheel of their bike forward and up a grooved inclined plane. The wheel comes to rest on two points of contact with the rack's tube, providing extra stability. A second bike can then be parked on the opposite side.

flycycle.co

"Often the problem with bike racks is that they are beautifully designed but aren't very functional. It's nice to see something so successful at meeting both criteria." –Constantin Boym



Honorable Mentions

Paseo Planters OSSO Concrete Design

ossoconcretedesign.com

Rambler Picnic Table Shift

shiftmakes.com



Editors' Picks

Circula Collection Blu Dot

bludot.com



Stack mmcité1

Outdoor Finishes and Surfaces

Winner

Bison 30-inch-by-30-inch Ipe Wood Deck Tile Bison Innovative Products

The Bison 30-inch-by-30-inch Ipe Wood Deck Tile by Bison Innovative Products provides the flexibility to create versatile, unique rooftop environments quickly and easily. These wood tiles are commercial grade and available in standard and FSC-certified options. Other material options include Cumaru, Massaranduba, Garapa, Mahogany, and bamboo. Each component weighs 34 pounds—only 5.4 pounds per square foot—and has been tested to achieve a 3,680-pounds-force Janka hardness rating, as well as Class A NFPA fire rating.

bisonip.com

Best of Products

"Unlike other decking products available today, these plank squares snap into a sliding system, which makes installation easier and allows you to make different configurations." –Gabrielle Golenda



Honorable Mentions

Dekton Grip+ Cosentino

Gradients Móz Designs

mozdesigns.com





Variegated Zebra Honed "Limestone" Pure + FreeForm

Editors' Picks **Ombré Cement Tile** Villa Lagoon Tile

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Best of Products Winner

COURTESY ASSA ABLOY OPENING SOLUTIONS

Openings

Winner

Attack Resistant Openings ASSA ABLOY Opening Solutions

Attack Resistant Openings by ASSA ABLOY Opening Solutions enable security and protection for educational environments in new or retrofit constructions. The assembly can delay an intruder's access using ASSA ABLOY's steel frame School Guard Glass, mortise lock, vandal-resistant escutcheon, and standard-weight hinges. The openings product complies with standards based on a recent FBI Active Shooter Report and can withstand 90 rounds of 7.62-millimeter NATO ammunition.

assaabloy.com

"This product is necessary given the current state of affairs. Innovation in safety is essential, and it's really great to see companies using ingenuity to deal with this systemic issue. It's a Band-Aid solution to an unfortunate problem in the United States." —Lora Appleton

Honorable Mentions

The Mitica Collection Boffi Group - ADL

boffi.com

Bird1st Glass Guardian Glass

guardianglass.com





Steel Entry Pivot Doors MAIDEN Steel

maidensteel.com

Lift and Slide WinDoor windoorinc.com

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cestrong.com

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Best of Products

Facades

Facades

Winner

InVert Self-Shading Windows TBM Design

The InVert Self-Shading Windows system by TBM Designs places smart thermobimetal pieces inside the cavity of the manufacturer's standard insulated glass unit (IGU) to dynamically reduce heat gain at the surface of a building's envelope. Each individual element actively responds to solar radiation by inverting its curl and flipping over to block rays. The shades don't use any energy or require any controls.

tbm-designs.com

"This product reinforces weather conditions and makes you more aware of what's outside. Rather than everything being completely controlled by humans, natural systems control the building, which is something we need to be dealing with more and more." —Fiona Raby



Best of Products Winner

Honorable Mentions

Living Wall Facades Eco Brooklyn

ecobrooklyn.com

Modified Wood Cladding Kebony

kebony.com





Editors' Picks Concrete Skin Breeze Rieder North America Perforated Building Facade Rigidized Metals Isopure Sedak sedak.com

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Building Materials

Winner

Mass Plywood Panel Freres Lumber Co.

