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MAS Context
Issue 28 / Winter '15
Hidden

Welcome to our Hidden issue
This issue explores the aspects of our built environment that are hidden, overlooked, not readily apparent, forgotten, and conceptually of physically removed from our sight, whether intentionally or not.
Time for us to shine a light on all those things worth rediscovering or seeing for the first time.

The more important something is, the more it is hidden.

Issue statement by Iker Gil, editor in chief of MAS Context

Hidden

With consummate skill the spectacle organizes ignorance of what is about to happen and, immediately afterwards, the forgetting of whatever has nonetheless been understood. The more important something is, the more it is hidden.
—Rem Koolhaas and Bruce Mau, *S, M, L, XL*

I borrow the last sentence of Rem Koolhaas's definition of Hidden for the title of the introduction to this issue as it perfectly captures our approach to the topic. Our built environment is constantly changing, with new developments taking place close and afar that briefly capture our imagination and take over our conversations. It does so until news of the next new thing comes our way almost immediately via multiple devices, and we forget about what came before, creating an endless cycle of new becoming old. But behind all the shine of all the changes that we witness, we question what the conditions are that allow them to happen. We question what all those elements are that we can't see, metaphorically and physically, and that allow for our built environment to work and evolve. Therefore, those hidden conditions can be considered the critical components needed for our cities to exist and what we see, whether positive or not, just their consequence.

The topic itself continues an ongoing interest of our team in exploring what is hidden that was initiated with the Visibility issue followed two years later by our Ordinary issue. Both explored the aspects of the topic from different angles and we wanted to continue this exploration with new perspectives and voices. Those come in the form of essays about forgotten buildings, interviews about outsider artists, speculations about Los Angeles and Boston, analysis of the conditions that shape Johannesburg, photo essays about massive water infrastructures and ordinary tunnels, videos contrasting the logistical infrastructures of the Midwest and Texas; illustrations about what we miss when we don't pay attention, and hidden tracks in some of our favorite albums, just to name a few of the contributions included. All of them provide new possible ways of looking at our cities and the people that inhabit them. They reveal what we were not able to see until now.

For the design of the issue, we collaborated with Chicago-based graphic designer Jason Pickleman of JNL Graphic Design. Jason is not a stranger to MAS Context: he has been on our board of advisors since 2012, we interviewed him in our inaugural issue MORE for which he also designed the cover, he has contributed his poetry and artwork to three other issues, he lectured in our first MAS Context Analog event in 2011, and we visited his studio last year as part our spring events. His work is superb and we are thrilled that he agreed to give shape to our Hidden issue.

Logistical Ecologies of the North American Operational Landscape

Essay by Conor O'Shea, Luke Hegeman, and Chris Bennett

Even for those of us who may be focused on the cities as zones of intervention, we can't understand what is going on within them unless we look outside them, far outside them.

— Neil Brenner[1]

1   Neil Brenner, "Wildly Civilized: Ecological + Extreme + Planetary Urbanism…What's Next? (moderated panel, Harvard Graduate School of Design, September 13, 2014).

2   The UN's claim that "over half of the world's population now lives in cities" is repeated everywhere from major world newspapers to graduate student thesis projects.

3   See for example, Edward Glaeser, *Triumph of the City*: *How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier* (New York: The Penguin Press, 2011). I attribute these observations on twenty-first-century urbanization to my participation as a researcher during the spring of 2013 in the Urban Theory Lab at the Harvard University Graduate School of Design. More information on their ongoing research can be found here: www.urbantheorylab.net.

4   Within much of design discourse, the urban is still synonymous with "the city" and vice versa, a term wrought with ideology. For a discussion on the widespread use of the term city as an analytical category, see: Hillary Angelow and David Wachsmith, "Urbanizing Political Ecology: A Critique of Methodological Cityism," *International Journal of Urban and Regional Research* 39, no. 1 (2015): 16-27.

Introduction

The UN has declared the twenty-first century to be an urban century[2] and across the United States the popular press and scholars alike herald a "return to the city" and an "urban renaissance"[3] ; accordingly, the design disciplines are now preoccupied by high-profile design projects in dense urban centers. These projects—outmoded infrastructure or buildings transformed into parks, retail, office space, or museums, for example—have become almost compulsory tools for municipal governments seeking to attract investment from jobs, tourism, and recreation in lieu of an eroded manufacturing tax base and amidst increasingly neoliberal policies.

With a practical financial interest in these new urban projects and with formal training rooted in twentieth-century urban theory hindering the prospect of alternative viewpoints, much of design myopically focuses on "the city" as a site of intervention.[4] Possibility for density, walkability, social interaction, and creative exchange are frequently cited as reasons for an interest in designing in cities. However, when reframed in a regional, continental, or even planetary context, the situation is quickly complicated as the global systems of waste, energy, food, and mobility needed to sustain any settlement, dense or otherwise, emerge into view.

Logistics Landscapes

Among these systems, the movement of containerized freight by train and truck along railways and highways is an illuminating lens through which to decipher twenty-first century urbanization processes. Considering the urban as a process, rather than an aggregation of discrete areas, underscores the fact that the aforementioned zones of downtown reinvestment are but one moment of capital accumulation. Virtually all the goods consumed in North America arrive by containership at North American coastal ports, mostly from newly industrialized Asian countries, where they move to market by train and by truck. Since

OPENING SPREAD:
© 2015 Luke Hegeman /
MODUS Collective
Wind turbines, like the one seen
here in Rochelle, IL, are among the
recent transformations of Illinois
soybean and corn croplands.

RIGHT:
© 2015 Chris Bennett
Millennium Park, Maggie Daley
Park, and the Lakeshore East
development pictured here in
downtown Chicago typify the
type of landscape architectural
projects used to lure investment
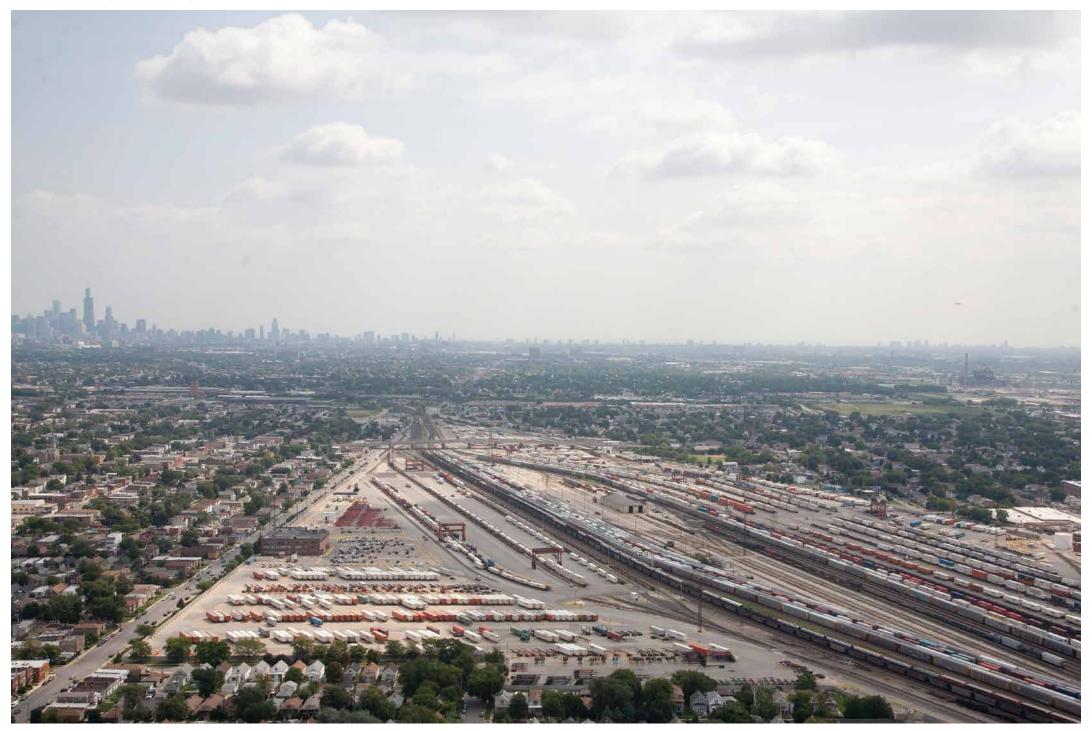dollars back into the historic cores
of American cities.

the early 2000s, mounting spatial, economic, and labor pressures on coastal United States ports coupled with a rise in online commerce and an increasingly fragmented global supply chain have caused activities historically associated with coastal ports to spill over into the interior of the continent. This interiorization of port activities has produced vast logistics landscapes in former rangeland, cropland, and pasture areas.

These logistics landscapes, where third-party logistics providers, warehousing and distribution facilities for online retailers, and manufacturing plants cluster around massive inland ports, are more than the just the inverse of America's centers of tourism and commerce: they are distinct urban environments, critical junctions in the global circuitry of twenty-first century capital.

Like the shipping container itself, these environments are hyper-engineered for efficiency and economy, and are done so in an effort to transcend existing local ecological and hydrological dynamics. Standard rail turning radii, warehousing dimensions, and road widths are deployed across the country in an effort to maintain a physical uniformity that keeps the specifics of place at bay, thereby sustaining the high standard of living across the continent that so many Americans enjoy. However, if these logistics landscapes, like the sites of reinvestment so popular with today's designers, are categorized based upon form alone, much is overlooked. The infrastructure and development needed to deliver goods to market collides with existing local economies and ecologies to produce regionally-specific logistics landscapes.

As a first step towards classifying these variations, or logistical ecologies, distinct adjacencies (of land uses, infrastructure, development, and ecologies, to name a few) of Northern Illinois and Alliance, Texas are documented in the accompanying photo essay. X

© 2015 Chris Bennett. Located at the crossroads of the North American rail system where six of the Class I railroads meet, Chicago's older intermodal freight facilities, like the Burlington Northern Santa Fe one seen here, are hemmed in by nineteenth-century fabric, with little room for expansion or the clustering of twenty-first-century logistics related facilities.
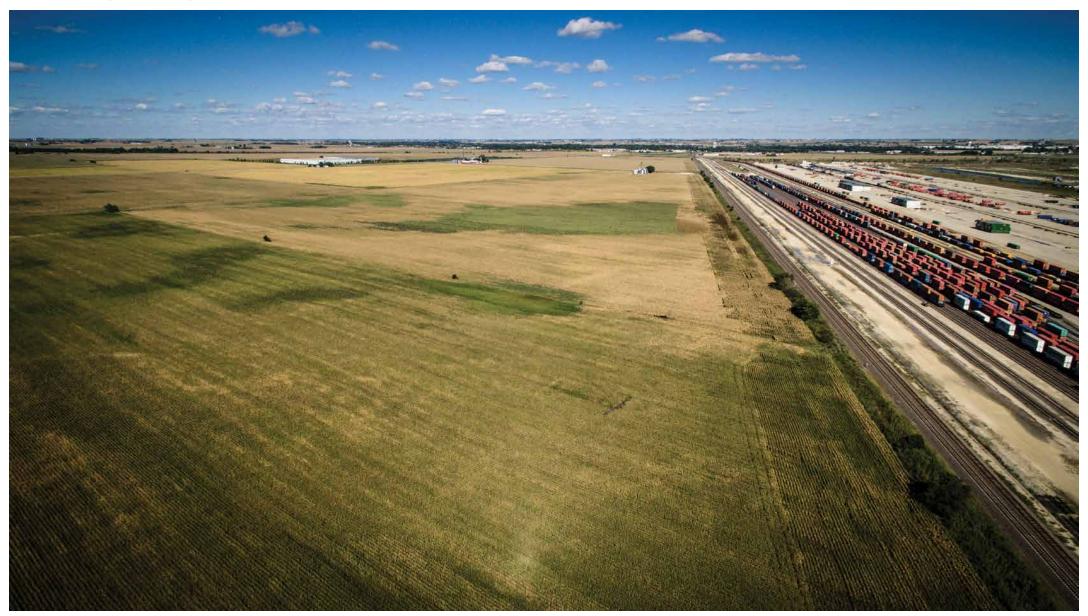
© 2015 Chris Bennett. Completed in 2002, the Burlington Northern Santa Fe Logistics Park seen here is part of the CenterPoint Intermodal Center in Joliet / Elwood, IL, North America's largest inland port, where more containers move through annually than all coastal ports except for the Port of Long Beach, Port of Los Angeles, and Port of New York and New Jersey.

© 2015 Chris Bennett. Completed in 2010, this Union Pacific Global IV intermodal freight facility seen is part of the CenterPoint Intermodal Center, which abuts the former Joliet Army Ammunition Plant, now the Midewin National Tallgrass Prairie and site of a 2015 American Bison *Bison bison* herd reintroduction.

© 2015 Chris Bennett. Facilities like this Menards distribution facility in Plano, IL collide with existing crop-lands and agricultural communities to produce a logistics landscape unique to the region.

© 2015 Luke Hegeman / MODUS Collective. The Union Pacific Global III intermodal freight facility pictured here was constructed in 2003 outside of Rochelle, IL atop some of the nation's most productive soils.

© 2016 Luke Hegeman / MODUS Collective. Dating back to the 1980s, Alliance, Texas is the nation's most mature logistics landscape; anchored by the Burlington Northern Santa Fe intermodal freight facility seen here that was expanded from 2001 onwards, this 18,000-acre master-planned logistics community was constructed on the natural gas field known as the Barnett Shale and includes industrial, residential, office, and retail space.

© 2016 Luke Hegeman / MODUS Collective. In the Alliance Gateway section of Alliance
warehousing and distribution facilities, like the DSC Logistics and Martin Brower facilities seen here,
leverage their proximity to the BNSF intermodal facility in order to decrease shipping times and costs.

© 2016 Luke Hegeman / MODUS Collective. Due to union contract negotiations at the General Electric facility in Erie, Pennsylvania, jobs have moved to the General Electric Forth Worth Locomotive Plant in Alliance, Texas, pictured here, which opened in 2012 and employs over 500 people.

© 2016 Luke Hegeman / MODUS Collective. Infrastructure, including the Alliance Highway seen here, continues to expand into adjacent rangelands and near low-density single-family housing developments to accommodate rising levels of imported containerized goods.

© 2016 Luke Hegeman / MODUS Collective. Overlapping rail, highway, rangeland, and access roads to oil and gas drilling sites characterize the logistics landscapes of Northern Texas.

The infrastructure connecting Alliance, Texas to the North American rail system is built atop the Barnett Shale, a natural gas field, where surface wells and their associated infrastructure sit within rangelands.

© 2016 Luke Hegeman / MODUS Collective. Expanded rail corridors, like the one seen here near Alliance, Texas, are built to accommodate longer container trains delivering goods to downtown retailers and low-density big-box stores alike, thereby transforming the hinterlands they cut through in into regionally specific logistics landscapes.
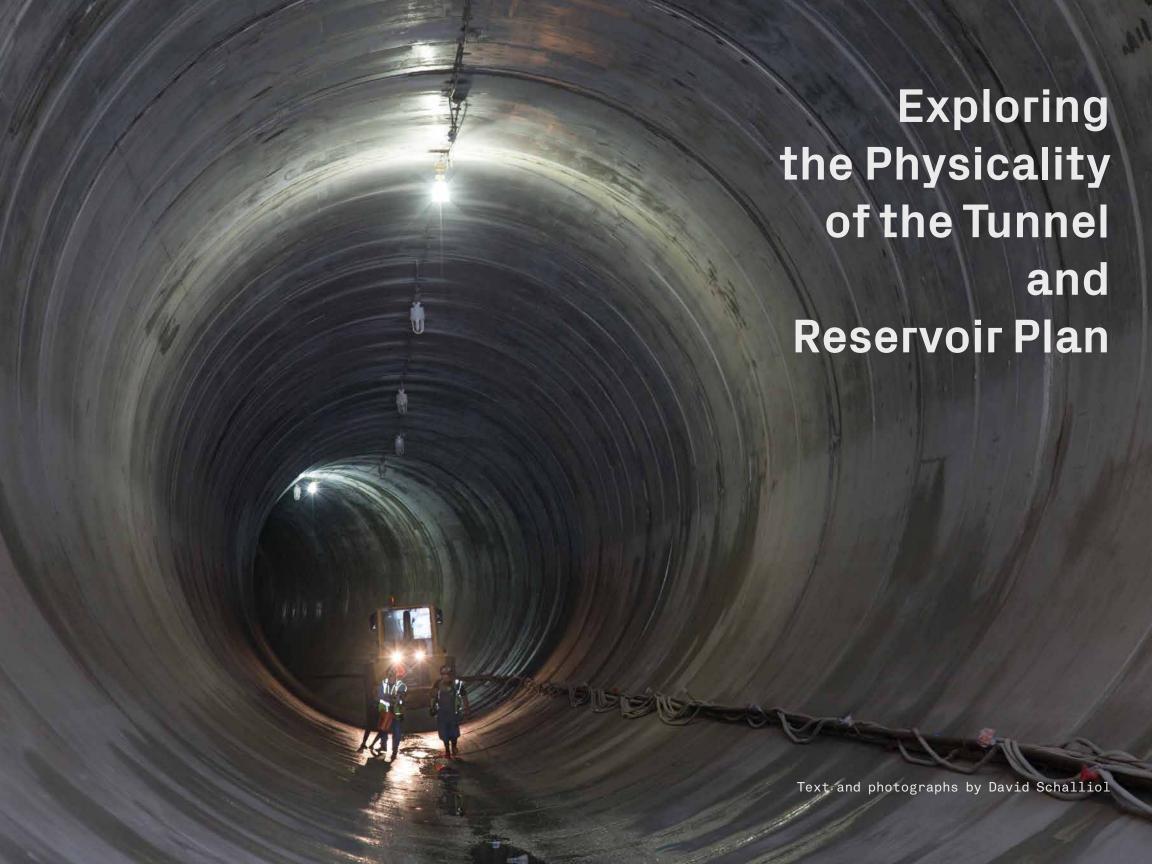
MARGIN

S

Exploring the Physicality of the Tunnel and Reservoir Plan

Text and photographs by David Schalliol

Chicago's permanent residents have a complicated relationship with the region's waterways.

Since the founding of the city, Lake Michigan, the Chicago River, and the city's numerous other waterways and wetlands have been essential sources of everything from drinking water to industrial fodder. But concentrating millions of people along the banks of the water supply created a real problem for wastewater disposal, famously influencing the decision to reverse the Chicago River and the construction of the Sanitary and Ship Canal in 1900.

Nevertheless, reversing the river did not solve the region's water problems. Among the persistent complications is the legacy of a combined sewer system. The system, which carries wastewater and stormwater, directs them to the region's water treatment plants, where they are cleaned and then released into the area's waterways. However, heavy rainstorms overwhelm the system, during which the combined sewage and stormwater are emptied into the area's watercourses—and sometimes residents' basements—before they can be treated. Residents primarily experience the subsequent pollution through beach closures, but the discharge affects the regional ecosystem in untold ways.

Started more than 40 years ago, the Tunnel and Reservoir Plan (TARP) is a goliath project designed to mitigate this problem by reducing the number of times when untreated sewage must be released into the area's waterways. During periods of heavy precipitation, rain is diverted into the Deep Tunnel, a network of

more than 100 miles of conduits as wide as 33 feet in diameter and deep as 350 feet below ground. The tunnels channel the effluent and rainwater into large reservoirs, which store the combined wastewater until it can be treated by the plants—and then released into the waterways.

These photographs present the three major portions of the southeastern section of the system: the Deep Tunnel, the Thornton Reservoir, and the Calumet Water Reclamation Plant. These interconnected facilities serve large portions of Chicago and its south suburban communities.

The portion of the Deep Tunnel shown here is the final 1,000 feet of a 36-mile system that leads to the reservoir approximately 325 feet below ground. When photographed, workers were finishing the installation of the 100-ton steel gates that control the flow of water in and out of the reservoir.

The Thornton Reservoir itself is being constructed from one of the world's largest aggregate quarries and will hold 7.9 billion gallons of water when complete.

The final section is the Calumet Water Reclamation Plant and its underground pump room, which pumps the water out of Deep Tunnel and the reservoir to be treated and then discharged into the Little Calumet River.