The Mass Plywood Panel by Freres Lumber Co. is the first veneer-based timber product to rival concrete and steel. It can be produced up to 24 inches thick, 12 feet wide, and 48½ feet long; and according to the updated U.S. building code, it can be used in buildings up to 18 stories high. The panels greatly reduce labor needs and speed up building construction time.

frereslumber.com

"To see that there's advancement in the acceptance of these new, innovative, wood materials is promising." —Alda Ly



Honorable Foam Mentions Owen

Foamglas Owens Corning

owenscorning.com

DELTA-DRY & LATH Dörken Systems

dorken.com





LP WeatherLogic Air & Water Barrier LP Building Solutions

lpcorp.com

Editors' Picks

Louvre Railing System Amuneal

amuneal.com



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HVAC

HVAC

Winner

EcoBlue WeatherMaster Rooftop Units Carrier

The EcoBlue WeatherMaster Series Rooftop Units by Carrier were designed to improve HVAC performance and efficiency while decreasing maintenance and installation costs. This product incorporates the industry's first beltless, direct-drive vane axial fan, and overall has 75 percent fewer moving parts than comparable products. Other enhancements include new control board and coil technology, permanently lubricated motor bearings, toolless filter-access doors, and easily replaceable parts.

carrier.com

"This product is simpler, more dependable, and lower maintenance than comparable options on the market today. Too often, design is perceived as something that has to be seen, but this is an invisible product that has a strong impact regardless." —Constantin Boym



Honorable Mentions

EME 3625D FLMD Ruskin

ruskin.com

mitsubishipro.com



XP Series Industrial HVLS Ceiling Fan Hunter Industrial

hunterfan.com



Editors' Picks MLZ One-Way Ceiling Cassette Mitsubishi Electric Trane HVAC US

i6 Big Ass Fans

ΤΑΤ 5_



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CITYMULTI® N-GENERATION

Tech: Smart Products

Winner

Life Anew NEXT TOTO USA & Georgia Pacific Pro

The smart, fully connected Life Anew NEXT system by TOTO USA and Georgia Pacific Pro is a game changer in the management of public airport lavatories. With integrated cloud-based processing and data storage, cutting-edge sensors, and wireless technology, the computable Georgia Pacific Pro KOLO Smart Monitoring System enables timely and customized communication between connected restroom fixtures and facility managers and custodial staff through mobile and web applications. The system is installed on EcoPower flush valves, faucets, and enMotion paper towel, toilet tissue, soap, and sanitizer dispensers in restrooms at Atlanta's Hartsfield-Jackson Airport to ensure that the two most critical fixture categories—paper and water—are connected.

totousa.com gppro.com

"Too often, intelligent design becomes an area for gimmicks, but in this case, there aren't any. This product is a serious working system." –Constantin Boym



The KOLO[™] system is a new communication platform that provides reliable, customizable and secure monitoring and analysis of smart, connected restroom fixtures and dispensers. An open architecture allows for the connection of partner devices.





Honorable Mentions

Intentek Wireless Charging Surface Formica

formica.com

Phyn Plus Smart Uponor North America

uponor-usa.com



Editors' Picks PureWarmth Kohler

Storage System with Expandable Battery Pack LG Electronics Ig.com Integrated Wine Column Signature Kitchen Suite

COURTESY TOTO USA

signaturekitchensuite.com

Tech: Design Tools

Winner

ARCHICAD 23 GRAPHISOFT SE

The new ARCHICAD 23 BIM software products by GRAPHISOFT SE offer a complete end-to-end design and documentation workflow for architectural and design practices of any size. Compatible on both Windows and Macintosh operating systems, the new product combines the best of gaming and computer-aided drafting programs to offer users an easy-to-learn and fun-to-use interface.

graphisoft.com

"It's nice that this product allows architects to use Apple computers. It's just more flexible." —Alda Ly



HonorableLayerMentionsLayer

Editors'

Picks

layer.team



ColorReader Datacolor

datacolor.com



Origami XR Origami XR

ingeniousio.com

IngeniousIO

OpenCA and ProlO

origami-xr.com



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60 Review

Walter Gropius: The Man Who Built the Bauhaus

By Fiona MacCarthy | Harvard University Press | \$35.00

Bauhaus Goes West: Modern Art and Design in Britain and America

By Alan Powers | Thames & Hudson | \$40.00

"When Walter Gropius arrived in London on 18 October 1934, he was treated like a creature from another planet." That first impression, the first sentence in the first chapter of English architectural historian Alan Powers's enlightening study of the reception of the Bauhaus in Britain, has long prevailed. Historians have tended to see the short period that Gropius and fellow Bauhäusler Marcel Breuer, Lucia Moholy, and László Moholy-Nagy spent in London as a relatively fruitless lavover on the Bauhaus's posthumous westward march to North America (and have ignored the fact that many prominent figures also went eastward to the Soviet Union or Palestine). The New World was a land of opportunity for modernism as the United States succumbed to the genius of Gropius, whom Tom Wolfe later—riffing on Paul Klee—satirized as the movement's "silver knight" in his 1981 book From Bauhaus to Our House. If Britain was unmoved, America was transformed, or so the oft-told tale would have it. Powers's book is one of two new major studies that tell a different story. Gropius's new biographer Fiona MacCarthy reports that Gropius-whom she met a year before his death—"looked back on his years in London with a kind of exasperated fondness," while Powers argues that Britain was a far more consequential chapter in Gropius's development as an architect than has ever been acknowledged.

Gropius founded the Bauhaus in 1919 in Weimar, but after the school lost the confidence of the local state government, it moved into its iconic modernist buildings in Dessau, only to be chased away again six years later by the local rise to power of the Nazi Party. The school eked out a final year in an abandoned telephone factory in Berlin until its third director, Ludwig Mies van der Rohe, read the graffiti on the wall and closed the school under pressure from a government now under Hitler's command. Exile was already a condition of the Bauhaus long before the diaspora sought to re-create, in vastly different circumstances, from Moscow to Harvard, something of what had been lost.

For more than a generation, American architectural historians have set out to debunk in exhibitions and books the powerful myths of the Bauhaus's international reincarnation that Gropius himself-with enormous help from Swiss historian and polemicist Sigfried Giedion-continually nurtured. This year the Bauhaus is celebrating its centennial, and the jury is out on whether the scholarly work of those revisionist contemporary historians is being advanced or slightly eroded. Post-Cold War Germany has a vested tourism interest in promoting the myth that all of modernist design emanated from the crucible of the Bauhaus-new museums are opening dedicated to it in Weimar and Dessauand many of the myriad publications that accompany the festivities have set out to recharge the magnetic power of the Bauhaus

as a lodestone to attract credit for almost anything modernist, especially steel architecture and metal furniture. But recent scholarship has shown just how complex and contradictory the school was during its 14-year existence as a laboratory for the most varied experimentation, and scholars continue to try to resist the pull of the Bauhaus as an easy-to-remember moniker and marketing device. Among their myriad achievements, one joint contribution of MacCarthy's and Powers's books is to reopen the question of what the Bauhaus diaspora brought to the U.K. and what the English sojourn contributed to Gropius's formation, but in both books the American part of the story feels a bit like an afterthought.

One of the dangers for those writing a biography of anyone who was at the Bauhaus is that it is tempting to treat that place as key to understanding their subject's artistic biography from beginning to end. This reductive assumption is perhaps somewhat excusable with "the man who built the Bauhaus," since even in America, as MacCarthy notes, Gropius kept an address book with a separate section for Bauhäusler, and set the powerful myth of his Bauhaus in motion with the 1938 show he curated at the Museum of Modern Art, intended more as a reanimation rather than a postmortem. MacCarthy is best known for her prizewinning biography of William Morris, and elements of her own biography pop up from time to time when she explains why a new biography of Gropius-a 1,200page, two-volume account was published in 1983—is needed. She recalls a visit with Gropius to the extraordinary apartment house-cum-commune in Lawn Road near Hampstead-a modernist building designed by Wells Coates that opened in June 1934, a few months before Gropius's emigration-as the spur that determined her to be his posthumous apologist. She writes in conscious emulation of Nikolaus Pevsner's Pioneers of the Modern Movement: From William Morris to Walter Gropius, published in 1936, when Gropius had decided to leave for Harvard. But MacCarthy doesn't ruminate—as Alan Powers's book helps us to do-on what it means that a radical building like Coates's was built in anticipation of the Bauhaus master's arrival, not after it. MacCarthy's appraisal of the evolution of modern architecture and design seems hardly to have advanced beyond Pevsner's bromides in claims such as, "Without Walter Gropius's broad-based approach to industrial designing as first developed at the Bauhaus, there might not have been an architect-designer as fluently imaginative as the American Charles Eames.³