The reservoir went online on November 26 and 27, 2015, during which it captured about 300 million gallons of water, enough to fill 15 feet of water from the reservoir floor. After decades of work and more than $1 billion spent during this phase (almost $4 billion in total),[1] it is time to evaluate the effects that this portion of TARP will have on the quality of the region's drinking water, the quality of the area waterways, and our resilience to flooding. X

1   Metropolitan Water Reclamation District of Greater Chicago, "TARP STATUS REPORT AS OF JUNE 30, 2015," June 30, 2015, https://www.mwrd.org/pv_obj_cache/pv_obj_id_4109CACC2D66C46541 CCD61FE3A97FA6D5195500/filename/TARP_Status_Report_com-plete.pdf.
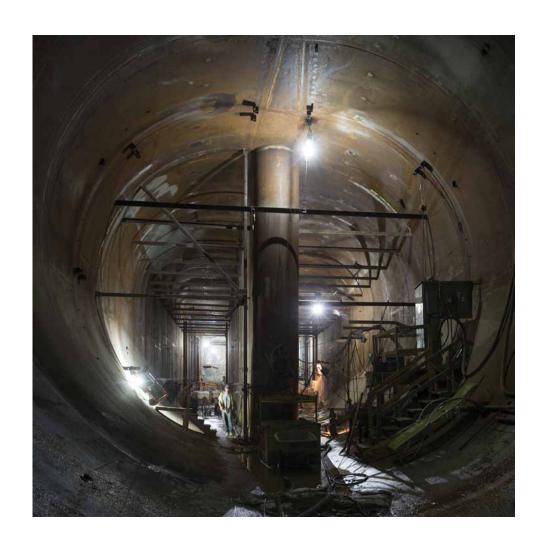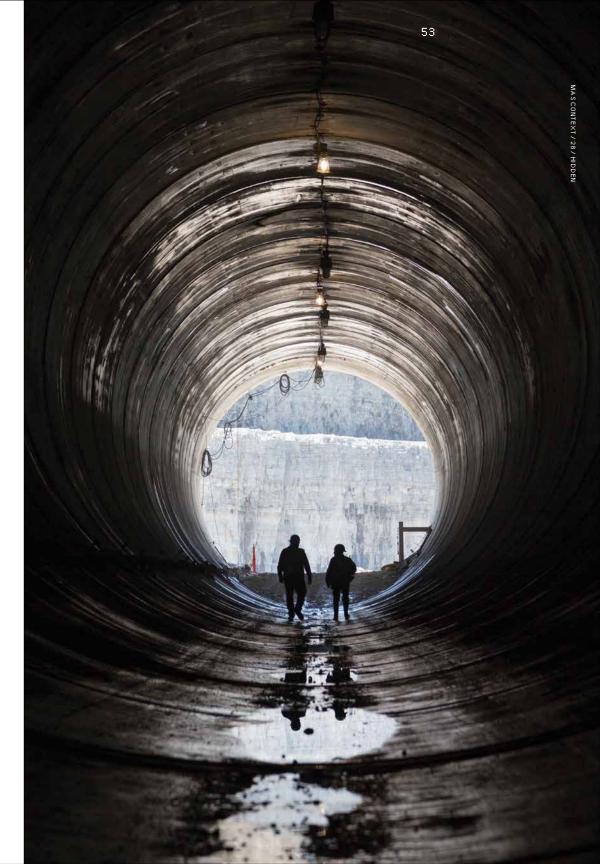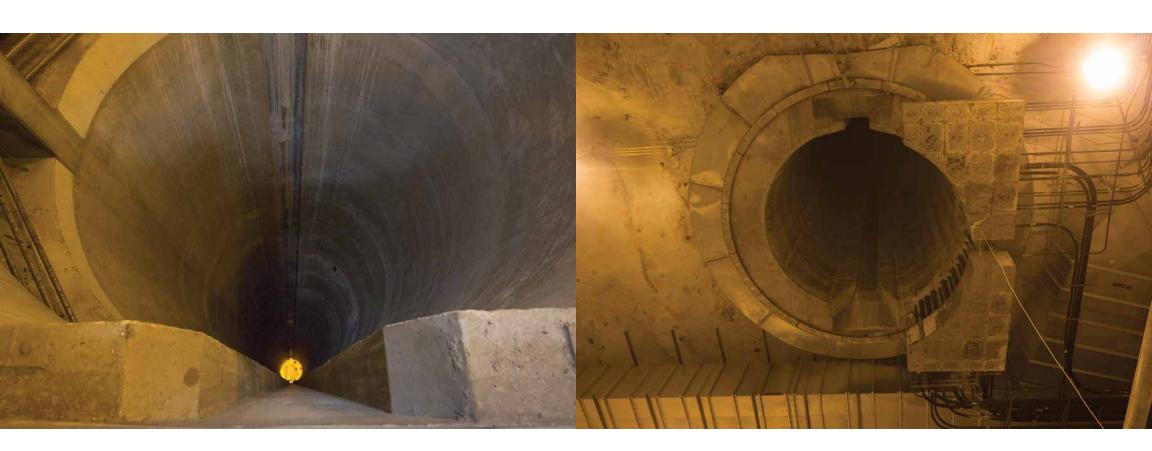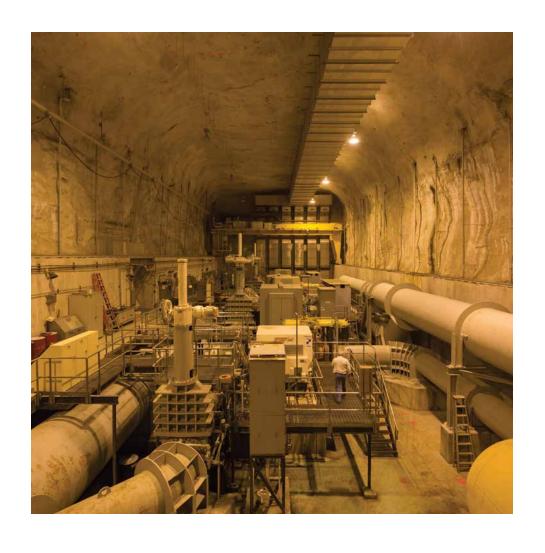
Undergrounding

Photographs by Theo Simpson
Text by Tom James

From the project *That Through Your Valleys Roll* by Theo Simpson

If you go looking for something, chances are you'll find it.

____Longdendale is a valley in the Peak District, a national park in the north of England, which straddles the hills that form the country's spine. The valley runs west, from the bare tops of the moors down toward Manchester, and for the most part it's fairly typical of the Peaks. There's the thick, dark line where the hills meet the grey December sky; the dull orange-brown of the dying-back bracken; the threadbare grass for the sheep to graze on; and the soft green moss on the bare tree trunks next to the road, like pyjamas on an old man.

____But on my visit, I didn't notice any of this. Because Longdendale is also home to something else: a chain of electricity pylons, 100 feet tall, which march down the valley for six miles, and which, in 2014, were officially diagnosed as amongst the ugliest in Britain. It was these that I'd come to see.

____The shortlist had been drawn up by the UK's electricity supplier, the National Grid. They'd set aside £500 million from the nation's energy bills, towards removing the "biggest and ugliest" pylons in some of the country's most well-known beauty spots. This was a perverse, reverse beauty contest, with a tantalising prize for the affected communities: the winning wires would be hidden, buried in a process known as "undergrounding," with only a small scar to remind the land that they were ever there at all. Throughout 2015, the valley held its breath.

____The line bursts out of the ground near the top of Longdendale, having travelled through the peaks in an old railway tunnel. The wires leap into the arms of the first pylon, and are then carried aloft down the valley in a permanent procession, celebrating the miracle of electricity, and the heroism of the men who mined and forged and erected these structures, to bring power to these hills.

____Are they ugly? This being an architecture journal, you might expect an impassioned plea in their defence, or an outraged demand for local people to change the way they think. It's true: the pylons themselves are quietly beautiful. They're pure structure, with no embellishment, their latticed form somehow rendering them as subtle as it's possible for 100-foot high metal structures to be. They look like rocket towers, launchpads of progress. Viewed head on, they almost disappear.

____But the wires are a different story. Hung against the backdrop of the hills, they're hard to make out. Like the puppet strings in the *Thunderbirds*, you can just about ignore them. But where the horizon falls away, and the wires are strung against even this grey winter sky, they're much more visible, like washing lines between concrete buildings. And when the line turns abruptly right over the reservoir, and the pylons march up and out of this valley, and into the next, the wires are all you can see.

____You only have to look the other way to see what local people could

have won. The other side of the dale is soft, brown, and simple. Wood smoke from an isolated farmhouse hangs lazily overhead. Death-defying dry-stone walls sprint uphill. Tributaries run down tight, folded valleys, to the reservoirs below. You have to admit, it would be a lot prettier. It's easy to imagine an influx of tourists, walkers, and afternoon-tea takers. And if you opened your kitchen curtains every morning to see them, perhaps you'd want rid, too.

____Yet there's something more than aesthetics going on here. The wires and the pylons are not optional extras: they exist to provide the power that local people want and need. Power for homes, schools, pubs, and shops; for traffic lights, water pumps and sewage works; for bathroom lights, reading lamps, the big light in the kitchen. Power for fridge-freezers, kettles, and toasted-sandwich makers; for televisions, Skyboxes, broadband routers, and laptops; for hair- straighteners, Nespressos, electric toothbrushes and smoothie makers. Power for iPhone sixes, Xboxes, Kindles, and fitness trackers. Power for those tiny, pointless, flying drones, to briefly amuse the man in your life on Christmas Day. The pylons make life possible, make it easy, make it boring. And, somewhere, further down the line, the power stations that feed them leach carbon into the atmosphere, or create nuclear waste that no one has ever known what to do with, and which no one ever will.

____These pylons are the modern age incarnate, the twentieth century in one simple metal structure: noble but wasteful, easy but ugly, a heroic feat of engineering that we don't want to look at anymore.

____And this isn't just the case for the residents of Longdendale, but for all of us, town and country, the UK and beyond. We want the benefits of modern technology, of "inexpensive progress" as John Betjeman sardonically termed it, but we don't want to have to see it. We'd rather let someone else do the dirty work, mine the coal, make the steel, assemble the iPhones, work at the megadairy, further down the line. Out of sight. Out of mind.

____In September 2015, the National Grid announced which sections of pylons they'd be burying. As it happens, the Longdendale wires weren't deemed quite ugly enough. Another stretch, just over the other side of the Peaks, will disappear, but these ones will remain. Apparently, they're still on the list, for consideration at some future date, when another £500 million is available. Second prize in an ugliness competition. Don't call us, we'll call you.

____Are they uglier now that they've been deemed as such? Are they harder for local people to look at, now that their hopes have been raised, and cruelly dashed? Would we prefer a world without our fitness trackers, our evenings idling in front of the telly, our Skype calls to distant relatives, if it meant we could be rid of them? Do these towers spoil the valley? Do we? X

Tunnel

A connection between two points.
Direct. Fast. Subterranean. Raw.
Urban space.
A place between anxiety
and formal aesthetics.

Photographs by
Rene Kersting

As a result of the economic boom that took place after the end of the Second World War, the German population started becoming mobile. Due to the increase in the number of cars on the roads, there were problems with the traffic flow.

Following the theory of the *autogerechte Stadt* (car-friendly city), German cities were subjected to numerous interventions. One of the measures that was taken was the construction of tunnels—subterranean footpaths that built a connection between two points. The basic idea was to split people and car traffic by putting them on different layers.

These days, the theory of a car-friendly city is no longer in focus. Tunnels became some kind of strange hidden public space—relics that are constantly used but not significant.

Tunnels are motion. Their primary function is to connect two places in the most direct way. Pure function. No beauty. No reason to stay. Nevertheless, there are some kinds of aesthetics present. The rhythm of light. The pattern of tiles. The structure of surfaces. The linear orientation. Aesthetics that should be noticed. Architects and creators of modern cities should be aware of them.

Tunnels became some kind of strange hidden public space— relics that are constantly used but not significant.

But that is not the case. People are not impressed by these kinds of places. They are afraid of them. The thought of being subterranean without daylight makes them feel uncomfortable. Even nowadays architects are not interested in these off-spaces. Nobody likes to be there. Nobody thinks about them. Nobody wants to take care of them.

To me, the interesting thing about tunnels is the contrast between anxiety and formal aesthetics. I am always interested in urban spaces that are not part of the superficial image of a city. Spaces that are under the surface. Hidden, unsightly, and unpopular.

The photographic series *Tunnel* deals with these subterranean public spaces. It is a documentation of tunnels in several German cities. All photographs are taken in black and white, from a central perspective. Working in black and white allows me to pay full attention to the pro-portions, rhythms, and structures. Using the same perspective in all pictures makes them comparable.

The intention of my work is to create a discussion about tunnels as a part of the urban space. X

"Tunnels are motion. **Their primary function is** to connect two places in the most direct way. Pure function. No beauty. No reason to stay."

Essay by
Patxi Eguiluz and
Carlos Copertone

BETI JAI
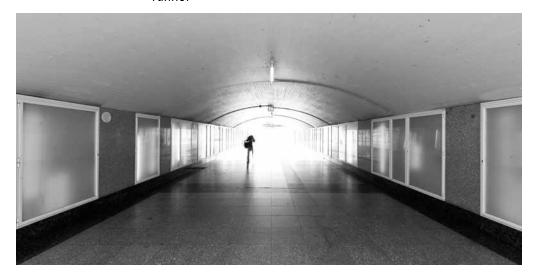## *The Last Surviving Basque Pelota Historic Fronton in Madrid*

The game of *pelota* is probably as old as humanity, as you only need a ball and a vertical wall. In Spain, the game of *pelota* played against a wall has been present in every province, each one having their own rules, with the vertical wall being the essential part of the urban morphology of the towns.

It was in the Basque Country, however, where more variations of the game developed: *pelota mano* (hand-pelota), *pala* (using a wooden racket), and the more iconic modalities, *cesta punta* (jai alai), and *remonte* (a variant of jai alai where the ball can not be retained, for which the player uses a wicker curved basket that allows him to pick up the ball and throw it at speeds up to 300 k/h).

These games, which had traditionally been played locally, had an unparalleled expansion at the end of the nineteenth century with a worldwide reach, maintaining the original rules and even exporting the Basque name Jai Alai (Merry Festival). There were *frontons* (pelota courts) in China and the Philippines, in New York, and in all of South America. It was one of the most popular games in Cuba, Florida, and, of course, Spain.

In Madrid, hidden between residential buildings and scaffolding that masks its current state of disrepair, there is a witness of that glorious period for the Basque *pelota*: the fronton Beti Jai. We look back at the past, present, and, we hope, promising future of the only example of a sports venue still remaining in Madrid from the nineteenth century.

THE EXPANSION OF THE GAME OF PELOTA

After the death of the King of Spain Alfonso XII in 1885, the Queen Regent Maria Christina of Austria moved her holiday destination to the coastal city of San Sebastián, Spain in the Basque Country. The consequence of that decision was a large presence of the aristocracy of Madrid in the city. It turned, first the Queen Regent and then the wealthy classes of Madrid, into fans of the sport in fashion at that time in the city: the Basque *pelota*. The game was, by that time, a professional sport, with big sums of money being spent on bets.

Thanks to its influence, there were several frontons built in Madrid in a short period of time so that its citizens could also enjoy the new fashionable game of *pelota*. By the time that the permit to build the Beti Jai was requested in October of 1893, there were already six other frontons in Madrid and, some of them, like the Fiesta Alegre, had an elegant façade similar to a neoclassical theater boasting a capacity of more than 5,500 people.

THE DEVELOPER

José Arana was a businessman from San Sebastián that had become wealthy by investing the money he had won in the Spanish Christmas Lottery in a company exporting foreign food products. He opened the Beti Jai fronton in San Sebastián in the summer of 1893, later known as Fronton Arana in honor of its developer. Witnessing the success of the *pelota* game in Madrid, that same year he decided to build a fronton in Madrid with the same name.

He located the building in a parcel in one of the blocks that were being developed north of the historic center of Madrid. Near the Paseo de la Castellana, and only five hundred meters from the historic center, the parcel was perfectly located in the new area of Madrid.

To build the fronton, Arana and his business partner Antonio Modesto de Unibaso hired the architect Joaquín Rucoba. Rucoba had been a municipal architect in Malaga, where he built La Malagueta bullring (1874) and the Atarazanas Market (1879). In Bilbao, he built two of his most important projects: the Arriaga Theater (1890) and the new City Hall (1892).

THE ARCHITECT

Joaquín Rucoba studied architecture at the School of Architecture of Madrid. He was a clear representation of a school that had broken off from the Royal Academy of Fine Arts of San Fernando to offer studies that combined traditional artistic aspects with a new technical education: the industrial revolution brought new materials and new technical solutions that could be applied to buildings.

Already in his early project for the Atarazanas Market in Malaga, he used forged steel to achieve large spans that simplified the structure. Like many of the architects of the era, he was unable to understand that this new technique required a new language, so he ended up covering the steel pillars with Arabian-style decorations to soften their industrial appearance.
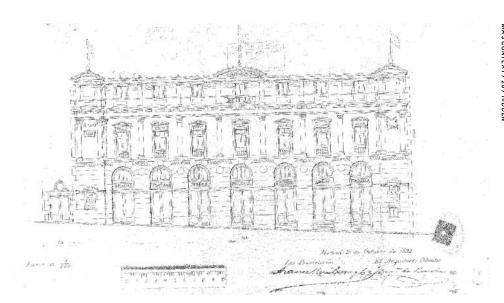
THE BUILDING

The Beti Jai opened on April 29, 1894. It was a summary of the best projects of Joaquín Rucoba. For this project, Rucoba created a neoclassical façade facing the Marqués de Riscal street in which he employed the same stylistic elements previously used in the Arriaga Theater in Bilbao: big openings that ended with semicircular arches that covered the ground and mezzanine levels and, above them, vertical windows with an oculus above the lintel in the main floor. For the area of the stands, he used a structure of forged steel pillars and beams (with lavish decoration created with molds offsite) that facilitated the viewing of the sports area, a structural solution similar to the one he used in the La Malagueta bull ring. Unlike other frontons, Beti Jai had a curved stand area that increased the distance to the court to avoid the possibility of stray balls hitting the spectators. But the main novelty of the building was the use of curved beams in the stands, creating a slope that provided optimum viewing conditions for the game. All the elements of this structural system were manufactured in

an offsite factory and assembled on site, making it one of the first examples of prefabricated construction. For the side façades of the building, Rucoba created brick walls of *neomudéjar* style (a Moorish Revival architectural movement), a style he also used in the side of the frontis (the wall of the fronton), where the access door is finished with a horseshoe arch. The use of the *neomudéjar* style is a clear sign of the period in which the building was built, when old styles were reintroduced to affirm a "national identity" in troubled times such as the ones in those years.
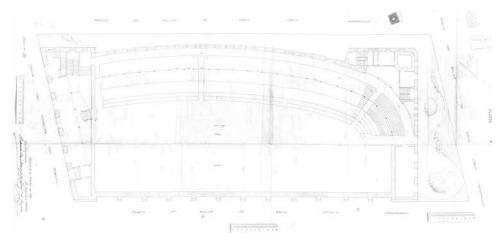
The new fronton competed with the Fiesta Alegre in elegance and design, and became known from that moment on as the "Royal Theater of the frontons."[1] It had lounge rooms facing the Marqués de Riscal street, as well as a café and kitchen in the back area. As can be seen from the map of Madrid drawn by Pedro Núñez Granés,[2] in 1910 the Beti Jai was still the only building in its block, and all façades were visible from the main street.

El Pelotari, 1894
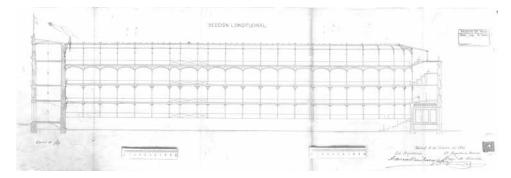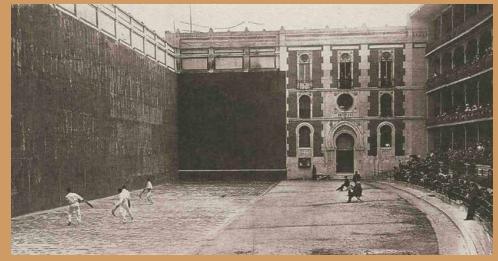
Elevation © Historic Archive of the City Hall
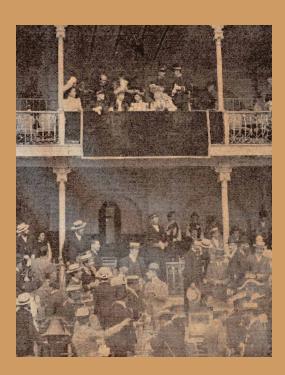
Plan © Historic Archive of the City Hall of Madrid

Longitudinal section © Historic Archive of the City Hall of Madrid

Early images of Beti Jai, 1893-1919 © Courtesy of Salvemos el Beti Jai

THE DECLINE

Probably due to the saturation of frontons and daily games, but also due to its own design (it was a very large uncovered fronton in a city with cold winters), the exclusive use of Beti Jai for the game of *pelota* did not last long. Between 1897 and 1916 the building was used for charity and social events, horse shows, professional meetings, invention demonstrations, and even political rallies such as the protest against the shortage of goods in 1916. In many occasions, the game of pelota was followed by other sports, such as fencing.

But all these other activities were not enough for this building to be profitable. In 1909 the journalist Rafael Solís wrote in the *La Correspondencia de España* newspaper:

The game of pelota attracted the fans and tastes of the people back in 1890.... After that, it was just a flash in the pan due to the rogue money involved that ruins everything... in the Marqués de Riscal street, near the Castellana, there was another building built for pelota, baptizing it with the name of Beti Jai, with an enormous court, and luxurious stands and galleries. Not many games were played in the building—there was no interest by then and almost no money and it is currently not leased and without any kind of practical use.[3]
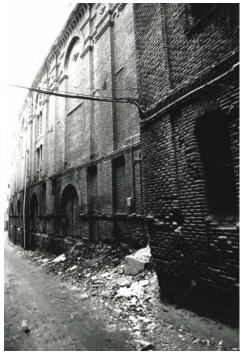
THE OBLIVION

Despite the fact that during that period there were other frontons being built, the uncovered Beti Jai was no longer the most convenient option to enjoy a game of *pelota*. On top of that, the public had moved on to watching other games that required smaller courts, such as *pala* or *pelota*. Those games allowed for covered buildings such as the Jai Alai built in 1922, a project by Joaquín Otamendi that had all the modern features of the time. Or the 1936 Recoletos fronton designed by Secundino Zuazo with the collaboration of the engineer Eduardo Torroja, one of the most important buildings of the so-called first Spanish Modern Movement (developed right before the Spanish Civil War). The building was covered by two overlapping barrel vaults, which used reinforced concrete that was only eight centimeters thick. It was an extraordinary example of the technical expertise of the engineer Torroja.

Meanwhile, the Beti Jai continued to adapt to new uses: As it appears in the Historic Municipal Archives of Madrid, in 1919 the Beti Jai widened its main door to build a factory for cars; in 1924 a permit was issued to build garages; in 1943, it was turned into a machinery storage; and in 1944, a permit was issued to open up a shop for cast and papier-mâché work. The last known use was a garage and warehouse for cars that lasted until 1997, when the Frontón Jai Alai Society bought it with the intention of bringing back its original use.
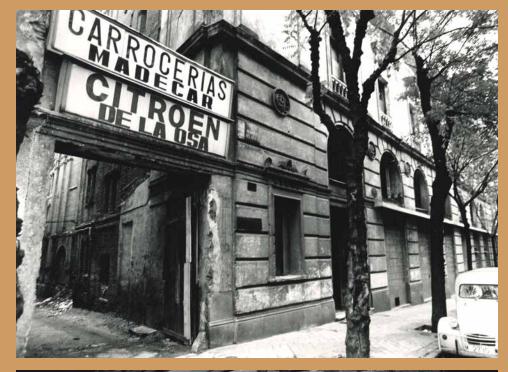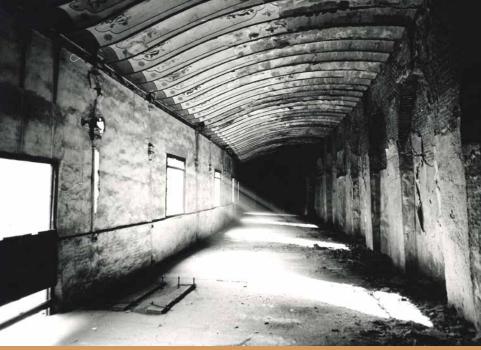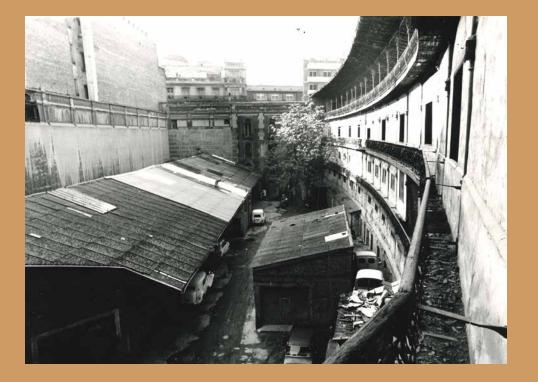

Beti Jai used as a garage, 1977 © Colegio de Arquitectos de Madrid (COAM)

Beti Jai used as a garage, 1977 © Colegio de Arquitectos de Madrid (COAM)

THE RECOVERY

Luckily, years of neglect did not fatally damage the building, and in 1977 the Architects' Association of Madrid submitted a proposal to declare Beti Jai a National Monument. In the General Urban Development Plan of Madrid, which took effect in 1997, the building was labeled as a monument, with the use and typology typical to a public building.

In 2004, the City Hall of Madrid received a preliminary project proposal by Pritzker Prize-winning architect Rafael Moneo that proposed an aggressive intervention to turn the building into a hotel, where rooms were located against the walls of the original court. Fortunately, the Institutional Commission of Artistic and Natural Historic Heritage (that included members of the Architects' Association of Madrid, the City Hall of Madrid, and the Community of Madrid) rejected the proposal as it negatively affected the intrinsic values of the building.

In 2008, the citizen platform *Salvemos el frontón Beti Jai* (Let's Save the Beti Jai fronton) was formed to initiate a thorough and constant campaign to save the building by publishing articles in the media, organizing lectures, and coordinating calls for action via social media. During that time, the building remained without a specific use and was illegally occupied by homeless people.

Finally, the legal proceedings to declare the Beti Jai an Official Asset of Cultural Interest in the category of Monument started on May 18, 2010, and became effective in early 2011. The official ordinance, published on February 9, declared that "the building is a significant example of the architectural duality characteristic of the end of the nineteenth century, where the historicist shapes, eclectic and *neomudéjares*, hide daring steel structures, creating a rich spatial proposal with an area for the stands, light and elegant, where the highlights are the curve façades and large roof."

During that time, the City Hall of Madrid started the process to expropriate the building, successfully acquiring it in 2015 after paying seven million euros.
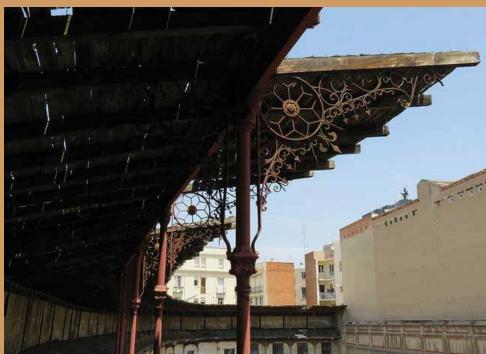

Schematic design by Rafael Moneo to turn Beti Jai into a hotel, 2004 © Colegio de Arquitectos de Madrid

Current condition, 2015 © Igor González

Current condition, 2015 © Igor González

Current condition, 2015 © Igor González

A NEW INTEREST

The interest in the building and its possible rehabilitation has increased constantly during the last few years. Besides the innumerable articles published in newspapers and on TV about its state of disrepair, there have been multiple efforts from citizen platforms, such as the previously mentioned *Salvemos el frontón Beti Jai* and *Madrid: Ciudad y Patrimonio* (Madrid: City and Heritage). The documentary "Beti Jai: la Capilla Sixtina de la Pelota" (Beti Jai: The Sistine Chapel of the Pelota), directed by Richard Zubelzu, was also released last year.[4]

On December 9, 2015, the City Hall of Madrid finally initiated limited work to shore up the structure of the building with plans to start its rehabilitation, first with a process involving citizen participation followed up with an international ideas competition.

What is more problematic, however, is the lack of support to the actual game of Basque *pelota*. Another documentary released in 2015, "Jai Alai Blues,"[5] shows the explosive increase in interest in the game during the 1970s and early 1980s and the temporary madness that hit the US, with magnificent buildings being built in Tampa and Daytona Beach in Florida, unfortunately no longer standing. The sport of *jai alai* was, at that time, one of the most recognizable symbols of the city of Miami.[6] Recent articles, however, show the current disinterest in the different modalities of *pelota*, with less than 180 professionals active today.[7]

The interests of people change continuously, following trends that come and go. But it would be unfortunate to have to wait until we witness a resurgence in the interest in the game of Basque *pelota* to recover this architectural gem from oblivion and make it, once again, a shared space for the citizens of Madrid.X

[1] Antonio Peña y Goñi, *La Lidia*, June 3, 1894.

[2] "Plano de Madrid," Instituto Geográfico Nacional, http://idehistoricamadrid.org/VComparador/compara.html.

[3] Ignacio Ramos Altamira, *Frontones madrileños. Auge y caída de la pelota vasca en Madrid* (Madrid: Ediciones La Librería, 2013).

[4] "Beti-Jai: La capilla Sixtina de la pelota," Artistic Metropol, http://artisticmetropol.es/web/beti-jai-la-capilla-sixtina-de-la-pelota/.

[5] "Jai Alai Blues," Atera Films, http://www.aterafilms.com/es/jai-alai-blues.

[6] "Miami Vice Theme HD," YouTube video, 0:55, posted by AMB Production TV, August 5, 2014 https://www.youtube.com/watch?v=dEjXPY9jOx8.

[7] Pedro Gorospe, "La pelota vasca pierde el apellido," *El País*, November 30, 2015, http://ccaa.elpais.com/ccaa/2015/11/30/paisvasco/1448887844_697093.html?id_externo_rsoc=FB_CM.

Space Travel

Text and photographs by Charles Rice

In J.G. Ballard's short story of 1982, "Report on an Unidentified Space Station," a group of interplanetary travelers makes an emergency landing on a space station that didn't appear on their charts. They determine initially that the station was a transit center, part of a larger network that eventually became surplus to requirements, "a relic of the now forgotten migrations of the past."[1] Through a series of survey reports, the team discovers that the extent of the station is far larger than initially thought; they traverse a terrace containing "thousands of tables and chairs" but soon discover that "this restaurant deck is only a modest annex to a far larger concourse. An immense roof three stories high extends across an open expanse of lounges and promenades. We explored several of the imposing staircases, each equipped with a substantial mezzanine, and found that they led to identical concourses, above and below."[2] The station soon takes on the proportions of a small planet, with no relief from the endless array of concourses, lounges, and terraces. Finding it impossible to locate themselves, the team surmises that the temporary inhabitants of the station must have "possessed some instinctive homing device, a mental model of the station that allowed them to make their way within it."[3] They discover that the structure curves gently as if to suggest a spherical form, yet it seems also to be expanding equally in all directions, scaling itself to the potentially infinite length of the journeys taken within it. Slight variations in the decor seem also to suggest evolutions in the architecture itself. The endlessness of the space gives form to their journey as itself endless. The station envelops the entire cosmos and everything within it, becoming the object of the journey, and, in the end, of the travelers' worship.

From its planetary vantage, the short story satirizes the exponential increase in interest in spatial interiority. It is this interest, as much as the space itself, which consumes the travelers. This appears to the contemporary "space traveler" as a fable: is it still possible to investigate the dimensions of a condition that has been overtaken by its own ubiquity and banality? Is it possible to return to a moment when interest was not yet worship, which we see today in the impending convergence of junkspace, nonplace, and a theory of spheres? These questions took me back to the vast interiors of John Portman's atrium hotels of the 1970s, the quintessence of what Fredric Jameson called "postmodern hyperspace," not long after Ballard was writing his short story.[4] The photographs are a kind of survey report of a journey through these spaces, taken in 2009. They initiated a project on what I termed interior urbanism, but looking back at the photographs now serves as a reminder, at least to me, of both spatial discovery and the abandonment of spatial possibility. X

PAGES 122, 124, 125:
John Portman and Associates, Bonaventure
Hotel, Los Angeles, 1977. Photographs © 2009
Charles Rice.

LEFT:
John Portman and Associates, Renaissance Center,
Detroit, 1977. Photographs © 2009 Charles Rice.

1   J. G. Ballard, "Report on an Unidentified Space
    Station," in *The Complete Short Stories*, vol. 2
    (London: Harper Perennial, 2006), 635–640.

2   Ballard, "Report on an Unidentified Space
    Station," 636.

3   Ballard, "Report on an Unidentified Space
    Station," 637.

4   Fredric Jameson, "Postmodernism: the Cultural
    Logic of Late Capitalism," *New Left Review* 146
    (1984): 83.

One Wall Away— On Hidden Spaces

Chicago Theatre at 175 North State Street,
The center of the auditorium ceiling is heightened and contains openings for special spotlights. A small corridor, lit by a red colored light, runs along the openings with green light from the auditorium projecting the openings onto the corridor wall.

Text and photographs by Jan Theun van Rees

Crawl space underneath the studio, lit by flashlights.

The concept of exploring hidden spaces emerged simultaneous with my initiation as a photographer. To execute some elementary experiments on space and light, I set up a camera in the crawl-space underneath my studio. While the lens of the camera was opened, I painted light onto the space by waving a flashlight through the open space.

When I showed the first results to some visitors in the studio, they asked me where the photographs were taken. The images reminded them of ancient archeological sites they had seen in Turkey. I explained that the space in the photographs was located directly underneath the floor and that they were literally standing on top of the photographed space. A sudden gaze of confusion but wonderment appeared on their faces: how could a space that looked so strange and exotic actually be directly connected to the space we were in? I realized that their response to the photographs showed the way I had to go.

When a person is viewing a photograph of a hidden space of a familiar building, the viewer's mind will automatically add this image to all the collected impressions and knowledge of that site. The interaction between 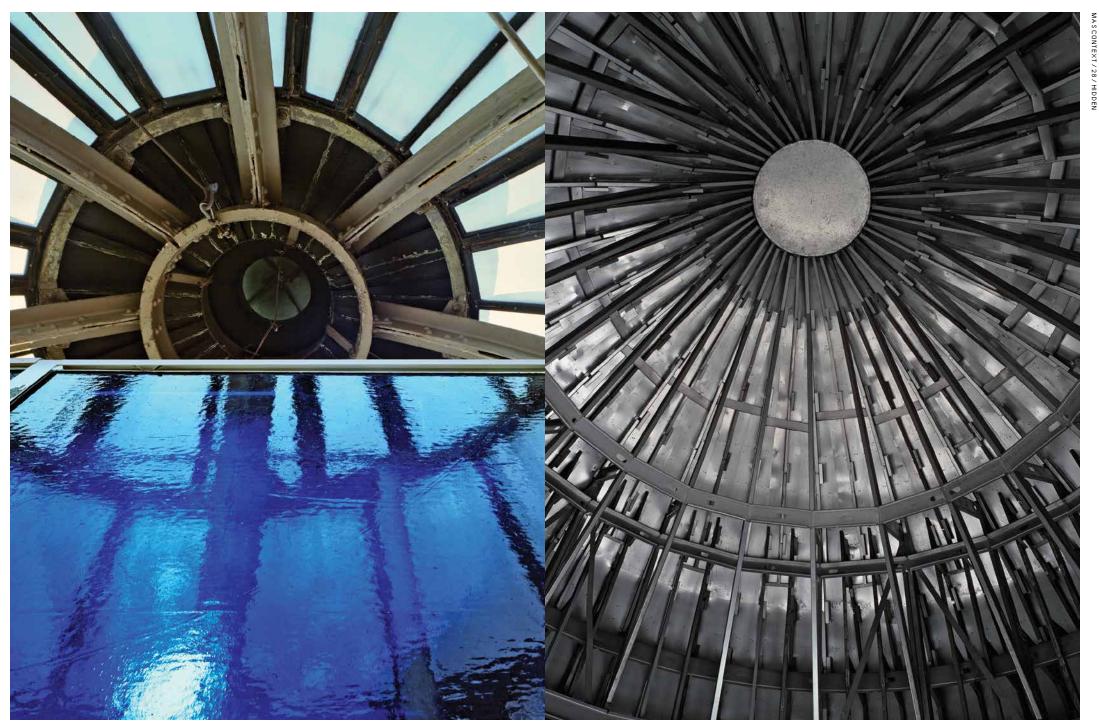the photograph and the viewer's perception of the building becomes most immediate and effective when the image of the hidden space is presented inside the building where the photograph is taken. This makes the photograph "site-specific."

Many photographs are still considered to (re)present the truth; documents that show "how it is" and "what is there." This observation in particular plays an important role for the photographs of the hidden spaces. If the viewer cannot trust his eyes—that which he sees is real—the photograph inevitably loses all meaning. An utmost neutral and descriptive photograph of a hidden space will bear no visual interest; moreover, it will destroy every mystery. With my photographs I earnestly aim to show what is actually there, without adding or altering any elements of a given space. Simultaneously, I try to suggest and prove that the building is much larger than it seems, and a complete world is waiting behind the walls to be explored. The "proof" lies in the credibility of the photograph itself.

The main tool that I use to reach my goal is the distribution of light. Even when no additional light is added, one can make use of the specific color atmospheres of the different light sources. To put it simply: fluorescent lights turn green, halogen lights turn yellow, regular light bulbs emanate redder light, and daylight is blue. In essence, these colors cover the total spectrum of light, and in most instances a multitude of sources can be available. Even when the scene is without colors, the mixture of different light sources creates a distribution of color on the photograph, which helps to highlight particular spatial aspects.
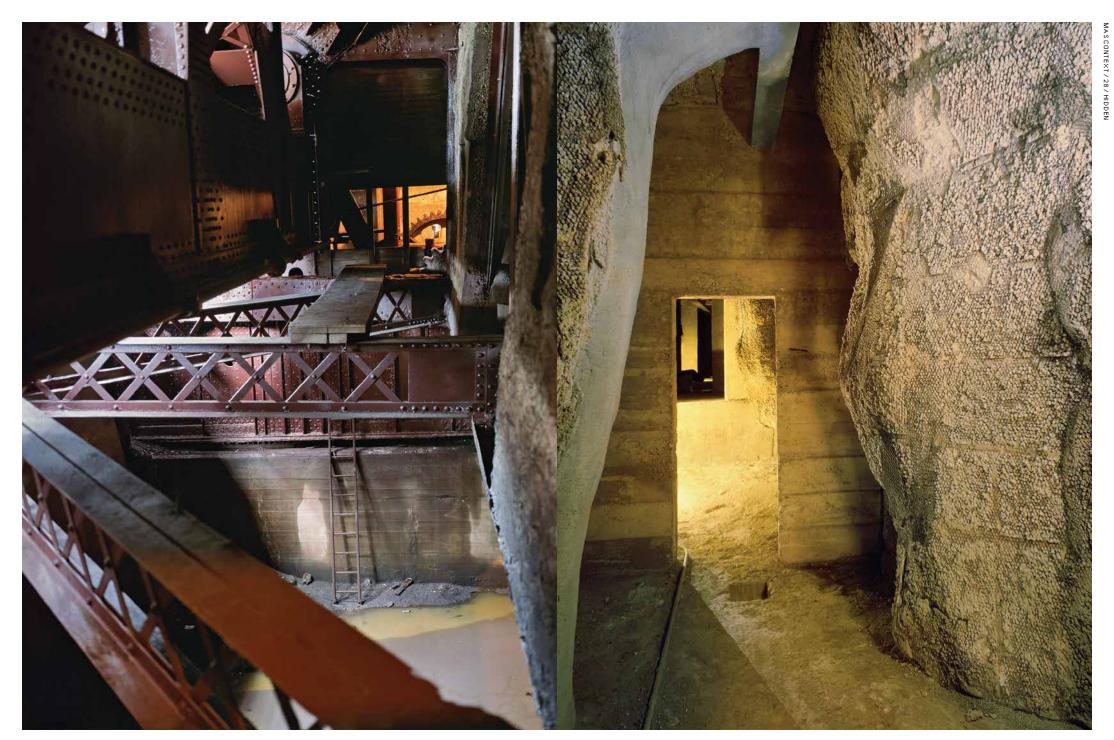
The hidden spaces I explored in Chicago are located in many different buildings, but in my perception they are all connected as parts of the same structure, which is the city of Chicago. Since then I have explored many spatial themes where the separation or interaction of spaces carry a motif. When the transition between private space and the public domain is explored, I am dealing with two tangible spaces, namely inner and outer spaces. Photographs of prison cells in detention centers are related to the freedom of the mind, which is visible in drawings on the cell walls.

Last fall I visited the densely populated metropolis of Tokyo. Within the city, every square inch has its purpose, and everything is consciously placed in the available space. Thus, all spaces are related to each other: the cup on the tray, the tray on the table, the table in the room, the room in the house, the house in the street, etc. This implies that ultimately all the spaces in the world are connected in a strange way. My task is to explore and visualize this ever-expanding myriad of interconnected spatial structures. X

Metropolitan Tower at 310 South Michigan Avenue,
view inside the beehive on top of the building with the blue glass box.

Medinah Temple at 600 N. Wabash Avenue, view underneath an onion-dome.
I've often been told, "there is nothing there to see." "Nothing" is always interesting to photograph.
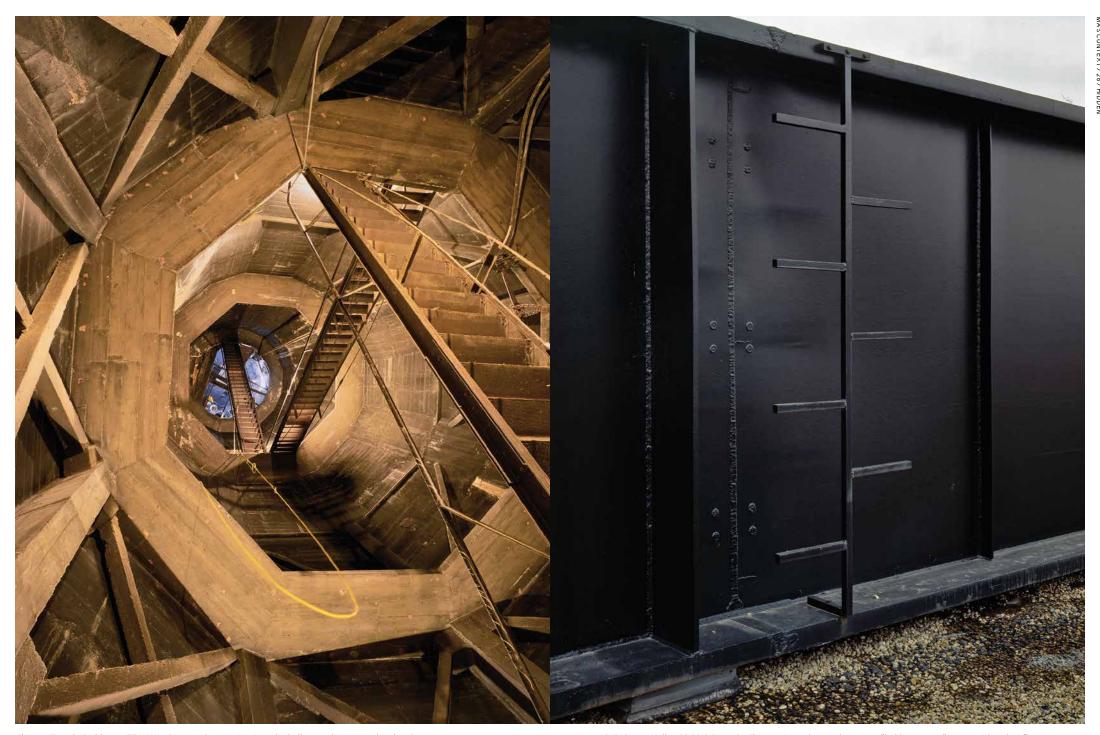
Bridge over Chicago River at West Adam Street,
view inside the space underneath the bridge for the counterweight to move into, when the bridge is opened.

Fountain of Time at 5531 South Doctor Martin Luther King Junior Drive,
view inside this enormous sculpture, created by Lorado Taft (1860–1936)
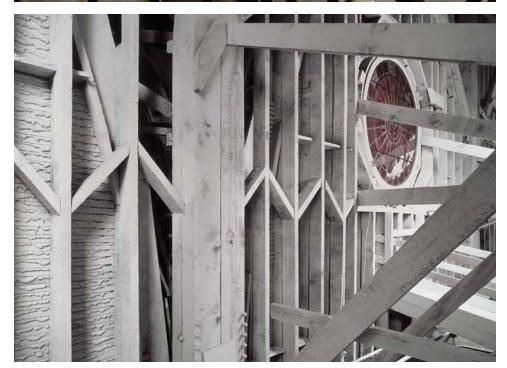
Saint James Cathedral at 65 East Huron Street, view into the bell tower. Built in 1834, the Belltower was the only part of the church that survived the Great Fire in 1871. Burning marks on the outside are still visible.

John Hancock Centre at 875 North Michigan Avenue, view of the air-cooling system on the top floor.
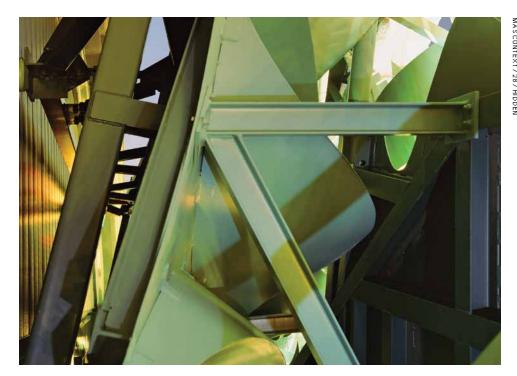
Chicago Temple Building at 77 W. Washington Street, view into the hollow peak in neogothical style
to mark the building as a church and not just an office building.

S. R. Crown Hall at 3360 S State St, Chicago. In modern architecture, "hidden spaces" are considered as flaws
in the design. The space in between the huge girders on the roof can be considered as a hidden space.
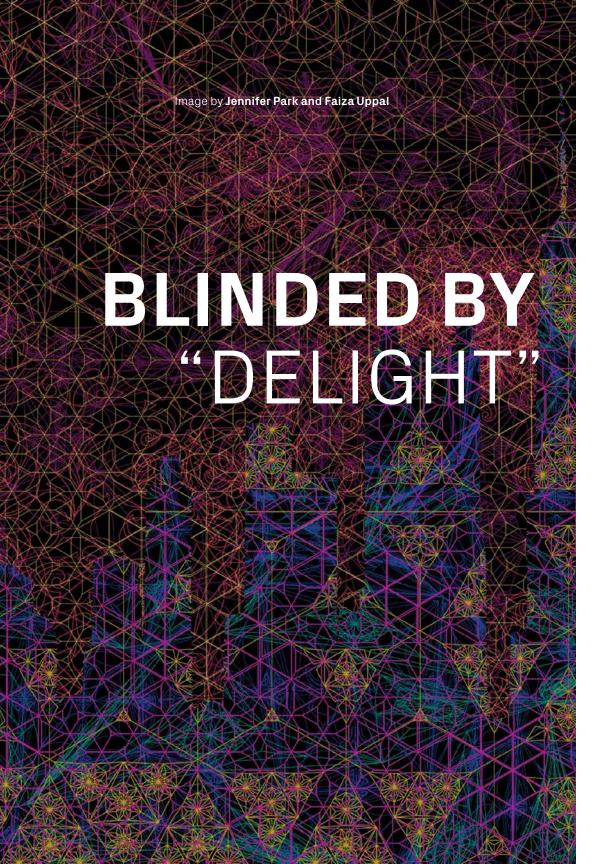
ABOVE: Cloud gate Sculpture at Millennium Park, view inside the sculpture gives an impression that contradicts the immaterial shining surface. BELOW: Holy Family Catholic Church at 1080 W Roosevelt Rd. The space between the interior and the exterior shows that it is a wooden barn enveloped by a brick structure.