Don't pick up *The Man Who Built the Bauhaus*—a great read, suitable for the beach, which Gropius and other *Bauhäusler* loved, from the banks of the Elbe to Cape Cod—to bathe in Gropius's architecture. MacCarthy has little understanding of architecture, no sense of the role that others, including Adolf Meyer and Breuer, played in Gropius's most successful designs, and only a weak sense of his international role in the 1950s and '60s, after he arrived in America. Despite the fact that he spent over half of his professional career in America, this period takes up only a quarter of this hefty volume. There are not even mentions of such key works as the U.S. Embassy in Athens, opened in 1961. This review could be quickly filled with a list of absences of key aspects of Gropius's career, or misunderstandings, such as the Bauhaus building being constructed of "prefabricated concrete walls," or the roof of Gropius and Breuer's Frank House in Pittsburgh (1939-40) hosting a dance floor (it is in the dining room two floors below).

But this churlish assessment is to miss the point. MacCarthy's aim lies elsewhere. In her book, we are offered an account of the sentimental journey of one of the most influential architects and pedagogues of the 20th century. The themes are of loss and absence, of the long shadow cast by Gropius's failed first marriage to Alma Mahler and his longing for greater contact with their daughter, Manon; of the loss of the Germany he had known; of life in exile; and the troubling lack of connection with his adopted daughter, Ati (who married John M. Johansen). All this has been painstakingly and empathetically reconstructed from private letters and interviews, and finally, after the book ends with a very moving passage, MacCarthy sees Gropius as having spent his whole life fighting against that very "architectural soullessness, the despoliation of nature, the denial of community...and capitalist greed" that is still commonly held to be the legacy of modernism among Britain's particularly virulent anti-modernists, led in recent years by Prince Charles. In the acknowledgements she offers another element of her motivation for this impressive commitment of five years of research and travel: namely, to counter Gropius's reputation as a cold-hearted modernist and "reveal Gropius as a man of considerable passions and tenacity." Little concrete argumentation is offered for the supposed positions in defense of nature and against capitalism by the designer of New York's Pan Am Tower, but one goes away with something of that connection to Gropius, the man, who so moved his new biographer 50 years ago.

Bauhaus Goes West will be an eye-opener for historians and general readers alike. Powers's main achievements are to reveal the extent to which strains of modernist experimentation existed in England before the arrival of the German and Hungarian émigrés from the Bauhaus, and also to argue convincingly that many of the key elements of their later work in America were influenced by experimentation in Britain. In a rich weave of documentation and little-known images—as opposed to the oft-reproduced photography offered in the Gropius biography—we are offered a nuanced and subtle context for the handful of years spent in London by Gropius, Breuer, and Moholy-Nagy-each of whom is given a chapter. They arrived in a country where, Powers argues, "there was a greater endorsement of a broad range of Modernism among an older generation than has been supposed," and where a broad range of German modernism, notably the work of Bruno Taut and Erich Mendelsohn, was recognized as equally as important as the work produced at the Bauhaus. Even more important Powers underscores the radical changes that took place in modernism in the 1930s. He shows that the "romantic and regional turn in the second half of the 1930s," in which Gropius and Breuer took part, was evident in a greater embrace of timber and structural fieldstone walls in both works that have long been part of the canon, such as Breuer and F. R. S. Yorke's Gane's Pavilion of 1936, and works that are great discoveries, such as a wood house by Gropius in Kent. It was in Britain that Breuer began to experiment with bent laminated plywood, which would be crucial to the transformation of American timber architecture after he joined Gropius in Cambridge, Massachusetts.