ABOVE: Harold Washington Library at 400 S. State Street, view behind the giant owl sculpture on the top of the façade. BELOW: Crown Fountain at Millennium Park. The interior of the glass video towers are lit by constantly changing LED colors.

Image by **Jennifer Park and Faiza Uppal**

BLINDED BY "DELIGHT"

Blinded by "Delight" is an image that addresses the theme of the first Chicago Architecture Biennial, the State of the Art of Architecture. The work refers to architecture's current realm as limited to what Vitruvius would call "delight." While firmness and commodity are largely controlled by engineers and developers, architecture's control is regulated to delight. Architecture's fascination with the complexity of patterns and forms creates a "veil" over our eyes.

On one hand, this veil protects the relevancy of our profession, but on the other hand, the "veil of delight" allows architects to hide away from the difficulties of social and political issues. The veil is superficial yet mesmerizing, and serves only to disguise reality. The complex web lures, the intricacy traps, and the delicacy binds. Ultimately, we are lost in this layered field and shrouds the world beyond.

Each pattern overlaid is a translation of modern Chicago building details forming the skyline of Chicago. Patterns are created using digital scripts based on the original detail's ordering system. The redoubling of systems and rules to create more patterns from patterns reinforces the strength of the veil that hides ourselves from the political side of architecture. This inhibits us from challenging our cultural needs and desires.

Blinded by "Delight" was co-awarded the 2015 Burnham Prize hosted by the Chicago Architectural Club in alliance with the Chicago Architecture Biennial.X

Iker Gil and Julie Michiels
in conversation with
Dan Rybicky

Almost There
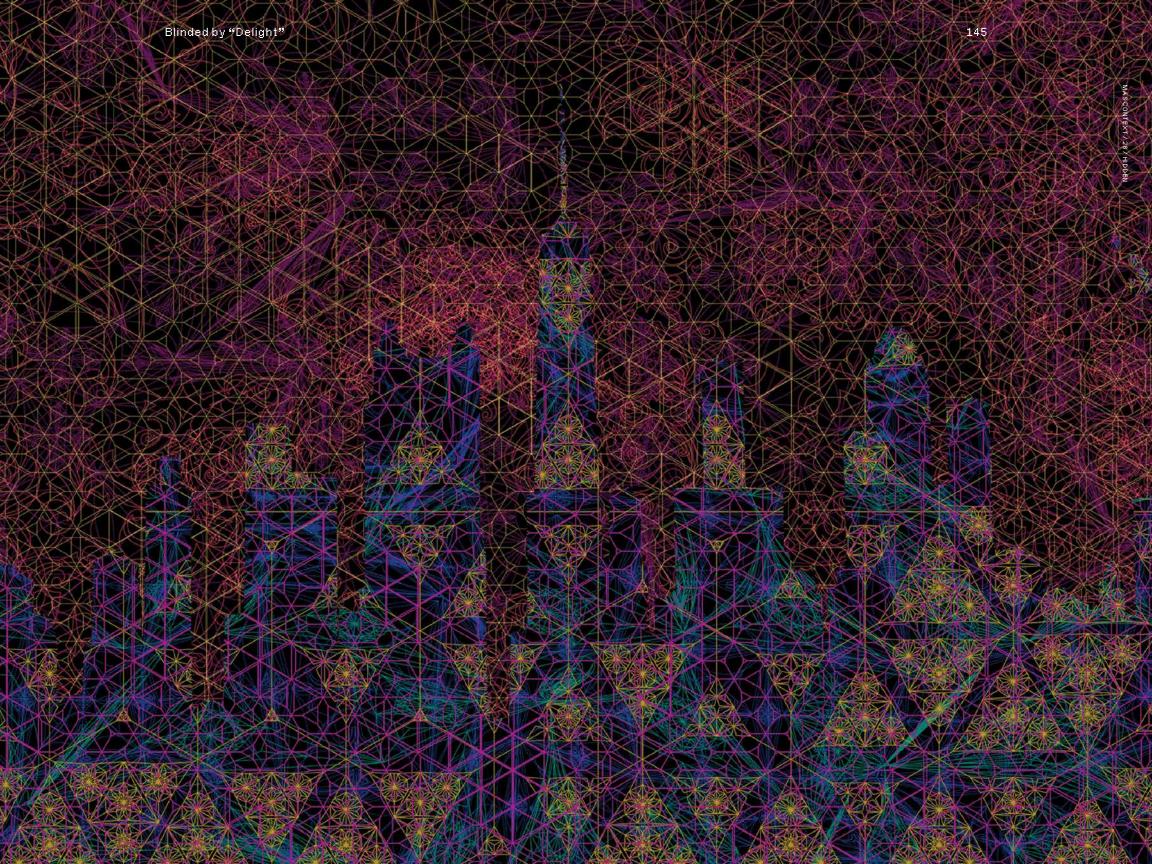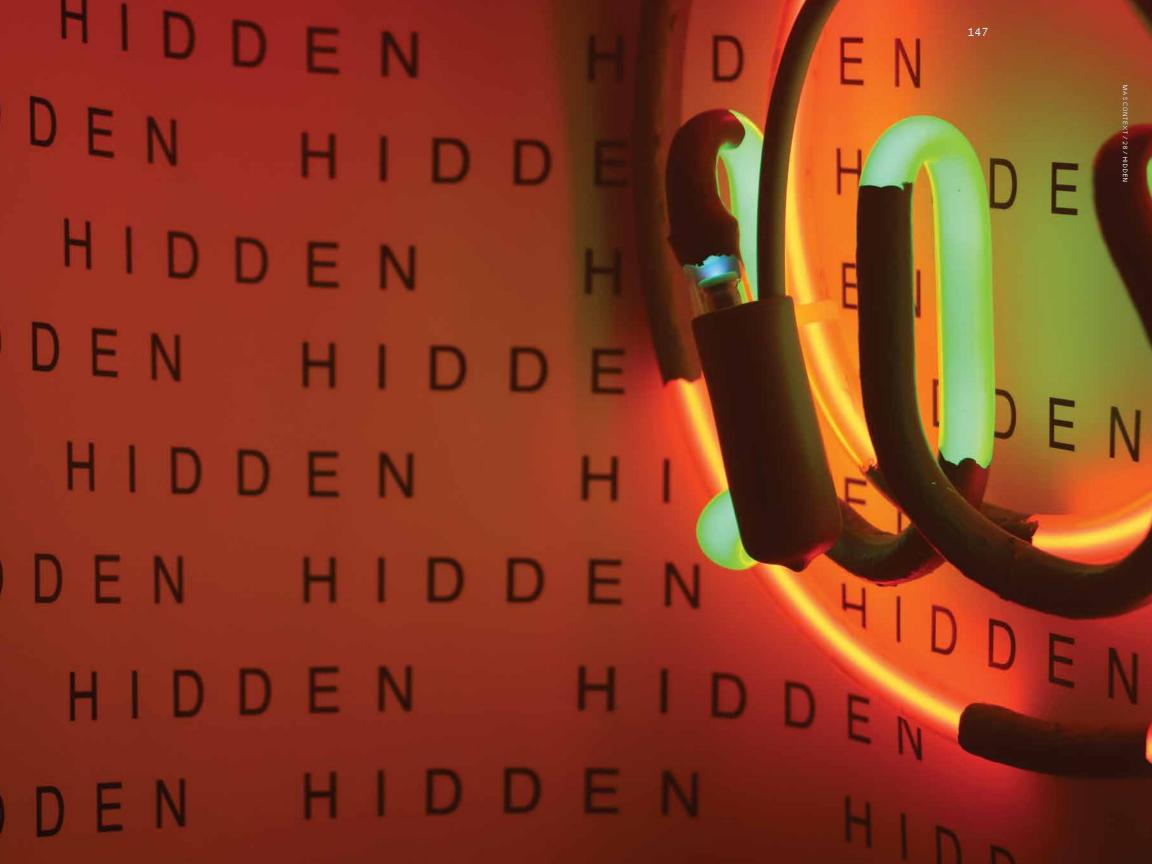
Almost There,
an award-winning documentary codirected by filmmakers Dan Rybicky and Aaron Wickenden, follows "outsider artist" Peter Anton for almost a decade.

The film focuses on Peter's art and life, one that hides more than we initially anticipate when we first meet him painting people's portraits at the Pierogi Fest in Whiting, Indiana. Living in the basement of the dilapidated house he grew up in, he spends his time secluded from the outside world, only accompanied by his scrapbooks, paintings, and cats. But we later learn that it is what he hides from his past that keeps him in that basement. A revelation that deeply affects Peter's life as well as the filmmakers' who, from that point on, are forced to confront the unpleasant discovery and its consequences.

Iker Gil and Julie Michiels talk to Dan Rybicky, co-director and producer of the film, about the genesis of the documentary, his complicated relationship with Peter, exposing the vulnerabilities filmmakers have, and what makes *Almost There* a film that people can relate to.

All photographs by Dan Rybicky and Aaron Wickenden

I: How did the collaboration between you and your codirector, Aaron Wickenden, start?

It started with us meeting in Chicago when we both moved here around 2002. It was through a mutual friend who had helped start a magazine called *Found Magazine*, which is still in existence. It's a whole compilation magazine of found items: people getting and finding things, notes on cars, letters that weren't supposed to reach them . . . it's hilarious.

We actually met at an exhibit that I was part of called *Really Real*, which was an exhibit in which there were performance objects that were real and some that were there that were artificial but looked real. I think he was interning at WBEZ at the time. I had just moved from Los Angeles. I was writing a screenplay for people out there but I wanted to live in Chicago.

J: How did you and Aaron meet Peter?

At the time that we met Peter in 2006, Aaron and I had already been friends for a few years. We went out to Pierogi Fest in Whiting, Indiana, to see the world's largest pierogi, which was being unveiled that day for the Guinness Book of World Records. A friend had told us about it and I think it was also one of Oprah's top five food festivals in the country. Anyway, we biked there and we saw the pierogi, which was so disgusting and un-believable. I don't even know if it was edible. It weighed over 100 pounds.

After seeing the pierogi we met Peter. He was at this rickety table doing pastel portraits of kids, telling corny jokes. He just had an energy about him that was vibrating with something that was compelling. Maybe
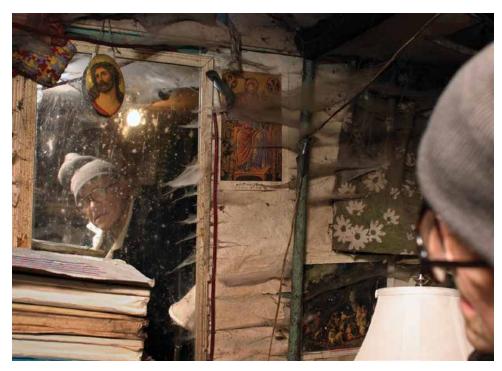
in the spirit of the sad clown, like that song, "Smile When Your Heart is Breaking," or whatever it is. He was being very jokey and funny but was dressed as a dandy of a sort. He had a bowtie and he wanted to look pretty good but he was a wreck, this total disheveled dandy. Then he pulled two scrapbooks from under his table. We saw the texture, the illustrations, this quality of something that was vibrating off those books. This idea of auto-biographizing your life through art, which is what these books were, was like an obsession. I'm interested in obsession. So we took some photos, he asked for our information, and he probably sent us a letter or two.

We knew about outsider art. I'd been to exhibits at Intuit and that work has always compelled me. Work that people working outside of the commercial or cultural mainstream are compelled to produce. I'm just interested in art as an expression, as a pure expression, more so when people aren't even thinking about it in a commodity way, which is definitely the case with someone like Peter.

I: When you went to Pierogi Fest, were you already looking for characters for your documentary?

No, we weren't. We went back to Pierogi Fest a couple of years later. We brought some photos of what we had taken and we saw Peter there again. Every now and then we would send a letter back and forth. He was encouraging us to come to his house but we didn't go because we were busy. But there was a moment where we just said, "He has done thirteen of these scrapbooks, let's go."

His house was impossible to find, we got lost trying to find it in Whiting. We finally got there and it was intense. Aaron grew up in an

environment where it was spotless. In the film you saw me pointing to the mold in my mother's ceiling but Aaron was the opposite of me. I think on that day Aaron could not even go within thirty feet of the house, the smell was too intense. I am someone who just goes. I think I walked into the foyer and into this black hole where Peter was going down. I just took a few snaps in the house that day with a flash because it was all so dark and intense. We also took some pictures just in the yard.

I remember going home that night and just looking at them. They were so intense. It is like that phrase that you cannot "unsee" what you've seen. One of the photographers that filmmaker Brian Ashby alerted us to, Zoe Strauss, who did this amazing book called "America," had this weird photograph of a storage space with this big banner on it that says, "If you break the skin, you must come in." We always said that to ourselves. Once we saw this, it really was hard to just forget about it.

That maybe says something more about who I am as well. When I was in Los Angeles I had a business card that just said my name and then, in italics, *human being*. That is really the truth. I am just drawn to whatever it is. There is something that drew me to it, to the work, to the art, to this guy.

Then, as the film details, we did try to help him like anyone, I think, does. We didn't want to get too close too fast or anything, but we were determined to go in there. It was a curious thing. It was like, "Don't go in the basement but go in the basement."

As documentary people, we were also interested what the context is of how people make art and where they make art. We have always been interested in the juxtaposition of this work going up on white walls and how, particularly in this field, you keep the artist. Do you keep the artist out of the gallery? What is their life really like? I'm interested in what motivates people to make art, much more than the art itself.
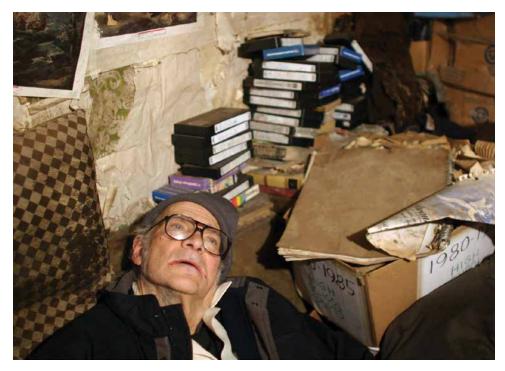
J: You mentioned that *Almost There* didn't start as a documentary. You took photos for quite a while. What made you change that idea?

By 2008, after having taken many photos, we thought that we wanted to contextualize this, maybe as an art show. We shared Peter's art with Intuit [The Center for Intuitive and Outsider Art in Chicago] as we knew people there. We brought in some scrapbooks and they were interested. We kept taking photos and, in the summer of 2008, we went to Review Santa Fe, which is a photography festival in New Mexico. We showed a series of photographs that we had fancily printed up to someone from Princeton Architectural Press who, I think, was the first person we had a meeting with. She burst into tears when she saw our twenty, really well done photos, and she said, "Let's do a book."

We started to take more photos and work on a book with Princeton Architectural Press. Unfortunately, this took place around the economic collapse and the book was never published.

With the same DSLRs that we were shooting with we started to do video clips that we thought we would include in the 2010 exhibition at Intuit. It became natural for us to start using the camera to film with him and we did a series of interviews. The first thing we did was just a series of sit-down extensive interviews with him for two or three days trying to get a history of his life. Then we started to try to sift through all of the books and the hundreds of pages of him writing about his life for the exhibit. We put them on iPads mounted on the wall so people could hear from him and have further context. The whole idea of the show was that it was Peter telling the story of his life. It was almost a narrative within the room. We had him literally create panels. Written things that we put in frames on each wall that took us through epochs of his life. He literally named each wall and then wrote about that era of his life.

We filmed the opening of the exhibit. I think that maybe it was around that time that we thought maybe we'll do a film that is just telling the story of Peter getting his exhibit. It could travel with the exhibit or something like that. We didn't know that things would take such an intense turn. The goal really was to tell Peter's story, to help him tell his story, his last life's wish, through an exhibit, maybe through the film.

And then the stuff happened [we will not discuss the actual event so we don't reveal a significant moment of the documentary].

It became natural to have our cameras with us. We met him in 2006, and this happened in 2010. We went to his house with the cameras. We didn't know what it would be but we knew that it was creating a big row at Intuit with their board members. A big row that they had never had in their entire existence. It was the first time that their entire organization had ever actually started to grapple with the very issues that exist and are loaded all around the art that they are studying.

I: In a way it uncovered those hidden aspects that are part of some of the lives of the outsiders.

There are people who think you can separate the art from the artist. That is one of the hypocrisies of the art world: that the work needs to stand on its own. Especially in the fancier galleries, gallerists don't necessarily give you huge backgrounds on the work. The work should be separated from the artist, so they say. I think it is a hypocrisy. Even Banksy has a story of a sort that is attached to his art.

We were also not art curators. When the exhibition went up, there were people who were horrified and outraged by what we had done. Literally the night before the show started, while we were not there and they were still putting up the show, the head curator of Intuit called everyone in and said, "Look at this disgusting show. It makes me sick, it looks like a high school art project collage nightmare." We didn't even find this out until later. She totally trashed us to the entire group. She agreed to be interviewed as we went forward, so she was a good enough sport to agree, but she hated it, hated what we were doing. What we were doing was

radical and not appropriate, but it also drew huge crowds to them because we were calling attention to the very thing that is always kept tamped down. Peter's art was autobiographical so it made sense for us to contextualize it. It wasn't like his art was visionary or about some fantasy world. This was about him so we wanted to play that up.

That's when we filmed all that stuff because we said, "If there's a whole organization here that's grappling with this, they're about to shut a show down, let's just keep filming." How can you stop after all those years? Then Peter's house was condemned. It just becomes "what's going to happen?" There's got to be an ending here somewhere. Our lives went on. I'm a full-time teacher at Columbia College and Aaron was becoming one of the most sought-after editors working in documentary, having just edited *Finding Vivian Maier* and *Best of Enemies.*

Aaron was editing, I was teaching, and we did pull back more after the whole thing. That was probably during the time when I did really question why we were doing the project, and that's where the inclusion of my family started to come into it.

J: It is evident throughout the film that you become close to Peter and that there is a personal investment in him. And then, at one point in the documentary, you also begin to reflect back on your own life and family. When did that connection between what you were seeing as the subject of the documentary and your relationship with your own family happen?
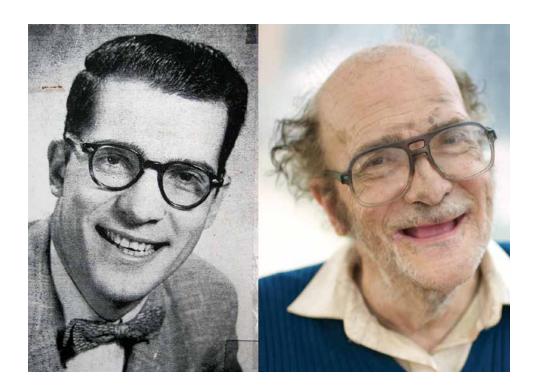
It was definitely during that time when all this stuff blew up and our friends, more than ever, were like, "Why are you still doing this project? This guy is not grateful for anything you've really done. He has evaded questions and your names are associated with a project, which now might be shut down. Everyone thinks he's creepy. Why are you doing this? When is this going to stop?"

I have worked in offices where I've really recreated my dysfunctional family because I am still living out haunts and hurts and unresolved issues. I have manifested and made them come right back to me in my present life with other people. In some ways, it didn't take so long for me to look and see that this was probably the biggest one and it was right in front of my face. It only took a moment like this for me to really explore and see how I was doing this with Peter. That I could never solve the sadness of my family, my own mother and brothers' twisted and dysfunctional relationship. Here I was, in some ways, trying to help this person who is, in a way, the ghost of my brothers' Christmas future. I think that that happens a lot where we're trying to do something in our present because we haven't solved it in the past, and we may never. That's what I think one of the motivators of life is in a way.

I conceptually have always said that, I think more than ever now in our culture, we're wary of the God eye, particularly in film. I'm always interested in why someone is filming something; for example, who are these three white filmmakers filming in Uganda? I want to see them back in their condo ordering something from Room & Board. I want to see full context. I want all the veils to be pulled back. I believe that the films that some of these filmmakers are making in front of their camera are much less interesting than the stories of what they are leaving out between the dynamics that they are in with their subjects.

One of the things that has happened in our film is that many documentary filmmakers have come to us and said, "I can't believe you put these things in your film." I think a lot of people have these really interesting negotiations with their subjects and the fluidity of a documentary filmmaker's role, when it tips over into an advocate or a caretaker. It's not an easy exchange, it's not monetary, but there is something exchanged. Like Peter says in the film, "You're serving me, I'm serving you, we're serving each other."

Conceptually I have always felt like I will never ask a question of the subject that I myself wouldn't answer. I wanted to have the veils lifted back on what vulnerabilities filmmakers have and how this is a deeper thing than what you might think. That's why these filmmakers devote years to projects like this that are barely funded.

I: I think bringing you as another character into the movie helps to navigate that fine line. Some people might perceive that you are exploiting Peter to make your own film. The moment that you expose your life the same way that you are asking Peter to expose his, it becomes clear that now it is an even trade, now you both have the same skin in the game.

One of the people at Kartemquin who is a huge friend and has been an incredible mentor in our project is Steve James. After *Hoop Dreams*, Steve made the last film that everyone wanted him to make. Everyone wanted him to make *Hoop Dreams 2*. Instead, he spent eight years making a film called, *Stevie. Stevie* is a very powerful film and one that he was both loved for and hated for. It was about him going to Southern Illinois to reconnect with Stevie Fielding, for whom Steve once served as an advocate Big Brother. In the film Steve gets a call from Stevie saying that he's in jail for a serious crime and to see if Steve can post bail. The can of worms opens because this guy really did commit this crime. It is an amazing, complicated, and difficult film. So Steve really helped us navigate some of these very ethically complicated issues, as did our executive producer Gordon Quinn. We had an incredible team of people who have been doing this for decades who helped us navigate these issues.

But going back to your comment, your point is well taken. We had seven feedback screenings over a year, and there were some early on in which people were attacking me for yelling at Peter at the end of it. People only see what's on screen for those ten minutes and don't see the amount of hours we spent with Peter. After this event, we started to think about how to put me in the film and, over the course of those seven screenings, we realized we had to put my story in before the showdown with Peter and that is what I believe was the final piece in the puzzle that made us land the middle of the film. Like you said, you see me as a character and, by the time that I am confronting him and get feisty with him, you can see what my investment is as a character.

Yet a film like this is not easy. It is a film that is traversing very complicated ethical issues. We just got on to Amazon Prime. Ten years later, many zillions of hours later, and the first review is by "Margot Sexiest Goddess Ever" whose first line is, "The directors did a great job of convincing me they're total scumbags." First line.

I: You should put that in your reviews. *[laughs]*

It's so great. Even trying to deal with these things is going to rile people up. Like I said, I think even the fact that I don't pity this person is controversial. Most people can pity a person like Peter. That makes it so much easier for them, to write him off and feel whatever it is that keeps a wall between them and him. I am pretty much the way I am with him that I

am with you, that I am with my family, that I am with my partner. That is just who I am. That alone is complicated for people.

I: If you do a movie that is complicated, you can't expect simple responses. You're setting up the framework for a wide range of reactions, and that is great. It generates a much more interesting conversation.

We always get asked why my story is in the film. Some people think it worked really well and it had to be in there. Other people say that it should be cut out. Those diverse opinions start a conversation, and that's definitely a conversation I wanted our film to have: To question on a deeper level what the role of the documenter in this world is. In the age of the selfie, who documents who? Why are we documenting? I think it is going to be bigger than ever because everyone is doing it. To me it is a really important thing.

For example, Jeff Malmberg, who made a beautiful film called *Marwencol*, is not really in the film. When we asked him, "Do you want to watch our film?" he saw our trailer and said, "Forget it, I want nothing to do with your film." We talked and had this deep conversation and he came around to understanding our point of view. His perspective, which I understand, is that if the filmmaker isn't in it then the audience becomes the camera. I think that that's okay, but I think that's just not true. There is always a director, it is shaped, the work is manipulated, and basically a million decisions are made.

J: The way you shoot, edit, and present a movie is based on very personal and subjective decisions. Each person could make a different film with the same footage. It is a little bit naive to pretend that that doesn't exist and you're seeing the *real* life.

Exactly.

I: It is also interesting that, in the same way Peter's life relates to your life, his life can be understood as a commentary on larger aspects of society such as aging, mental illness, and poverty. Was this something that you set to do from the beginning?

Our film has a lot of things going on, but I feel that it has a straight-forward plot. There is this idea that the plot is the hook that you hang the meat on, and there is a lot of meat you can hang. To me, there are a couple of questions that stick over the film, one being that this guy is going to die if he stays in this house. From the moment you watch it, you think, "Some-thing has got to happen here. I don't know what it's going to be and I'm horrified because it might not be good and it probably *isn't* going to be
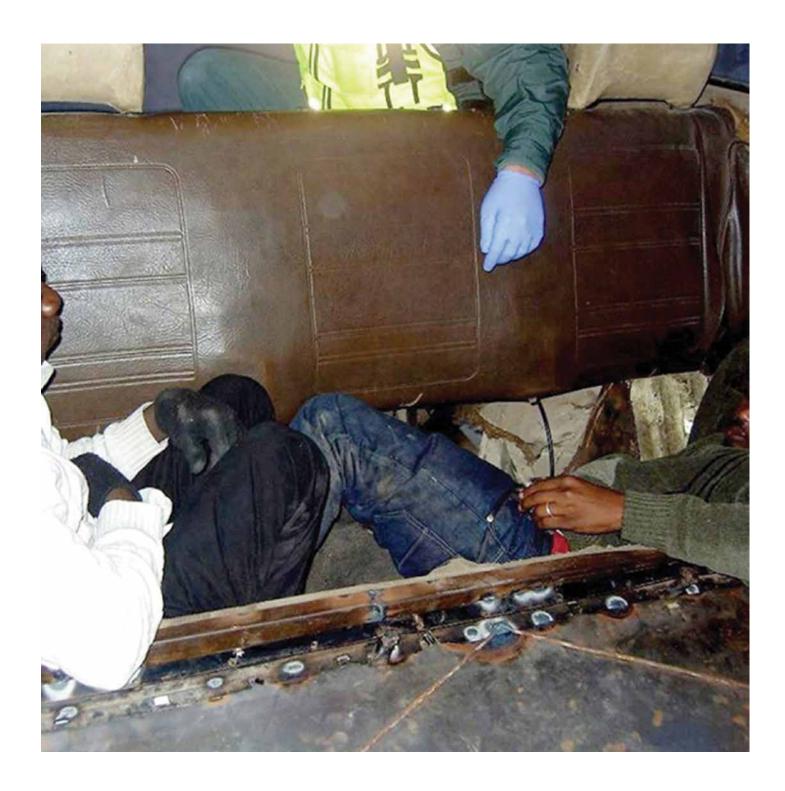
good." There are also all the complicated aspects related to the art show and Peter's life. To me there's a strong plot in our film. The meat comes through just following a story. I feel like if you follow any one story, all the issues, "social issues," will come up. There are social issues around all of us if we look close enough. The character is the motor upon which those come through.

We were invited to present our film at South Korea's EBS Documentary Festival this year, and we asked them why they had extended the invitation as we didn't apply to exhibit the film. They though it was a great film to start a conversation with their elder population. There is a senior tsunami there and, more than any culture, theirs is very much beholden to elders. Our film showed a person similar to many people in Korea that, while maybe they aren't as extreme as Peter, they are in a similar position, refusing to leave their home saying they would die if they leave their home. However, when they leave their home, they end up having a new lease on life. Many people have approached us and said, "This film is about aging in America." We have screenings planned with elder care organizations and art therapists as well are very interested in the film.

I: It goes back to the idea that the movie is complex and it is not trying to remove any of these layers. It gives the viewers the opportunity to have these conversations and these different readings that people can extrapolate to their own life, to their own conditions.

I always feel like life is a mirror. If you share a lot, people will share back. By opening yourself up, people open up to you. I also think that only through the deeply idiosyncratic could you ever hope to be universal. That is something I have to teach my students because they often try to write vague proclamations. They think that vague clichés are the way in, that those are the universal things, but only by getting incredibly specific can you actually get other people to relate. You think that people wouldn't understand something if it is too specific to them, but I think they do. That is what allows people to see their own self or story in something. X

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Farhana
Project by Reinaldo Loureiro

In the Farhana border crossing one can easily observe the terms in which the contemporary colonial encounter is taking place in the context of a globalized and neoliberal world order. Farhana is part of the highly contested border of the fortress Europe has chosen to become: the creation of the European Economic Area and the Schengen space with their violent dynamics of inclusion and exclusion has made journeys much more dangerous and even lethal.

The border police of the Spanish enclave of Melilla in Northern Africa routinely check for cars used by people-smuggling mafias operating on both sides of the barbed wire fence. Once a victim of these traffickers is found inside a car, the driver is arrested and will most likely face a minimum four-year custodial sentence. These images have been taken in the course of these operations and then made available to news agencies and newspapers through the online archive of the police. Although I have permission to access the archive, I have instead chosen to collect them from the local and national newspapers that have published news related to these police operations.

Selecting this place of appropriation allows me to make reference to the process of production, distribution, and consumption of these photographs. In fact, the time of the images in this project is not the time of the specific police operations, but that

of its signifying practice in society. The original currency of these images seems to be negotiated between its intentional referent, the documentation of the operations against human smugglers, and what is later placed in a symbolic regime of representation: a discursive construction of migrants as intruders, visually trapped in their rites of passage and intensively articulated in the body of the news story and later in many comments left by readers.

It is important that these images can circulate again and be reconsidered without the mediation of the institutions that produced, disseminated, and prescribed their value. In fact, putting them together in a new context without their institutional badges allows new meanings to emerge, breaking away from their single, iconic, and illustrative currency they originally had in the newspapers. Beyond the debris left behind by customs and forensic probes and the inventory of alterations made to vehicles, these images consistently reveal re-enactments, performances, fractured representations of the body, erased faces, empty spaces, traces of presences, absences, encounters, relief, and trophies.

There seems to be a selective right to the representation of the bodies of these victims being exerted in these police images. The traffickers are always kept outside the constructed frame of the scene and only their victims occupy the reading surface of the image. The camera sifts through these wreckages to show these people hidden, twisted, bent out of shape with their faces placed outside the frame. Alternatively, a black bar is placed on their eyes in postproduction to protect their identity. Preventing an encounter with their eyes, their faces and the dignity of their bodies allows a new function to emerge beyond identification and reminder of police power: to define these migrant bodies.

In conclusion, the intention is to reassess both this vernacular practice and my artistic intervention within a critical framework in order to draw attention over any illusion of transparency they might convey. One witnesses a strong sense of agency in these victims of trafficking, a determined migratory project and their resistance to discriminatory entry policies. These journeys are indeed a social, economic, and political phenomenon, but also the object of vigorous forces claiming its hegemonic representation.X
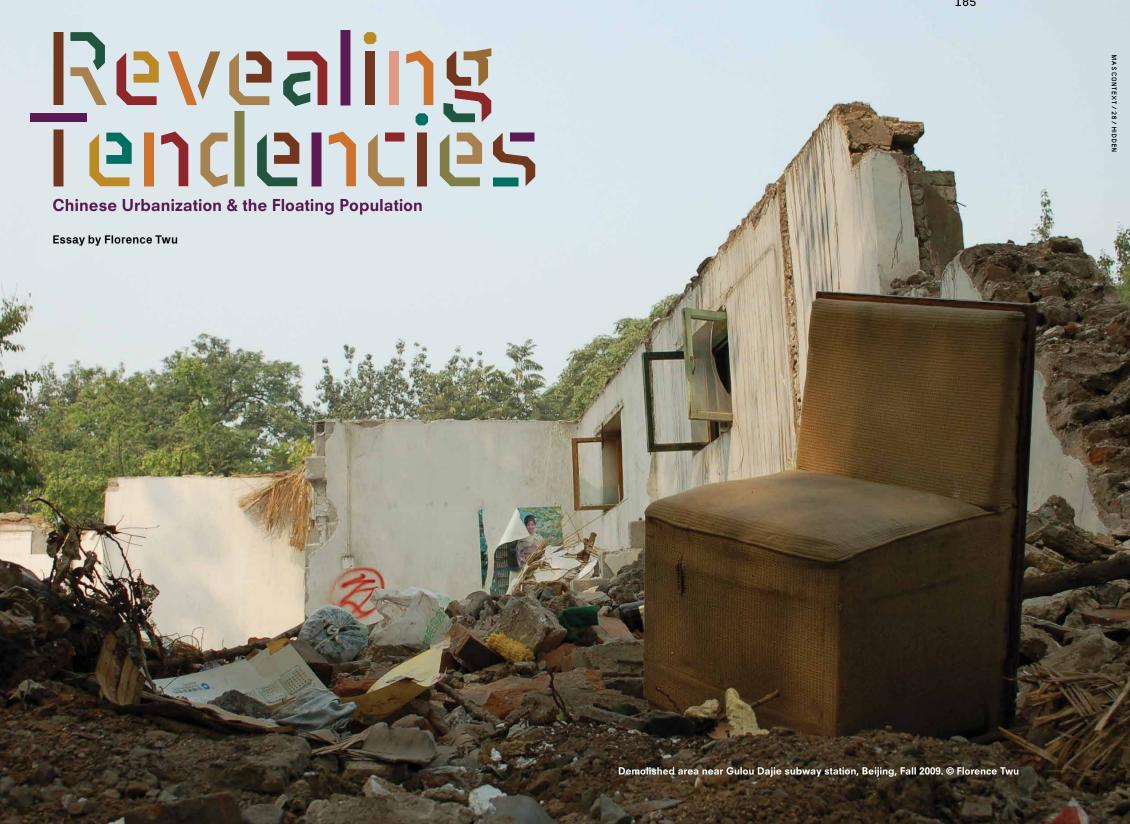
Revealing Tendencies

Chinese Urbanization & the Floating Population

Essay by Florence Twu

Demolished area near Gulou Dajie subway station, Beijing, Fall 2009. © Florence Twu

Shenzhen may seem prosperous, but it's a desperate place.
— Anonymous Chinese migrant factory worker [1]

Friends, we were born into the world poor through no fault of our own. But to die poor is a sin.
— Diary entry of female Chinese factory worker [2]

They are known as *liudong renkou*, the floating population in China, an estimated 250 million migrant workers who have moved from their countryside homes in search of better opportunities in the city. The sheer volume of people migrating to urban areas as labor has allowed China to develop at the unprecedented pace and scale as it has for the past three decades.[3] While the image China projects to the world is one of pure progress—all glittering skylines and modern shopping malls—an inconvenient reality is that the invisible hands whose labor have made China's developmental miracle possible live on the margins of urban society as "second class citizens," hidden from public view in underexamined housing formations. By moving from their locations of birth, rural-to-urban migrants have relinquished their rights to state-provided public services including subsidized housing under China's geographically based household registration system referred to as *hukou*. As a result, they have little choice but to make their lives in the all-too-often difficult environments of factory dormitories, condemned neighborhoods, and makeshift migrant housing settlements.

Just as their contributions to the Chinese economic miracle are unrecognized officially, the spaces these invisible hands inhabit have been similarly neglected and hidden from sight. Factory dormitories are perhaps the most widely known living quarters, due to the high global profile of Apple products manufactured through Foxconn Technology Group and the infamous dormitory suicides that briefly dominated headlines in 2010. Rather than directly address the regimented working and living conditions that likely contributed to the suicides, Foxconn chose to outsource their dormitories to push the responsibility—and any additional blame—to another subcontractor in order to continue their business operations as usual.[4] Demonstrating particular cunning in the service of profitable returns, the Foxconn case illustrates some of the nefarious tactics of global business to maximize return on what has been viewed as an inexhaustible supply of replaceable labor.

The phenomena of factory dormitories located a short walk from a manufacturing facility is hardly novel. Industry has always sought to capitalize on a proximate and captive labor market—the docile and already-trained farmers' daughters brought in to replace child labor in the Lowell Mills, the planned worker community of George Pullman, and single-industry cities such as Detroit are all examples. Those that persist in our historical consciousness have typically been connected to some utopian or moralizing mission. One is hard-pressed to find such overt idealism in factory owners even if the practice of market capitalism in China was supposed to be guided by the ideals of Chinese socialism.

What does stand out is the relentless drive of China's general growth-above-all approach. As a result, dormitory construction is driven by efficiency and cost, creating a monotonous built landscape of the generic, banal, and easily overlooked.
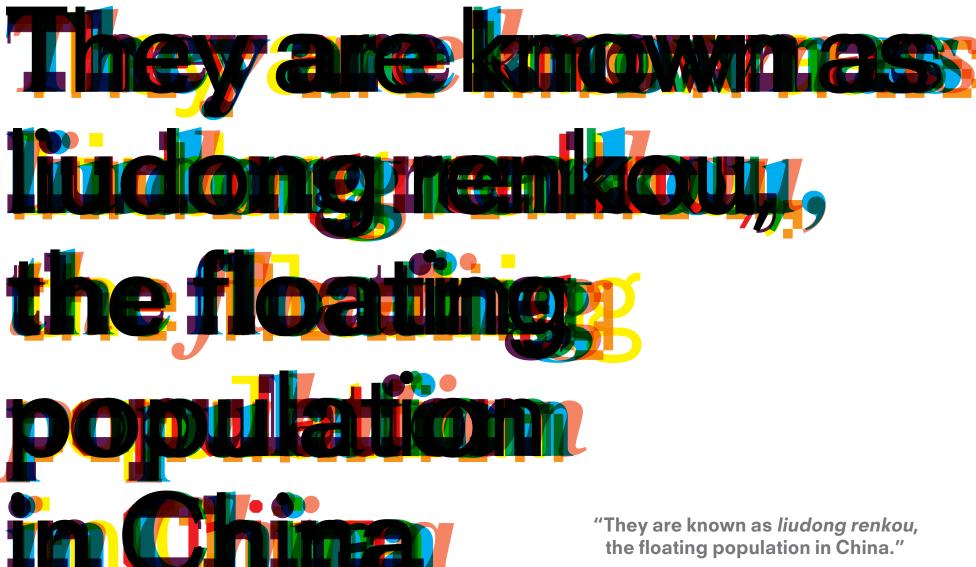
Shoe Factory Dormitory in Guangzhou, China, 2008 © Daniel Cronin

Kitchen in Guangzhou, China, 2008 © Daniel Cronin

Dormitory in Guangzhou, China, 2008 © Daniel Cronin

They are known as liudong renkou, the floating population in China

"They are known as *liudong renkou*, the floating population in China."
— Florence Twu

Demolished area near Gulou Dajie subway station, Beijing, Fall 2009 © Florence Twu

Out with the Old, in with the Laborers

Elsewhere in the country, migrant workers have taken shelter in undesirable old housing stock representing a previous way of life that is quickly disappearing. Rent in traditional apartments is too expensive and because of the *hukou* system, rural migrants lack the urban residence permits that would give them access to lower-cost social housing. Dilapidated and disposable housing stock—sometimes already slated for demolition— becomes one of the remaining refuges for migrant workers.

The old city center of Beijing is made up of a network of alleyways known as *hutong* that link together a network of low-lying grey-brick courtyard homes known as *siheyuan*. This basic urban fabric was established in the thirteenth century and remained largely unchanged through the Communist transition in 1949. When Beijing's population rose in the 50s and 60s, inhabitants spilled into the open courtyards, infilling the spaces with makeshift shelters to accommodate more people. The city also grew, but outward, in the form of four-to-five story Soviet-style housing compounds.

The onset of *hutong* demolitions in Beijing coincided with the opening of international markets in the early 90s when real-estate profits through redevelopment became realizable. The lead-up to the 2008 Olympics further accelerated a citywide demolition project of unprecedented proportions. Opinions on the destruction of the *hutong* were mixed, however. While intellectuals decried the policy's historical and cultural erasure, many original *hutong* residents themselves were not opposed to relocating to higher quality living conditions as long as compensation and notice were adequate.[5] For those who lived through the Mao era, government housing complexes are seen as an ideal.[6] As a result, many *hutong* neighborhoods fell into disrepair, paralyzed by an uncertain future.

With the government eager to see the neighborhoods demolished to make way for commercial development and previous inhabitants ready to move into better accommodations, the *hutong* have provided inexpensive housing option for incoming migrants to the city. Areas slated for demolition are marked with the character for *chai*, to tear down, but signs of life persist throughout condemned neighborhoods. As migrant families make do with what shelter they can find, they have attracted targeted demolition and relocation efforts by the government in order to "improve the population structure" and attract "more civilized" residents through the redevelopment of heavily migrant-populated districts such as Chaoyang.[7] As of 2010, an estimated two-thirds of Beijing's *hutongs* have been demolished.[8] Yet the evictions and demolitions do not provide solutions, only pushing migrants into other informal urban living arrangements that have arisen to accommodate the human tide.

"Villages within Cities"

Present in all major Chinese cities is the phenomena of "villages within cities" or "urban villages," rural farming villages that once existed on urban outskirts now enveloped whole by rapid urbanization and home to numerous migrant workers. These rural islands are a product of China's dual land-ownership policies where urban land is publicly owned by the state and rural land collectively owned by the villagers' themselves. Local governments chose to convert more easily obtained rural cropland for urban development while leaving residential rural areas untouched. Stripped of the croplands that were their previous source of income, villagers turned to renting extra rooms to incoming rural migrants. To address the need for affordable housing and generate additional revenue, an entire informal housing market has developed as villagers further subdivided rental properties and began building larger, unregulated structures up to four or five stories tall.

In cities such as Shanghai and Fuzhou, converted shipping container serve as ad hoc homes for construction workers building the most decadent of luxury high-rises. Ironically lurking in the shadows of high-rise job sites or conveniently concealed a sufficient bus ride away, these makeshift structures have become self-sustaining communities that function at a scale and manner more familiar to the environments the migrants left behind.

While tolerated for decades, these migrant enclaves have increasingly come under attack as local governments reframe their urbanization efforts. One Shanghai community was established by an entrepreneurial recycling industry worker with access to shipping containers. After four years of existence, the village was shut down in days when the circulation of images on the Internet embarrassed local officials. As a whole, however, these informal housing markets have helped to keep the cost of labor down, on the order of multiple decades worth of annual revenues in large cities such as Shenzhen.[9]

Demolished area near Gulou Dajie subway station, Beijing, Fall 2009 © Florence Twu

Moving Underground

Nowhere is the dual nature of Chinese society more evident than in the teeming underground labyrinth of basement units and air raid shelters that house migrant workers in Beijing. Again a consequence of sharply increasing rents and the lack of affordable housing options, a literal subterranean city three-stories below street-level has developed as a physical counter-narrative to the progressive skyline above. Annette Kim, professor at the University of Southern California, has worked with a team of Chinese researchers to map the types of rentals available under Beijing, finding the median size to be 9.75 square meters (about 105 square feet)—just under the 10 square meter minimum required by Beijing's local codes. In comparison, the average worker dormitory accommodation is only 6.2 square meters (about 67 square feet).[10] Unflatteringly referred to as the "rat tribe" both in the Chinese press and among legal urbanites, the underground denizens are too poor to afford aboveground private housing. The epithet joins a colorful lexicon built around unconventional living conditions: "cupboard tribe" for those living in shipping containers, "well tribe" for a group that found shelter in unused wells near a five-star hotel, and "ant tribe" for the intelligent but powerless class of university-educated youth settling for low-income jobs, bonding together in urban colonies for support.[11]

Subterranean living is perilous and uncomfortable. Heavy rains in 2012 claimed 79 lives and forced thousands of underground occupants into the streets above.[12] There is also the ever-present risk of cooking fires breaking out. The difficult living conditions are tolerated as temporary by some, but others decorate their tiny rooms as homes, dreaming of the day they can afford to live above ground.

Changing Conditions

Uninhabitable dormitory conditions, insecure housing amid urban ruins, a belowground shadow city—all are expressions of the suppressed internal contradictions that have fueled China's miraculous economic growth. The country's hybrid of capitalist and communist impulses has resulted in novel forms of social and spatial segregation as it has benefited from the influx of a vulnerable, itinerant labor force. By keeping blue-collar workers out of sight from both locals and tourists alike, Chinese cities were able to maintain a certain facade of progress—a fiction that is quickly dissipating with a changing economy and increasingly dramatic instances of environmental decline.