But Powers does not restrict himself to a handful of famous designers. He has researched an impressive roster of lesser-known Bauhaus émigrés and of British students who had attended the Bau haus, and most important, he studies the work of a number of female designers, such as Enid Marx, little known outside—or even inside—Britain. Marx later wisely remarked that "the strength of the Bauhaus was not in the profundity of its technical training, but in the atmosphere of enterprise and experiments in all the arts which it managed to create." Bauhaus Goes West is as impressive for offering a history of British textile experimentation during this period as for fully depicting a corpus of architectural statements that make it clear that modernism's contribution to the 1930s in Britain was much more impactful than is generally acknowledged. The impact was not simply in formal terms, but also in the way that different Bauhaus figures offered different paths to explore, notably Moholy-Nagy, whose interest in the biological underpinnings of design dovetailed with scientific research in England, where the botanist A. G. Tansley coined the word "ecosystem" in 1935.

As Powers notes, then, as now, "everyone finds the version of the Bauhaus they are seeking."

Barry Bergdoll, cocurator of the 2009 Bauhaus exhibition at MoMA, teaches architectural history at Columbia.

61 Review

The Evolution of a Building Complex: Louis I. Kahn's Salk Institute for Biological Studies By Jeffry Kieffer | Artifice | \$29.30



First-floor plan of the Salk Institute's unbuilt Meeting House.

In spite of its title, this book is not exactly a reconstruction of the evolution of the Salk Institute from the time of Dr. Salk's first meeting with Louis Kahn in 1959 to when the first scientists moved into the northernmost laboratory block lining the monumental plaza overlooking the ocean in 1966. This book may be seen as a polemical essay that seeks not only to refute the negative reception of Kahn's work by established European critics like Colin Rowe, Reyner Banham, and Manfredo Tafuri, but also to challenge the notion that the French Enlightenment strongly influenced Kahn. This idea was hypothesized in the 1980s by a number of Italian scholars, such as Marcello Angrisani, whom I cited in my essay "Louis Kahn and the French Connection," first published in Oppositions 22 in 1980.

Despite acknowledging the influence of the French émigré architect Paul Cret, who was Kahn's mentor at the University of Pennsylvania until the latter's graduation in 1924, Jeffry Kieffer finds it necessary to insist that Kahn's approach was not typological. This term references the abstract type-forms promulgated by J. N. L. Durand in his 19th-century treatise *Précis des leçons d'architecture données á l'Ecole Polytechnique*, which was destined to establish the compositional method of the École des Beaux-Arts, by which Cret had been formed. Cret attempted to transmit this thought process to his students, notwithstanding Kahn's socially committed, anti-academic stance adopted during his collaboration with Oscar Stonorov at the time of the New Deal.

Despite Kahn's initial commitment to social housing, Kieffer insists that Kahn in his maturity was influenced, like Frank Lloyd Wright, by American transcendentalism, although he fails to observe how this preoccupation was also evident in the work of Buckminster Fuller, who influenced Kahn via Anne Tyng when the two designed the gargantuan, geodesic City Tower project of 1952-57. Further, Kieffer skips over not only the countervailing impact of Kahn's sojourn at the American Academy in Rome from 1951 to 1952 but also the simultaneous publication on Kahn's doorstep, as it were, of Emil Kaufmann's Three Revolutionary Architects: Boullée. Ledoux. and Lequeu, issued by the American Philosophical Society in Philadelphia in 1952. Surely this work has to be one of the sources for Kahn's hermeticism, more than Kieffer's somewhat simplistic suggestion that there's a link between an open Torah and the symmetrical plan of the Salk Institute, which comprises twin blocks on either side of an axial plaza

facing the sea. If any part of Kahn's Salk Institute proposal is hermetic, then it is surely his unrealized Meeting House complex, which seems to have been conceived by the architect as cryptically overcoming the split between C. P. Snow's two cultures, i.e., the separate discourses of art and science which may account for Kahn's metaphorical treatment of the Meeting House as "a building wrapped in ruins." Uncertain as to what might be the ultimate program for such a building, Kahn seems to have rung the exterior around its content-part lounge, part dining hall, part library, part theater-with all except this last being housed in orthogonal volumes. Kahn ostensibly modeled the theater, according to Kieffer, after Ledoux's Besancon theater of 1775, but the theater associated with the Meeting House bears little resemblance to Ledoux's form. Kieffer is at his best in his formal analysis of the Salk Institute, although even here the rigorous character of his analysis might have been aided by the support of annotated diagrams.

Above all other considerations, Kieffer wants to convince us that Kahn's constant preoccupation was to render every building as a transcendental light modulator, with light continually changing according to the movement of the sun. At the same time Kahn's approach was often to assume an a priori geometrical gestalt as a point of departure, as in his 1959 First Unitarian Church in Rochester. His designs were also often inflected both tectonically and programmatically, as is evident from the folded-plate version of his long-span interstitial service floors set between the layered laboratories at Salk, a solution that was eventually abandoned in favor of Vierendeel trusses spanning across the labs. A similar inflection occurs with the Kimbell Art Museum in Fort Worth, Texas, of 1965-72, wherein cycloid pseudo-vaults span 100 feet as folded plates in such a way as to provide for both longitudinal pseudo-rooms and a transverse flexible loft space, thereby reconciling the inherent conflict between a museum conceived as an assembly of rooms and a museum conceived as open-ended space.

Kenneth Frampton is the Ware Professor of Architecture at the Graduate School of Architecture, Planning and Preservation at Columbia University.

62 Highlights

Far Out: Suits, Habs, and Labs for Outer Space

San Francisco Museum of Modern Art (SFMOMA) 151 Third Street San Francisco

Through January 20, 2020



Fifty years to the day after Neil Armstrong became the first human to set foot on the moon on July 20, 1969, the San Francisco Museum of Modern Art opened Far Out: Suits, Habs, and Labs for Outer Space, an out-of-this-world exhibition of space suits, designs for hypothetical extraterrestrial habitats, moon-based laboratories, and more. Much of the work on display at SFMOMA is decidedly architectural. Included in the exhibit are examples of Neri Oxman's high-tech biomimicry creations and Rick Guidice's imaginative space colony drawings from the 1970s.

House, a collaborative project by Clouds Architecture Office (Clouds AO) and Space Exploration Architecture (SEArch) for NASA's Centennial Challenge Mars Habitat Competition. In its design for a four-person habitat to be placed on the surface of Mars, the team proposed a 3D-printed structure that would be covered in a laver of ice to shield it from the planet's harsh weather conditions. AS

The exhibition also includes Mars Ice

New Glass Now

Corning Museum of Glass 1 Museum Way Corning, New York

Through January 5, 2020



New Glass Now brings together work by one hundred emerging and established talents from 32 countries to offer a lens on the state of glassmaking today. A curatorial committee composed of design experts Aric Chen, Susanne Jøker Johnsen, and Beth Lipman, as well as the Corning Museum's curator of modern and contemporary glass, Susie J. Silbert, selected the pieces-which range from largescale installations to delicate miniaturesfrom the results of an open-call submission.

Touching on themes like gender inequality and environmental degradation, the carefully curated exhibition reveals what glass can

achieve with expressive and conceptual approaches, as well as with new takes on ageold flameworking, glassblowing, and casting techniques. This comprehensive survey coincides with New Glass Then, an annex exhibit that explores the history of two previous iterations of the New Glass Now exhibition series from 1959 and 1979. Adrian Madlener

Fast

New York

Resident Alien: Austrian Architects in America Austrian Cultural Forum New York 11 East 52nd Street

Through February 2020



The Austrian Cultural Forum New York is shining a light on the distinct cultural contributions that Austrian-born architects like Elizabeth Close, Richard Neutra, and Rudolph Schindler have made over the last century in the United States. Resident Alien features practitioners who have not only changed architecture as a profession but have also shaped the physical countours of this country-think: Victor Gruen, pioneer of the American shopping mall.