Two factors that have overwhelmed affordable housing options and driven migrants to less desirable forms of urban shelter—the sheer volume of migrants and the underlying *hukou* system—are beginning to show signs of change, however. Exhausted workers who have not attained their goals of amassing savings and upward mobility are returning to inland cities in a mirror image "tide of return." Simultaneously, the *hukou* system also shows signs of loosening, allowing migrants access to social services in hopes of increasing consumer consumption and urban growth.[13] Whether economic and urban growth can occur while simultaneously improving living standards has yet to be seen. X
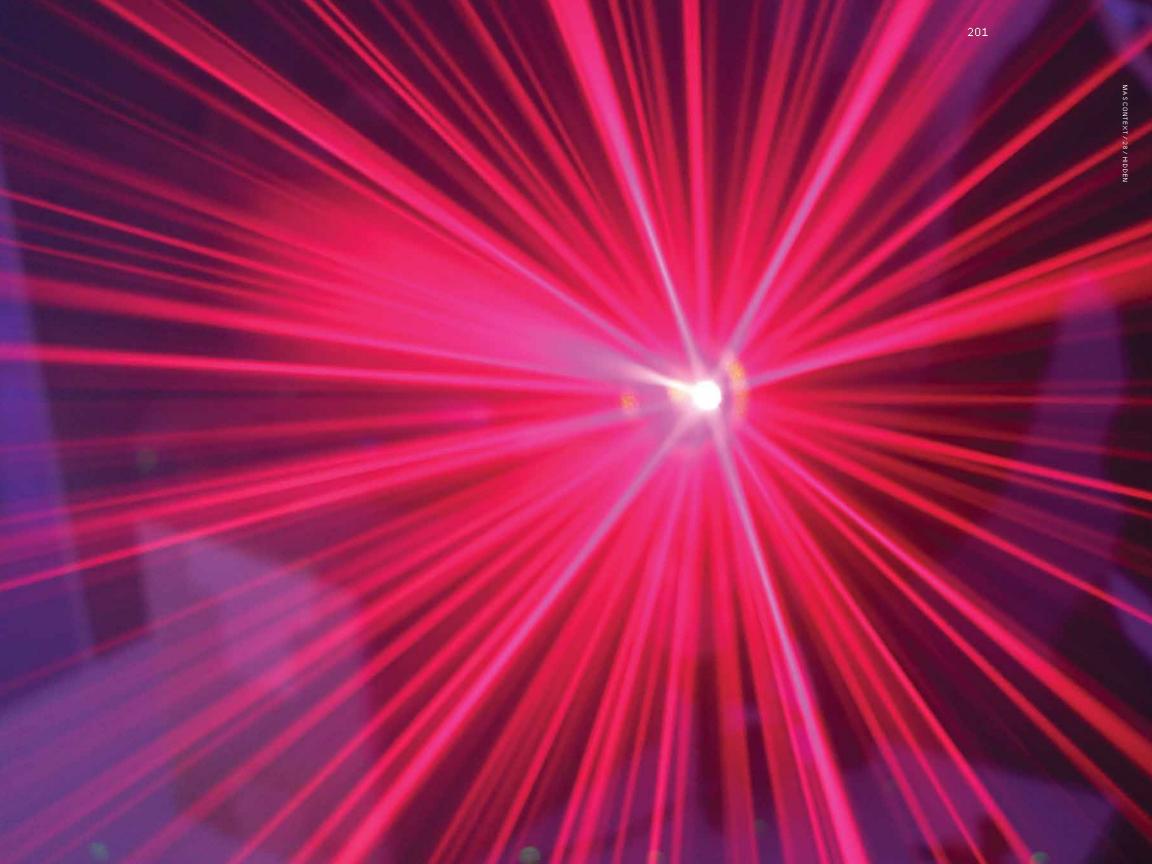
Demolished area near Gulou Dajie subway station, Beijing, Fall 2009 © Florence Twu

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7 modes of Counterespionage

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Abortions
Free Cleaning

Text by
Sumayya Vally
Sarah de Villiers
of *Counterspace*

Definition of *counterespionage* in English:

Noun. Activities designed to prevent or thwart spying by an opposition: *the Security Service has responsibility for counterespionage.*[2]

By its very contexture, Johannesburg is an amalgam of many spatial blind spots. Since its inception, the city has beguiled migrant communities from across the continent and beyond. Migrant populaces entering Johannesburg in the years of its beginning, from other parts of Southern Africa and across the borders, survived the metropolis by creating diasporic urban conglomerates around the city. These were territories arranged by culture, by new evanescent economies, by innate and endemic dexterities—codes to access spaces only legible to those who could perceive its respective lexicons. The peripheries thickened and multiplied, and became savvy at defending and entrenching their modes of city existence.

Because governance privileged only a minority demographic, the majority of urbanities that formed *were* these thickened peripheries—now expert at their own autonomies, which existed despite the formal city. But these many margins, in many senses hidden to those external to it, are what make up Johannesburg.

Many have thought of Johannesburg as elusive (Mbembe and Nuttall in particular theorized this in *The Elusive Metropolis*),[1] but the way that we read the city has more to do with understanding its assemblage of spatial languages than with its elusiveness. Some of these *hiddens* are hidden in plain sight, in broad daylight—they are here, if you care to read them.

For the most part, our profession situates itself within a small margin of the city, recognizing only what is superficially and conventionally understood as "architecture"; many are perpetuating a blindness to most of what the city offers to engage with. As spatial practitioners, we must become more fluent in comprehending our own context. Our realities are replete with clues for new stereoscopic possibilities—if only we start to engage with them. We do not situate our practice with having the luxury of choosing to not see the realities of our city. The "immaterial" is more material than the material. The city is there, if you know how to read it.

Which side are you on?

Which realm is the legitimate, the real?

What is rendered opaque, and from whom?

A great deal of Johannesburg's existences are made up too of counterexistences which work despite limitations and what is recognized as the nominal city—structures formed and designed for survival against economic and spatial deprivation, in the leftovers, slippages, and loopholes of the city, which we recognize *as* the city. Architects unravel the secrets of space through an all seeing plain of plan or section, both not actual perspectives by a person in space, but an all-seeing flattened view, equidistant from a slice in space. In a perspective, there is foreground and background—in section or plan, there is isolation in empirical space.

Imagine a spy, crouched above the city's streets, viewing the goings on through windows and alleys from a parapet up above. Now, turn your mind's eye toward the fugitive, running through the sewer tunnels in the bowels of the city, navigating through the hidden services that connect the individual properties above. The vision of these two is parable in a section, a vertical slice to forego the horizontal sprawls and runnings-on of the city. We feel Johannesburg is necessary to be unpacked through an archaeological section (fig 1)—from vantage points high above, to those below, to straddle the complexities and tensions that are spoken of, that run the city—following our eyes along the ventriloquist's strings that hang up the motions of everyday life. As Jameson observes, in the observance of a stratification of a city, it is possible to note the ability of layers to fold and collapse onto the next, hierarchically overruling, smothering and bearing, but also polluted or fertilized by their
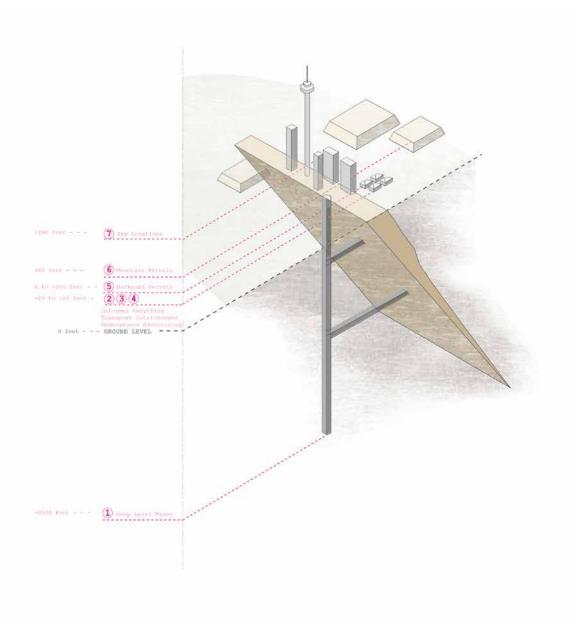
+200 feet - - - ⑦ Sky Locations

+65 feet - - - ⑥ Mountain Rituals
0 to +200 feet - - ⑤ Backyard Secrets
-20 to +10 feet - - ②③④
Informal Recycling
Transport Interchanges
Underground Advertising
0 feet - - - GROUND LEVEL - - - -

-6500 feet - - - ① Deep Level Mines

forebearers.[3] Unlike the vision of a city on plan, thus, the city's various layers lose autonomy on the drawing and do not remain separate and impenetrable bubbles of existence. These bubbles, in reality, are sliced diagonally by interjected modes of movement, from economical exchange, and by oppressive powers of the time.

Johannesburg's everyday life could be viewed in the most part as a city of practicality, its processes and industry pierced on its skin, metallically adorning its otherwise bare appearance. However, it is in and on this modernist mechanism that stories, life, and secrets are produced. Leach describes that "use never does anything but shelter meaning"[4]—alluding to the point that use or function—in Johannesburg's case certainly its mining industry—has an innate ability to shelter, protect, and in so doing, an ability to hide. These former structures of monument and memory—for example the grand mine dumps that have grown to embrace the city and identify it as its own made, familiar mountain range— are slowly being taken away, one brush, sweep, and bucket at a time. Since many processes are hidden, inherently they operate unannounced, almost somewhat antimonumental. Thus, one may argue, if one does pay a little respect in the wondrous feat these processes are silently, stealthily making in the dark overnight, one may return in the day to a new city, where all the locks have been changed. Through this archaeological approach, we aim to dissect the hidden processes, expose them for a split second in their existence, and offer a moment for celebration for the momentous, crucial processes that are adding and rebuilding, quietly and fantastically.

For the twenty-first century spy in Johannesburg, there are so many places to look and to hide when looking (hence counterespionage); the remnants of mine dumps the first agglomeration of secrets and remnants of lost treasures waiting to be exposed and reported.

1
Deep Level Mines (-6500 feet)

a. Zama Zama

Try your Luck!
"Next, Botes' team investigated the Zama Zama's methods of operation. The cleverest among them exploited the mining house's operations. When the legal miners detonated explosives at the end of their shifts, the dust was given four hours to settle before the next shift arrived to remove all the rocks containing gold.

The Zama Zamas covered their faces with wet cloths and accessed the blast site after two hours to remove the gold-bearing rock.

They ground, washed, separated, and burnt their loot in the tunnels. They used ingenious methods to smuggle the pure gold out of the mines, Botes says. Some filled condoms with gold and asked female miners to insert them in their vaginas when they went to the surface."[5]

Gold is the grand irony of Johannesburg.

Its lucky unearthing in 1886 galvanized the shaping of a sleepy stretch of leftover farmland into the continent's richest metropolis. But the gold that brought Johannesburg was also used as a device to deepen the race divide. Migrant and black labor forces were exploited in the mines, and the mass mountains of yellow earth excavated from the underground in search of were used to contain the areas that separated race groups during apartheid.

Today, large areas of the city are hollow underground, and most of the accessible gold is gone—leaving an extensive underground network of tunnels in its wake. Miners who scavenge on the leftover gold underground are known as "zama zamas" in South Africa (which translates to "try and try" or "try your luck!"). Their modus operandi is to enter the underground city, often paying exorbitant bribes to do so. Once the miners are in, they dwell underground for months at a time, "invisible citizens of an almost surreal, subterranean state."[6] The miners' skins become grey, their lungs become polluted—their very existence is a complete feat of persistence against the extreme conditions. Naturally, because the miners are persistently underground for months at a time, whole subterranean economies develop in response to their needs to survive, with prices getting steeper the deeper underground the miners are (fig. 2).

Botes's spies established the prices of food sold to the Zama Zamas: a loaf of white bread cost R80 [R8 surface price] when delivered to a shaft, a jar of peanut butter R150 [R20 surface price], a bottle of brandy R1,500 and a loose cigarette delivered underground was R10 [R1.10 surface price].[7]

The leftovers of the start-of-the city—a completely expansive set of tunnels, arguably taking up more volume than the city itself, is largely forgotten, and has eroded out of sight, shrouded by edifices, highways, and Highveld grasses. They have found new inhabitants, a group who is, at the very least, among the most vulnerable in the city—a reminder that the gold that built the city still allures desperation.
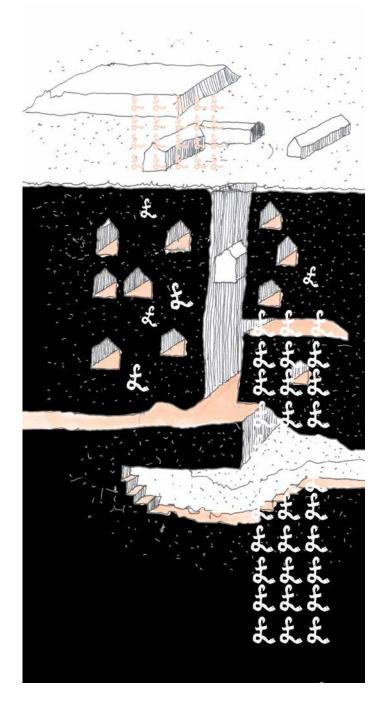
Figure 2- Zama Zamas, or illegal miners, participate in a subverted economy; where the price of commodities underground exponentially appreciate value, due to the adversity against their attainability. *Image by Sarah de Villiers.*

b. Disappearing houses/ sinking sand

"An early morning on Delagoa colliery in the Witbank area, a man goes in search of coal. The local community of KwaGuqa live near the abandoned mine. David Ndlovu, from KwaGuqa, is one of the many who have fallen victim to the abandoned mines in the area. In 1999, he was walking to work along one of the many footpaths, which criss-cross the mine when a sinkhole collapsed beneath him. As he sank into the ground, he was badly burned up to his waist by the coal, which has been burning underground since the mine was decommissioned in the 1950s." [8]

"Anna's breathing has been badly affected and she relies on medicated breathing apparatus to relieve the tension in her lungs. The family suffer with sinus problems and constantly take antihistamine pills to relieve the symptoms. Anna's grandson often wakes up with a bleeding nose and sleeps with a steam machine in his room to clean the air. Black dust is a constant problem. The value of the property has also drastically reduced. They had plans to build houses on the land. Soon after building commenced these plans were halted due to the foundations becoming saturated with acid mine drainage." (fig. 3). [9]

"The dolomitic situation is satanic," says Gauteng MEC for local government and housing, Humphrey Mmemezi. [10]
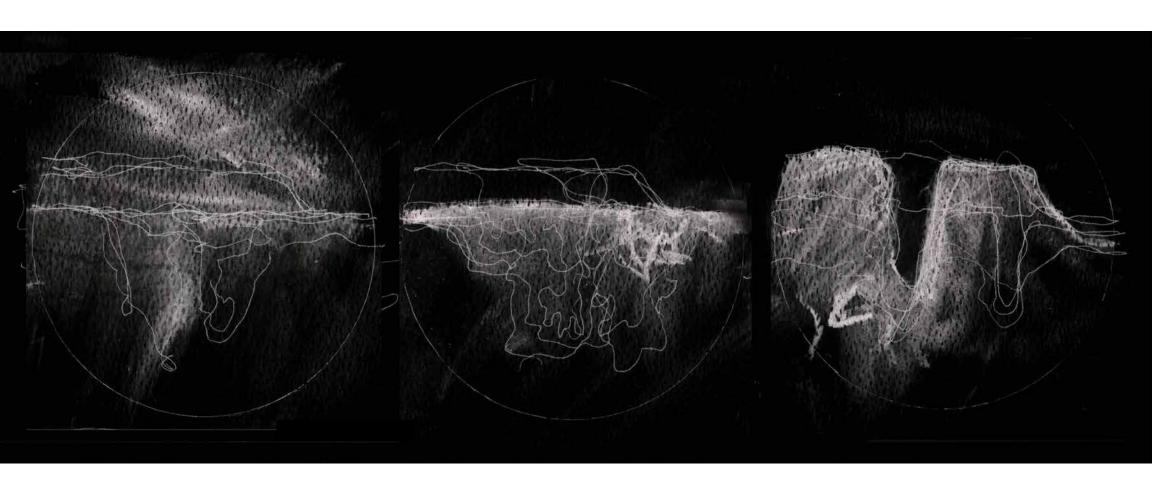
Figure 3- Ashes to ashes—dust to dust: Mining of coal may be lucrative to many, but for those who live close to its extraction suffer the burnt of sustaining the lives of others. *Image by Sarah de Villiers.*

Figure 4- According to one account, a massive sinkhole, caused by unstable ground from the deep level mine below; swallowed up a house—and no trace of the inhabitants were ever found because the hole was so deep. *Image by Sumayya Vally.*

"*[Residents don't realize] it comes during the night. . . . People can wake up and the section [of the township] is not there.*" (fig. 4).[11]

"*For instance, in the middle of the night on Aug. 3, 1964, a massive sinkhole swallowed a house in the mining village of Blyvooruitzicht, 50 miles west of Johannesburg. Six people were sleeping inside the home, and the hole was so deep that no trace of the family was ever recovered.*" (fig. 4).[12]
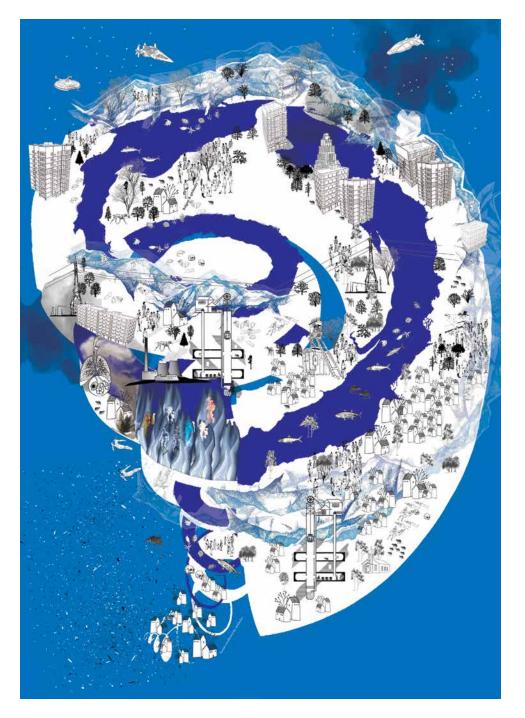
Figure 5- Time and Space Spiral- Similar to the Geological Time Spiral: developed by Joseph Graham, this image adopts the system of time-based progress to represent mutations of hidden creatures inhabiting an artificial landscape. *Image by Amina Kaskar.*

Meanwhile, across the gold mining belt, deserted mine shafts have filled with groundwater, which mingles with the metal sulfides in the rock, turning it an orange color and rendering it potently acidic. Rising up through the shafts, this so-called acid mine drainage (AMD) spills into rivers, streams, and groundwater, poisoning drinking water and threatening the Cradle of Humankind, the UNESCO World Heritage site that is home to some of the oldest known hominin fossils in the world." (fig. 5).[13]

These news media excerpts describing architectural abduction and invisible toxic forces would almost fit well into the pages of a science fiction novel. The aftereffects of toxic mining processes are becoming visible a century after the mining commenced. Many of the mines were left unmarked after their closure, and it is not uncommon for structures to be swallowed into the hollow earth. Brilliant colors from the toxic earth surfaces eventually—ground water becomes contaminated as it reaches the toxins in the ground and oxidizes as it makes contact with air. These colors are often an eerie reminder of the mining, sometimes surfacing in areas that were not recorded as formal mines. Much of this unstable, sinkhole area is inhabited by informal settlers—although much of the gold is long gone, its haunting still persecutes the poorest citizens of the city.
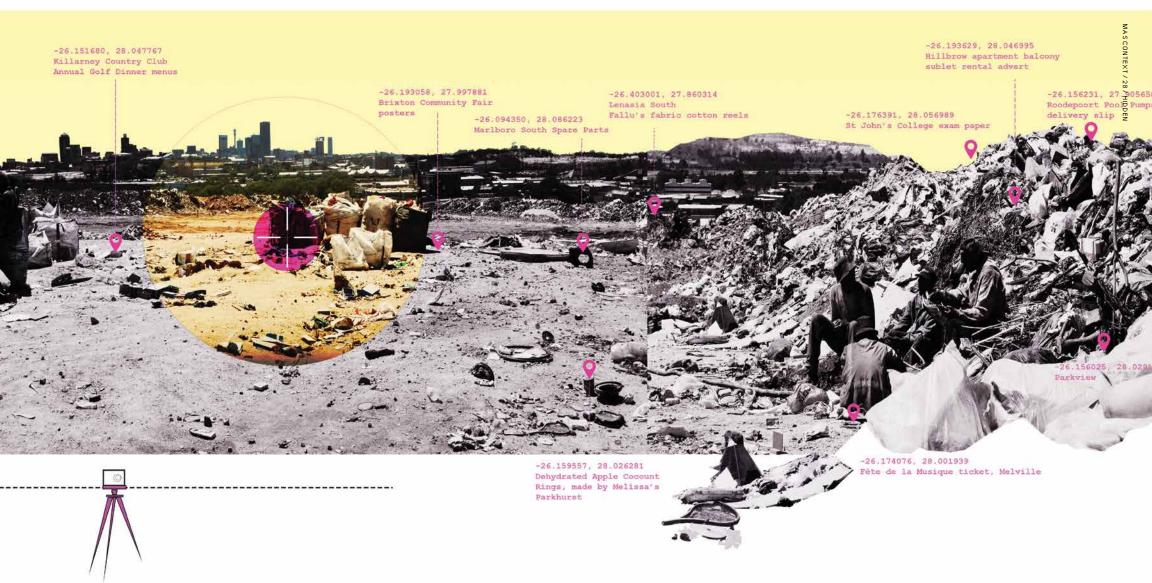
2
Informal Recyclers
(-20 to +20 feet)

Italo Calvino describes Beersheba as a city with two projections of it-self—one where it has a "celestial zenith"; a monument adorned with expen-sive, useless items, and its opposite, an inferno of thrown away, discard-ed waste; items no longer functioning.[14] Calvino remarks certain honesty in the latter, where in its abandon, is just itself, raw and unmiserly. We find a similar observance in the close followings of the informal recy-clers and their regenerated, Frankensteinian economies in Johannesburg. A spy may make the sludgy climb up to the summit of one of these waste-mountains, and find upon it all sorts of intriguing evidences and traces of the lives and secrets Johannesburg shelters. A discarded exam paper from St. Johns, a renowned boys high school in the city, strewn over used condoms or stripped wires. The tickets to educational and eventual finan-cial access, once seen, become information, their physical counterparts rendered useless, except for their material worth—R1.00 per kilogram of recycled paper. These waste dumps, therefore, become transient archives of all existence, completely democratic and equal to all types of useless-ness—it is all collected and piled up here the same, vulnerable to anyone who could, but probably won't, sift through it.(fig. 6)

What also remains intriguing is the striking sense for anonym-ity by some sects of Johannesburg recyclers. Many explain that due to the nature of their work, they would prefer to not risk being recognized by a family member in a photograph in the press, and so many make use of the various forms of masks they carry on their person when approached by an outsider (fig. 7).