Curated by Cal Poly San Luis Obispo architecture professor Stephen Phillips and Cal Poly Pomona professor Axel Schmitz-

International Mon univers

Pavillon Le Corbusier Höschgasse 8

Zurich, Switzerland

Through November 17

the show. SF

berger, the show breaks down the impact of

the migrant architects into ethereal catego-

ries like Cloud Structures, Media Atmosphere.

and Urban Terrestrials. The organizers relied on the help of designer and UCLA professor

Julia Koerner, and B+U cofounder and SCI-

Arc professor Herwig Baumgartner to chron-

icle the works of their Austrian predecessors

in America. Both architects will be featured in



The newly renovated Pavillon Le Corbusier in Zurich-the only museum dedicated exclusively to an architect as a visual artist-celebrates its reopening with an exhibition of Le Corbusier's personal objects, titled Mon univers. Curators Arthur Rüegg and Christian Brändle show a more personal side of the iconic architect, installing objects created and collected by Corb in a building envisioned by him and his close friend and patron Heidi Weber. Showcasing Corb's travel collections and forays into painting, sculpture, and photography-pursuits keenly supported by Weber-Mon univers sheds light on some

of the architect's most colloquial references and inspirations.

The building was completed in 1967, two vears after Corb's death. Weber struggled to maintain the museum both physically and programmatically for the rest of the century, but the city of Zurich led the renovation after Weber's operating term ended in 2014. Emily Conklin

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66 Pictorial

Modern Management Methods

These photos are from *Modern Management Methods: Architecture, Historical Value, and the Electromagnetic Image,* by Caitlin Blanchfield and Farzin Lotfi-Jam, to be released November 29 by Columbia Books on Architecture and the City.

Modern Management Methods casts architecture in a new electromagnetic light. Through the X-ray and the archive—paired forms of modernist media—the project renders the United Nations Headquarters, a site of geopolitical uncertainty and bureaucratic happenstance, at the scale of the architectural detail. Thus, it asks how the value of a building is produced through instruments of expertise, management ideologies, and historical narratives.

At a time when the U.S. is withdrawing from its international obligations and nationalism is on the rise in this country and others, what does it mean to consider the U.N. Headquarters as a building in New York City? What do we learn by grounding abstractions like universal heritage and internationalism in the material realities of this place, with all the messiness and negotiations of such an undertaking at the city, state, and extraterritorial levels?

Following the September 11 attacks, in 2002 the \$2.4 billion Capital Master Plan was launched to refurbish the U.N. Headquarters, bring the building up to fire code and environmental standards, and to strengthen its security—all while maintaining its iconic historical character. The plan was an exercise



in risk management in an era of securitization, in the administration of jurisdiction (the U.N. is sovereign territory), and in the regulation of symbolic architectural value. It was also an intensive restoration process, dismantling, for instance, the famed curtain wall to replace it with blast-proof, tinted glass.

Modern Management Methods locates these administrative moments in the spaces of the archive and the building. Through unorthodox survey practices, the project correlates documents from the Capital Master Plan-memoranda, reports, and PowerPoint presentations-and X-rays Blanchfield and Lotfi-Jam took (with a radiographer) of the U.N. Headquarters' structural columns, window mullions, and communications systems. These two forms of representation reveal how conversations around security, nationalism, environment, accessibility, and historical value entered the bureaucratic framework of a capital construction project, and the specific sites in which this paperwork was translated into architecture. **Caitlin Blanchfield and Farzin Lotfi-Jam**



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- Complex is deficient in meeting modern day security requirements.
- Complex contains large quantities of hazardous materials asbestos, lead.
- Lack of sprinkler systems.
- Building infrastructure deteriorated after 50+ years of use steam lines, ductwork and all mechanical systems.
- Upgrade of mechanical electrical pumping systems to current day standards.

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UN Headquarters site



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