Figure 6- Informal recyclers sorting gathered waste. *Photo by Michael Flanagan.*

MAS CONTEXT / 28 / HIDDEN

-26.151680, 28.047767
Killarney Country Club
Annual Golf Dinner menus

-26.193058, 27.997881
Brixton Community Fair
posters

-26.094350, 28.086223
Marlboro South Spare Parts

-26.403001, 27.860314
Lenasia South
Fallu's fabric cotton reels

-26.193629, 28.046995
Hillbrow apartment balcony
sublet rental advert

-26.176391, 28.056989
St John's College exam paper

-26.156231, 27.905655
Roodepoort Pool Pump
delivery slip

-26.156025, 28.029
Parkview

-26.159557, 28.026281
Dehydrated Apple Cocount
Rings, made by Melissa's
Parkhurst

-26.174076, 28.001939
Fête de la Musique ticket, Melville

Figure 7- A leveller- lifestyle archive of northern and southern suburbs and the inner city. *Photo by Sumayya Vally.*

3
Transport Interchanges.
(-20 to +20 feet)

Reading the Johannesburg's palms reveals secrets and futures fit only for the smoky rooms of the esoteric, or dark cinemas of science fiction. Perhaps the lines of its hands are the lines of recyclers emptying out the discarded truths of the suburbs on a weekly basis and collecting it on a mountain of democratic banality; or it may be studying the sluice gates of the lines themselves—the bustling transport nodes of Johannesburg for a surveillance of fugitives to its story, in flight across its surface, every day. A considerable amount of spatial practitioners in Johannesburg have been involved in the last two decades following democratic policy-making of infrastructural projects relating to taxi and bus nodes across the city, intended as enabling stepping stones for many of the far-flung to gain opportunity for entry into the city and to its daily economies. South African urban practitioners Dewar and Uytenbogaardt initiated ideals for public space-making in post-apartheid cities, one of which interestingly argues that "good public space" should provide environments that contain qualities of secrecy and complexity in order to be fully absorbed into a context which it sits, and provide opportunity for creative interpretation of space by its users.[15] Whatever Dewar and Uytenboogardt had in mind as meaning "good," secrecy does seem to be part-and-parcel of today's Johannesburg's major taxi ranks. Eddies of gambling (fig. 8), convening men, and porn DVD sales gather in the gloomier corners of thoroughfares in these spaces; often separate from any institutional structure or governing systems; but certainly there because they exist, because they bring a desirable clientele, and because they can be serviced or protected by the quotidian structures of bureaucracy should the need arise. These sometimes occur on overhanging balconies, or basements to the main transport spaces.
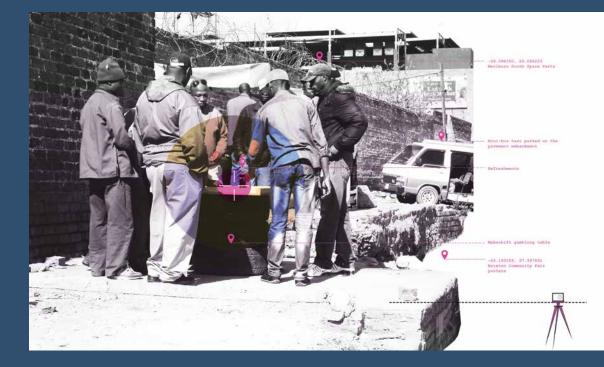

Figure 8- In a quiet, derelict back-alley behind a major taxi rank in Alexandra, Johannesburg (seen in the background), men gather around a drafts table to gamble. *Photo by Amina Kaskar.*

4

Underground Underground.
(-20 to +20 feet)

At eye level in and around the above-mentioned transport interchanges, Johannesburg streets are blazoned with an eye-height burgeoning tape of subliminal subtitles of dubious adverts for bodily endowment, reproductive remuneration, refound lost lovers, and immediate financial resurrection. Nutall discusses advertisements of Johannesburg as an uprooted projection of Johannesburg's "surface," indicative of the city's unfixedness of commodity.[16] Sure enough, these plastered adverts are ripped off overnight by some opposing, unseen forces of the night; only to be repapered a week later with refreshed adverts of new numbers and agents to call (fig. 9). These adverts become the only crystalized physical sediment of this world that remains of this eddying, elusive economy of many (often bogus) traditional healers and paid-for-magics. Certainly, in Johannesburg, a lot is hidden because it is concerned with the processes of forgetting, for replacing and hiding the recent unsavory pasts with commodities of the fresh and current—this is echoed in OMA, Koolhaas and Mau's observances of "hidden" where often a city's processes contain with it skill of invigorating ignorance of a demonstration, in the process of the demonstration itself.[17] The future of Johannesburg slips from the gold pan of any hopeful one who tries to sift it.

The Villages under the Highway

Beyond the equivocal underbelly of imitation supernatural, there are locations in the city with rich heritage of traditional healers, pockets of sanctuary and culture that exist in almost parallel spots of unlikely seclusion.

The islands between highway interchanges, abandoned buildings, and indeed many mine dumps in the city, are ritual spaces for many. Underneath an interchange of the M2 highway, in an abandoned old stable-yard, believed to be as old as Johannesburg, is one such place of retreat. An average day at the Mai Mai Market sees men and women carting trolleys laden with bovine heads, serving meat to hungry customers in their courtyard which functions much like an eating space in a village kraal. Beyond the courtyard are men and women selling medicines bearing ingredients from snakeskins, tree roots, and many unidentifiable constituents.

The space houses many cultural religious-affiliated activities, including prayer ceremonies and coffin making. Many of these spaces exist in such unlikely blind spots of space. Leftover, available pieces of land which carry with them a feeling of seclusion, left to transition into a state beyond what they are, these ruins sometimes become something of a paranormal wilderness, adopting new program and function through their newly grown spirit of *unuse*. It is interesting that most of these are man-made constructs, leftover pieces of unthought infrastructure, or sites of industrial waste; yet they are adopted and revered by their everyday protagonists as sites of catharsis and ritual. A pertinent and very prevalent use of the mine-waste dumps as ritual sites is described further up in the archaeological section.

5
Backyard /
Balcony secrets
(+0 to +200 feet)

Another unfolding, unexpected, hidden surface to Johannesburg's standard datum is that of the backyard addition, a common phenomenon in many of Johannesburg's proscribed Apartheid township properties, and to in recent decades in the high-rise apartment blocks of Hillbrow and Yeoville (figs. 10–11). What appears like one house or one apartment, in fact indoors or behind it, or on its balcony, has swelled to accommodate two or three extra households; mirroring the urgency for housing and business accommodation with the rapid growth of the city. Many hidden processes thus arise from this, for example the illegal sub-connection of power from the main connection to the squatting sub-spaces; as well as invented undeclared sub-renting economies to people from foreign countries or the urban poor. However, these sub-populations bring with them a whole set of resources unaccounted by the plain-site of the city; including goods and skills and presence in the city which adds to its vibrancy. Here, quite literally, fugitives of the state actually add to the street life and presence of the city, observing the processes, effectively acting as counter-espionage agents to the city's originally intended population.

Figure 10- A whole subvillage of shack-dwellings is visible in three consecutive backyards of Hillbrow, Johannesburg. *Photo by Sarah de Villiers.*

Figure 11- From a vantage view from Ponte City tower, many of the balconies in Yeoville and Hillbrow show the hidden lives of the dwellers inside- the often dense living quarters spilling outwards, so that the balconies serve as outdoor cupboards, laundries, and playgrounds; never visible from the street below. *Photo by Sarah de Villiers.*

6
Rituals on Man-made Mountain (+65 feet)

"The uniform of the John Masowe churches consists of white gowns for both men and women. They worship without shoes, belts, watches, and cell-phones on them as this is viewed as interfering with the descending of the Holy Spirit. The many different Masowe groups are mostly populated by Zimbabwean migrants although often times, other nationalities do come to seek help from the [priests].

A place of worship cannot simply be chosen out of the available land. The exact location needs to be revealed by the Holy Spirit through [priests]. After the Holy Spirit has revealed an appropriate place, the performance of sacralization rituals involves the marking and spiritual separation of the sacred from the profane land. There is a general belief among respondents that the bush us an abode of evil spirits that the groups need to get rid of. Usually the first step involves a night vigil to spiritually claim and take over the space from contrary spirits. As one member said, "If there is something wrong in this place we will definitely know through the spirit. We pray and sprinkle water around to cleanse the place."

—Peter Kankonde Bukasa, Lorena Nunez Carrasco, Melekias Zulu, Matthew Wilhem Solomon [18]

The mountains of incandescent mine waste are monumental (but eroding) in areas along the gold-reef—mass scale architectures when seen from the air in relation to the built form of the city.

But a zoom-in of the dust mountains reveals new networks of activities. Though these are man-made mountains, they have become entangled in natural processes. The highly toxic chemical saps seeping from below often surface as iron red and cobalt blue rivers. Grasses and foliage—some planted during the mining age to contain the dust, others planted more recently in attempts to remediate the soils—are sprawling and uninhibited. The mine dump's almost unearthly luminescent yellow structure is interrupted by smaller topographies of crevices and walls—slowly printed into a geology by an accelerated settling of the blasted rock with the poisonous by-products of the explosives. The invisible code for composing this landscape came from abrasive industrial processes decades ago—and their implications are still producing this landscape. Clues in the landscape are often testimony of toxic activity, even when the site is disguised or reconfigured from its prior use as a waste-dump site or an old mine.

Being on the mine dump often feels like being in a scene from a sci-fi film. Perhaps it is this otherworldliness and seclusion from the city that attracts ritual activity. The Masowe churches often use the mine dumps as sites of ritual sermon and ceremonial prayer (figs. 12–13).

An exercise in place making: The process of preparing the space for ritual prayer. [14]

1) *Chase former evil dwellers.*
2) *Remove dirt.*
3) *Dig a hole, place salt in it.*
4) *Add a sheep's tail to the hole if available. Sheep's tails act as good amulets against witchcraft.*
5) *Cover the hole with soil.*
6) *Draw a circle of hot ashes within the limit of the cleared space.*
7) *Have three priests gather around it with a bucket of water in the middle.*
8) *Mix coarse salt in the water.*
9) *Pray over the water, simultaneously sprinkling it around.*

Figure 12- A congregation of church-goers on the outlays of Vilage Mai Mine, south of Johannesburg. *Photo by Sumayya Vally.*

Figure 13- A group of white-clothed church-goers walk well-beaten path over the mine dump after leaving the ceremony. *Photo by Sumayya Vally.*
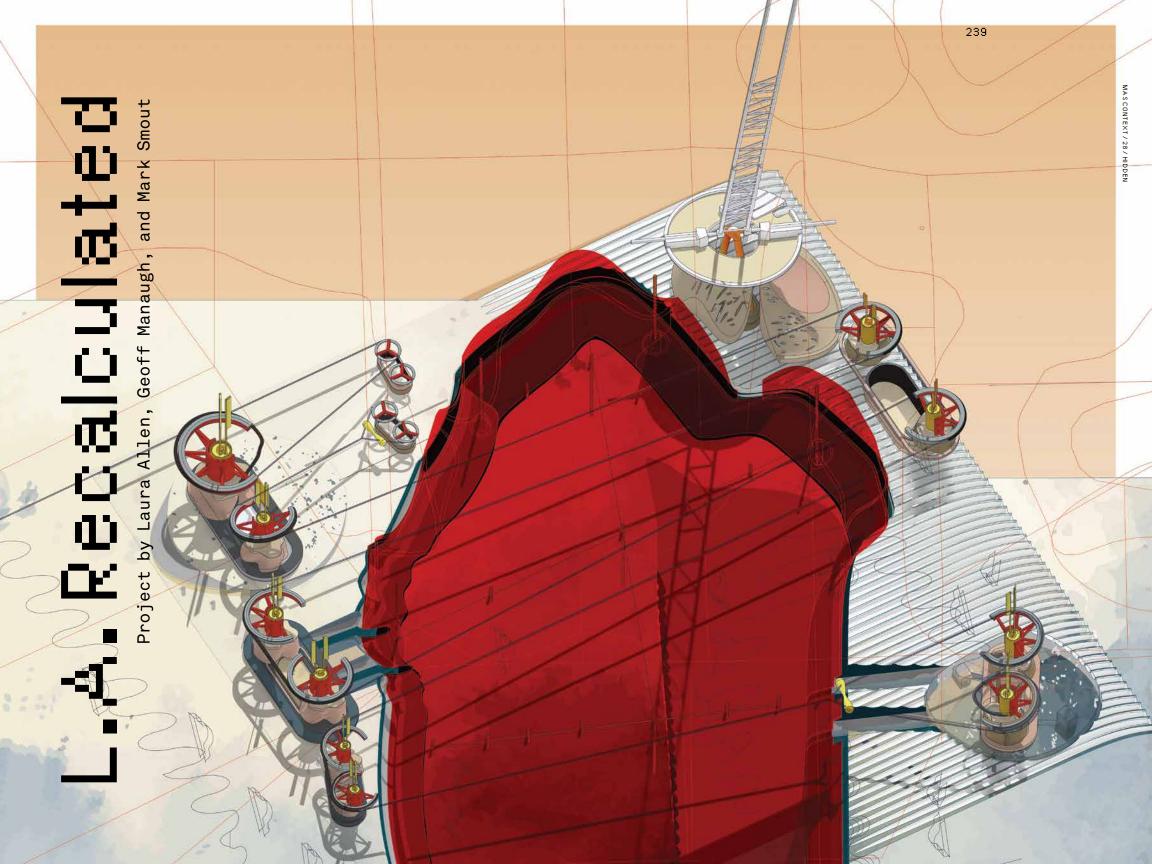
7
Sky Locations (+200 feet up)

All of the situations presented here are spatial in some way or another, and the subject matter of each asks us to engage with the city's spatial prompts in ways beyond the merely the conventional building. Each presents a group with unique ways of creating, negotiating and inhabiting space—more profoundly or with more complexity than is immediately apparent. The majority of our city does not dwell neatly boxed into the suburbs. For much of the city, these highly complex modes of negotiating the city are the everyday. Because we thrive off of its perplexities and ingenuities—but also, more importantly, if we are to truly serve our city—we must begin to understand these modes of counterespionage.

There are hundreds of codes to be read, and what we present are but a few introductions to some we have detected and been inspired by. X

Perhaps the most fascinating strata of Johannesburg inner city today is that of the uppermost—the innercity rooftop—an extruded surface, antithesis of the extracted volumes beneath the city, and an agglomerating symbol of its wealth. Elevated far above its natural datum, one may witness a myriad of strange and subversive apparitions of people and activities of building rooftops (fig. 14)—ironically one of the most private spaces of the city (although open to the skies above).

Historically, the rooftops of inner city Johannesburg hosted a multitude of poorer servant staff during the mid-twentieth century, superimposed onto the riches of the elite below it. As Malcomess and Kreutzfeldt describe, in 1952, it was alleged that 40,000 people lived in Locations in the Sky (Locations = local word at the time for black slum).[15] When the ruling party of the time tried to limit the growing amount of family members joining the already dwelling resident in the rooftop servants quarters, the removal of such was given friction by the white landlords and building associations below it. As Malcomess and Kreutzfeldt note.[19] It is ironic that these rooms possess the best views in the city, and places where freedom for loopholes in the Apartheid regime could be explored. Overtime, many of these locations have developed into sprawling communities and networks of cities in the sky, with the descendants of housekeepers moving into the space as well.

Even today, when viewed from a vantage point on the top floor of the Carlton Centre building, the tallest building in the city, many unexplained, third-space activities continue to be hosted by this spectral strata of the city; echoed in the observances by Mary Wafer who shows that these spaces often provide a sort of marginality, "in-between," a place that people can use and be accommodated, for however temporary.[20]

Thus, here, it would seem, the hidden spaces provided a sort of "breathing gap" for the short comings of the city; where its inner accommodations and services are inadequate, and require an unseen, bleed out space of the sometimes unsightly services of the building, or temporary nature of structures that may pop up there to accommodate people moving though the city.

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12. Godfrey, "Legacy of the Mine."

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19. Bettina Malcomess, Dorothee Kreutzfeldt, *Not No Place: Johannesburg. Fragments of Spaces and Times* (Johannesburg: Jacana Media, 2013).

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L.A. Recalculated

Project by Laura Allen, Geoff Manaugh, and Mark Smout

Los Angeles is a city where natural history, aerospace research, astronomical observation, and the planetary sciences hold outsized urban influence. From the risk of catastrophic earthquakes to the region's still-operational oil fields, from its long history of military aviation to its complex relationship with migratory wildlife, Los Angeles is not just a twenty-first-century megacity.

Its ecological fragility combined with a dangerous lack of terrestrial stability mean that Los Angeles requires continual monitoring and study: from its buried creeks to its mountain summits, L.A. has been ornamented with scientific equipment, crowned with electromagnetic antennae, and ringed with seismic stations, transforming Los Angeles into an urban-scale research facility, a living device inhabited by millions of people on the continent's westernmost edge.

L.A. Recalculated is a distributed cartographic drawing —part map, part plan, part deep section—that takes conceptual inspiration from the book *OneFiveFour* by Lebbeus Woods. There, Woods describes a hypothetical city shaped by the existential threat of mysterious seismic events surging through the ground below. In order to understand how this unstable ground might undermine the metropolis, the city has augmented itself on nearly every surface, with "oscilloscopes, refractors, seismometers, interferometers, and other, as yet unknown instruments," Woods writes, "measuring light, movement, force, change."
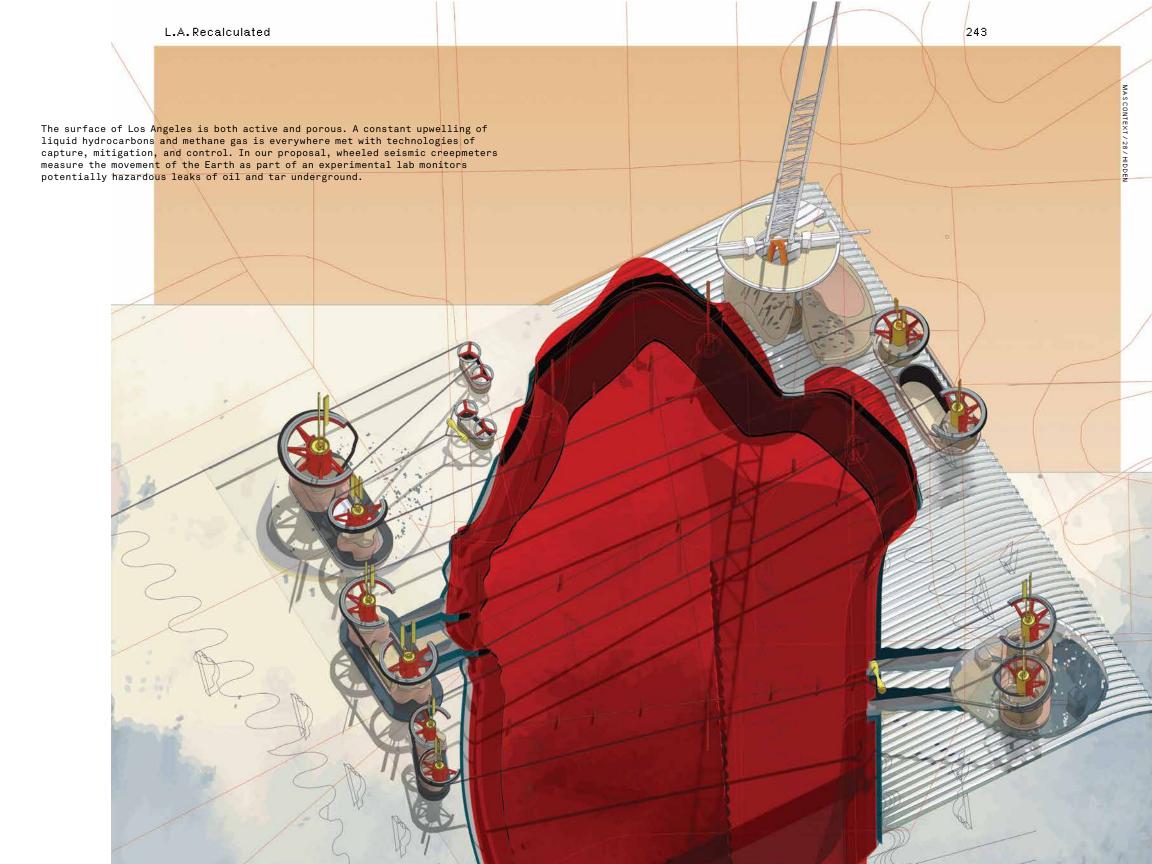
In this city of instruments—this city as instrument —"tools for extending perceptivity to all scales of nature are built spontaneously, playfully, experiment-ally, continuously modified in home laboratories, in laboratories that are homes," exploring the moving surface of an Earth in flux. Architecture becomes a means for giving shape to these existential investigations.
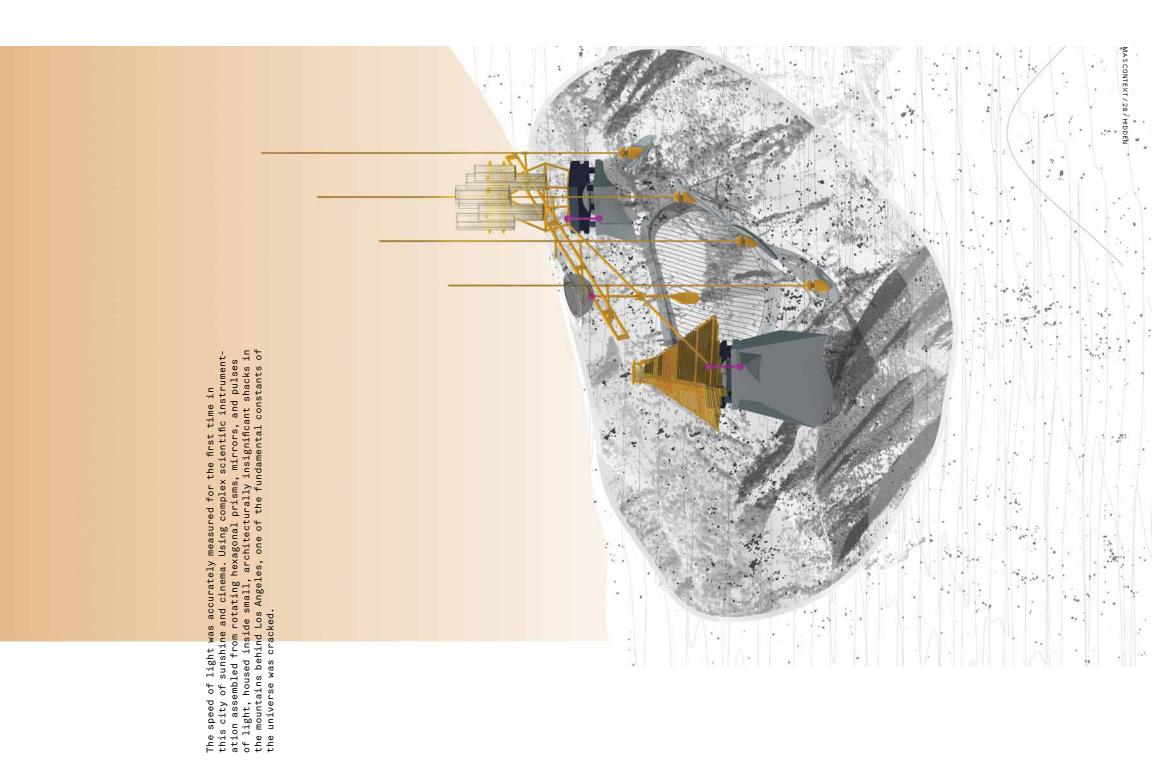
Twenty-first-century Los Angeles has inadvertently fulfilled Woods's speculative vision. It is less a city, in some ways, than it is a matrix of seismic equipment and geological survey tools used for locating, mapping, and mitigating the effects of tectonic faults. This permanent flux and lack of anchorage makes Los Angeles *bathymetric,* we suggest, rather than terrestrial, oceanic rather than grounded.
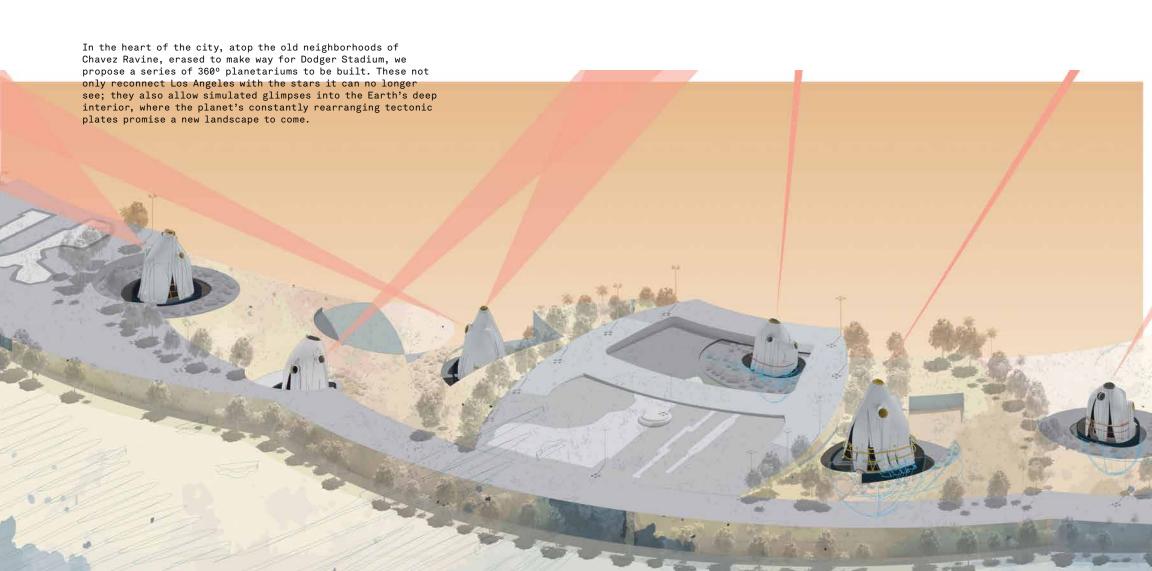
L.A. is also a graveyard of dead rocket yards and remnant physics experiments that once measured and established the speed of light using prisms, mirrors, and interferometers in the San Gabriel Mountains (an experiment now marked by historic plaques and concrete obelisks). Further, Los Angeles hosts both the Griffith and Mt. Wilson Observatories through which the region achieved an often overlooked but vital role in the history of global astronomy.

Seen through the lens of this expanded context, Los Angeles becomes an archipelago of scientific instruments often realized at the scale of urban infrastructure: densely inhabited, with one eye on the stars, sliding out of alignment with itself, and jostled from below with seismic tides.

The surface of Los Angeles is both active and porous. A constant upwelling of liquid hydrocarbons and methane gas is everywhere met with technologies of capture, mitigation, and control. In our proposal, wheeled seismic creepmeters measure the movement of the Earth as part of an experimental lab monitors potentially hazardous leaks of oil and tar underground.

The speed of light was accurately measured for the first time in this city of sunshine and cinema. Using complex scientific instrumentation assembled from rotating hexagonal prisms, mirrors, and pulses of light, housed inside small, architecturally insignificant shacks in the mountains behind Los Angeles, one of the fundamental constants of the universe was cracked.

In the heart of the city, atop the old neighborhoods of
Chavez Ravine, erased to make way for Dodger Stadium, we
propose a series of 360º planetariums to be built. These not
only reconnect Los Angeles with the stars it can no longer
see; they also allow simulated glimpses into the Earth's deep
interior, where the planet's constantly rearranging tectonic
plates promise a new landscape to come.

As the city changes—its demography variable, its landscape forever on the move—so, too, do the constellations high above. These shifting heavens allow for an always-new celestial backdrop to take hold and influence the city. A complex architectural zodiac is developed to give context for these emerging astral patterns.

Seismic counterweights have long been used to help stabilize skyscrapers in an earthquake zone, usually found at the tops of towers, these dead weights sway back and forth during temblors like vast and silent bells. Here, a field of subterranean pendulums has been affixed beneath the city to sway—and counter-sway—with every quake, a kind of seismic anti-doomsday clock protecting the city from destruction.

All of the oil, tar, and liquid asphalt seeping up through the surface of the city can be captured. In this image, slow fountains attuned to these percolating ground fluids gather and mix the deeper chemistry of Los Angeles in special pools and reservoirs.

The endless jostling of the city, whether due
to tectonic activity or to L.A.'s relentless cycles
of demolition and construction, can be tapped as
a new source of renewable energy. Vast flywheels
convert seismic disturbance into future power,
spinning beneath generation facilities built
throughout the city's sprawl.

Through sites such as Griffith Observatory and the telescopes of Mt. Wilson, the history of Los Angeles is intimately connected to the rise of modern astronomy. The city's widely maligned landscape of freeways and parking lots has been narratively reinvigorated through the installation of gates, frames, and other architectural horizon lines, aligning the city with solstices, stars, and future constellations. ✕

ARCHIPELAGOS OF DETRITUS

THE NEED FOR A THEORY ON SPATIAL WASTE

Essay by
Sergio Lopez-Pineiro

We are already familiar with the waste that urbanization brings along and leaves behind: closed mines and dried lakes, unfinished urban developments and urban voids, polluted land and landfills. All these spaces constitute residues of several different processes of urbanization. Although still requiring more, most of these spaces have received some attention from architects, engineers, landscape architects, and urbanists via theoretical and practical frameworks for rethinking, reusing, and reimagining them.[1]

In this text I focus on another type of waste, a spatial typology that as a whole has not received as much attention: spatial waste, literally, or what I call archipelagos of detritus. With this term I refer to the scraps of space that emerge in our space-hungry civilization every time we create, colonize, or inhabit space—of any type and in any medium.[2] These mostly uninhabited spaces are holes within the continuously patterned environment and they tend to emerge in one of the following four ways:

1

As imprecisions. Some scraps of space emerge as a consequence of the imprecise, inefficient, and anomalous implementation of urbanization. For example, gaps (mostly uninhabitable small and thin slivers of land) appear due to a surveyor's error or a mistake in a deed description.

2

As obsoletes. These residues can also appear via the spatial obsolescence that results from functional changes. For example, white space (unused frequencies of the radio spectrum) appears due to technological shifts in broadcasting technologies.

3

As separators. We inhabit by spacing and separating: our social spaces require gaps between things. For example, setbacks in-between buildings, planters separating cars from pedestrians, crawl spaces under houses, even the space under our beds. As by-products of territorial proxemics, these interstices become waste mostly due to their small impractical sizes.

4

As excretes. In the process of opening up space, our construction techniques require transferring material, in many cases literally spouting it as waste through different types of machinery. Spoil islands or snow mounds are two examples of by-products that emerge as a consequence of the creation of spaces needed for the built environment (canals, parking lots).

These residual spaces must always be referred to in plural, as they are neither singular nor unique instances within the capitalist environment. Rather, they systematically emerge as sets of multiples, defining archipelagos of disconnected, leftover patches of space. They happen by accident and on purpose: they are both flotsam and jetsam.[3] Archipelagos of detritus are a permanent fixture of our territorial development: they have a pervasive and by now almost natural and irremediable presence. Despite their existence, they tend to remain hidden as residues of the productive tissue we call urbanized landscapes. Only in certain moments do they gain visibility and are rediscovered, giving insight into our modes of inhabitation, leading to new spatial appropriations or becoming sources of the desired (i.e.: ecology, beauty, public space) and refuges of the unwanted (i.e.: weeds, vagrants, ugliness).

Biology has long understood that humans produce waste through excretion due to our biological functions and as the means for promoting homeostasis and achieving successful internal stability.[4] However, we are still in need of a theory that explains how humans produce spatial waste due to our functions of inhabitation and as the means for achieving successful spatial stability. Through ethnographic and spatial analysis, this theory would explain why we do not seem to be able to inhabit without producing scraps and residues of space: archipelagos of detritus happen, initially originating from the development of our methods for inhabiting the world but now perpetually fueled by industrialization and modernization.

There are not many precedents for a theory of this kind. Lars Lerup's text "Stim & Dross: Rethinking the Metropolis" could be a useful—and maybe the only—precedent for such theory. He uses the terms stim and dross to respectively refer to "points of stimulation" (i.e.: inhabitable space) and to "the ignored, undervalued, unfortunate economic residues of the metropolitan machine."[5] Together, these two substances constitute what he calls the "holey plane," the surface of the urbanized landscape that is filled with holes as "fissures, vacated spaces, and bits of untouched prairie": "Patently unloved yet naturalistic, this *holey plane* seems more a wilderness than the datum of a man-made city. Dotted by trees and criss-crossed by wo-men/vehicles/roads, it is a surface dominated by a peculiar sense of on-going struggle: the struggle of economics against nature. Both the trees and machines of this plane emerge as the (trail or) *dross* of that struggle."[6] Alan Berger's understanding of the holey plane is a precise portrayal of the power, uniqueness, and unprecedented aspect of Lerup's work: "It reconceptualizes the city as a living, massive, dynamic system, or a huge ecological envelope of systematically productive and wasteful landscapes."[7] In this seminal text, Lerup richly describes the existing tension between these two substances and ends the article with the following statement: "The inadequacy of the binary opposition of Stim & Dross is becoming evident (the legacy of our stale language and its profound grammatical limitations). Only in the hybrid field of *stimdross* may we begin to rethink and then to recover from this *holey plane* some of the many potential futures."[8] At the urban scale, then, stimdross could be considered a useful precedent for a theory that would explain why we are unable of inhabiting without producing spatial residues.

In this text I have collected some of the scraps of space that systematically and inevitably surface as by-products from our daily construction and occupation of space. The following archipelagos have been included in this inventory: highway interchanges, spoil islands, micro plots, snow mounds, white spaces, crawl spaces, and disk fragments. They have been listed in order of size, from large to small, with typical sizes ranging from 100 acres (typical footprint of a standard four-leg all-directional highway interchange) to 0.00006 sq. millimeters (the physical space typically occupied by 4 KB, the smallest size of a data fragment in Windows 7). Due to the different methods of documentation that are required by each of these sets of spaces, each of these archipelagos is catalogued through a specific atlas and examples of these have been referenced in the text. The purpose of this text is not to criticize these remains. In many ways they cannot be criticized, similarly to how we cannot criticize skin flakes, crumbs, or fallen leaves. As it happens with these residues, we can only observe these detritus and categorize them as symptoms of some underlying condition.

Due to the prevalence of these remnants, this inventory could be as long as a list of our everyday spaces. For this reason, this collection is obviously incomplete and could be continued. The scraps I have selected show, however, a breadth of sizes and contexts, evidencing that this waste production is an inherent quality of our skills—or lack thereof—for colonizing space: regardless of the space we are designing or occupying, we will produce some type of spatial residue. Despite its incompleteness, this collection is an ethnographic cross-section of our industrialized means of spatial inhabitation.

The land enclosed and locked in by highway interchanges generally becomes a dead zone disconnected from its surroundings. Despite the fact that the overall square footage of these dead zones can be very large, these patches of land do not even appear to have a proper name—probably due to their perception as scraps. These inaccessible patches of land include a variety of spaces and objects required by transportation safety protocols such as, for example, gores (area between the highway and an entrance or exit ramp generally defined by two wide solid white lines guiding traffic entering or exiting the highway), gore noses (tip of the gore usually incorporates retroreflective flexible signaling posts and impact attenuators), safety zones, or vehicle recovery areas. But, they also include large extensions of terrain cut off from the surroundings by the highways' sinuous layouts. Safety sight lines and setbacks as well as demands for maintenance-free grounds generally prevent much from happening in these spaces—including, in most cases, vegetation taller than two feet.
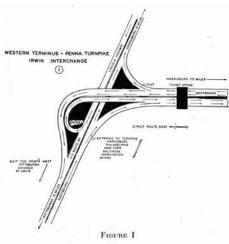
Built during the 1930s as part of the Public Works Administration and opened on October 1, 1940, the Pennsylvania Turnpike was the first long-distance limited-access highway in the United States, "an unbroken ribbon of concrete cutting through mountains and across valleys, bypassing towns. No stop signs, no intersections, no speed limits."[9] Despite it being the first highway of its kind, its designers seem to have been already aware of the unavoidable detritus this transportation network was about to produce as it can be concluded by the pochéd drawings of the turnpike interchanges that illustrated one of the first publications distributed to the public.
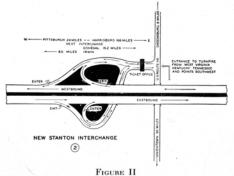
These spaces, which are seen daily by millions of people throughout the world, appear for the most part to be hidden from our visual field. Only in some rare cases do these dead zones gain visibility as when they are landscaped in particular ways or when they include a sculpture or another form of art installation. In some exceptional situations, when it has been possible to reconnect these patches of land to their surroundings, these dead zones have been reclaimed as urban parks, such as Barcelona's Nus de la Trinitat designed by Batlle i Roig.

Atlas: Pennsylvania Turnpike Commission, *The Pennsylvania Turnpike*[10]
Typical sizes: 1–100 acres[11]
Spatial type: Separators

HIGHWAY INTERCHANGES

FIGURE I
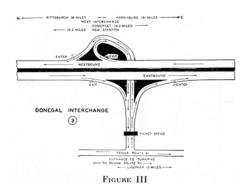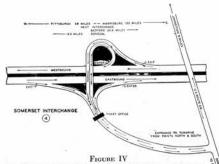
This Interchange makes a direct connection with U. S. Route No. 30 (Lincoln Highway). Traffic to and from the Turnpike for points of destination are shown above by the directional arrows. The ticket office at the western terminus is located directly across the Turnpike proper on 6 traffic lanes. All other ticket offices, except at Carlisle Interchange, are located off the Turnpike on spur lanes provided for entrance and exit.

FIGURE II

This Interchange, being located on the heavily traveled U. S. No. 119, will serve to expedite traffic east and west across Pennsylvania from southwest to the east and vice-versa. Note ticket office is off the Turnpike proper. Follow directional arrows for correct guidance.

FIGURE III

This Interchange being located in a mountainous region and in the heart of a vacation-land serves as a direct connection to the nationally known town of Ligonier twelve miles north of this point. The annual Rolling Rock Horse Show is held in this community.

FIGURE IV

Somerset Interchange is located north and adjacent to the town and will serve as a direct connection to north-south traffic traveling on U. S. Route No. 219. Directional arrows point out destinations and mileage from this Interchange.
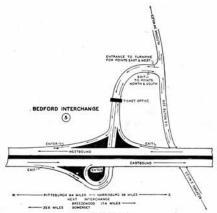
FIGURE V

The above Interchange is located at the mid-point between Harrisburg and Pittsburgh. It makes a direct connection to the heavily traveled U. S. Route No. 220 for north-south traffic and is only two miles north of the nationally known resort town of Bedford. (Considerable traffic will flow from the south through Bedford to this Interchange for east-west destinations.)
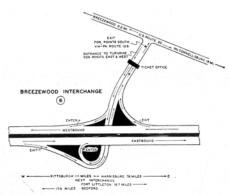
FIGURE VI

The above Interchange is conveniently located with a direct connection to the Lincoln Highway—U. S. Route No. 30. It will absorb and discharge a considerable volume of traffic using Pa. Route No. 126, which leads directly south into Maryland and Virginia, as well as from the normal flow of traffic on the Lincoln Highway proper.

FIGURE IX

Blue Mountain Interchange is located two miles east of the Blue Mountain tunnel, making a direct connection with Pennsylvania Route No. 944, for points south by way of the Shenandoah Valley, and traffic from other routes such as the Lincoln Highway passing through Chambersburg, which is only fourteen miles south of this Interchange.
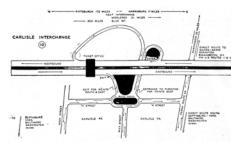
FIGURE X

This Interchange is located north and adjacent to the historic town of Carlisle which in reality is the gateway to the west for traffic from all points east, as shown above. The 4-lane ticket office is located directly across the Turnpike proper, as is the ticket office at Irwin. Traffic desiring to proceed westward from this Interchange will follow the directional arrows as noted.

FIGURE VII

The above traffic facility located near Ft. Littleton on U. S. Route No. 522 will serve a north-south influx of traffic desiring direct connections with east-west destinations. It is anticipated that considerable hauling of coal from the famous Broad Top Coal Fields will use this Interchange for east-west distribution.

FIGURE VIII

The Willow Hill Interchange is provided to serve several connecting valleys throughout this area, which, during various seasons of the year receives a great amount of tourist travel on Pennsylvania Route No. 75.

FIGURE XI

The present eastern terminus of the Pennsylvania Turnpike is located at Middlesex, just two miles beyond the Carlisle Interchange, making a direct connection with U. S. Route No. 11 for points north and east, as shown. No ticket booth was provided for this Interchange due to its close proximity to Carlisle. When the Turnpike is extended to Philadelphia this Interchange may be eliminated. The foresight and discretion shown by the Commission in its planning will prove economical.

Diagrams describing the 11 Pennsylvania Turnpike interchanges as built by the Pennsylvania Turnpike Commission. *Pennsylvania Turnpike Commission, Pennsylvania Turnpike,* **10-15.**

Spoil islands are artificial islands that appear in waterways as by-products of the material accumulation resulting from channel construction and dredging. For example, the Atlantic Intracoastal Waterway in Florida was created in the late 1950s. The spoil resulting from dredging was used to create 137 spoil islands spread across four counties (Indian River, Brevard, St. Lucie, and Martin). Depending on the accessibility, ecological value, and historical human use, the islands are designated in three main categories that dictate their accessibility and use: conservation, education, and recreation.[12]

In *Spoil Island: Reading the Makeshift Archipelago,* Charlie Hailey has precisely described the duplicitous nature of spoil islands as a spatial remnant full of potential to be rediscovered: "Spoil islands are overlooked places that combine dirt with paradise, waste-land with "brave new world," and wildness with human intervention. Seemingly mundane by-products of dredging, these islands are the unavoidable residue of technological process. At the same time, they are readily adapted for other, often unintended, functions and demonstrate the potential value and contested revaluation of landscapes of waste."[13] He aptly calls them "topographic blind spots."
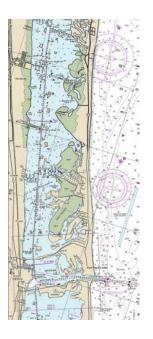
Atlas: Charlie Hailey, *Spoil Island*
Typical sizes: 10,000–800,000 sq. feet[14]
Spatial type: Excretes

SPOIL ISLANDS

Spoil islands in Florida's Indian River as recorded by the Spoil Island Project: Brevard County (left), Indian River County (center), and St. Lucie County (right). "Indian River Lagoon Aquatic Preserves Spoil Island Project," Spoil Island Project, accessed January 5, 2016, http://www.spoilislandproject.org/indian-river-county-spoil-islands/

Fragments of NOAA (National Oceanic and Atmospheric Administration) nautical chart number 11472 showing the Intracoastal Waterway and the spoil islands spread along its side in the areas of the Indian River south of Indialantic (left), around the Sebastian Inlet (center), and north of Fort Pierce Inlet (right).

In large parking lots, like those placed next to shopping malls or transportation hubs, accumulated snow is not plowed all the way to the edge. Due to practical concerns resulting from long plowing distances, in these cases snow is plowed into sizeable mounds located in the middle of the parking lot. In their efforts to open up parking space, these everyday maintenance practices—practices with no artistic or design ambitions and only focused on practical concerns—produce peculiar landscapes, clearly visible in the middle of these highly frequented parking lots. Despite the fact that these large mounds of snow are generally seen as leftover space or something unwanted, these snowed-in parking lots can also be seen as beautiful, unintended, accidental landscapes defined by usually overlooked piles of snow.

Atlas: Sergio Lopez-Pineiro, "White Space"[15]
Typical sizes: 10–8,000 sq. feet[16]
Spatial type: Excretes

SNOW MOUNDS

Parking lot in Buffalo as recorded by the author in "White Space." Courtesy of the author.
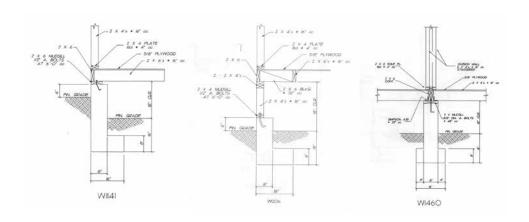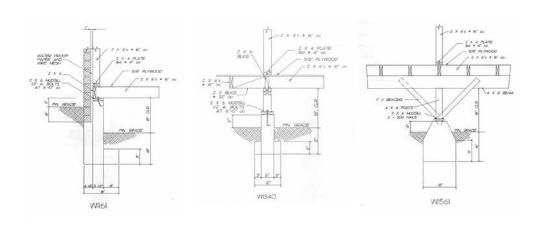
There are three kinds of building foundations for single-family homes: a slab on grade (shallow foundation), a basement, and a crawl space. Shallow foundations use the ground as formwork for the foundation slab. In these cases, no spacing exists between the ground and the inhabitable space as concrete is poured directly onto the ground— slab on grade. Basements are inhabitable spaces located below grade. Generally, their flooring is also built in direct contact with the ground—no spacing exists between the basement's floor and the ground. Crawl spaces, however, are a different type of foundation: in this case, the first level of the home is separated from the ground, leaving an un- inhabitable space (crawl space) in-between the ground and the floor. These spaces are generally no taller than 18 inches and, while relatively common, they do not have a good reputation: "Many building experts recommend against crawl spaces because they have the water problems of a basement with almost none of the storage space, at much higher cost than a slab."[17]

In some cases, however, the introduction of this interstice can be necessary and beneficial, as in sites located in Special Flood Hazard Areas (SFHAs) above the Base Flood Elevation (BFE) as categorized by FEMA (Federal Emergency Management Agency). In these cases, the crawl space can protect the inhabitable space and, consequently, it is the elevation of the crawl space in relation to the exterior grade that determines the insurance premiums to be paid by home owners: "Crawlspaces should be constructed so that the floor of the crawlspace is at or above the lowest grade adjacent to the building. Buildings that have below-grade crawlspaces will have higher flood insurance premiums than buildings that have the interior elevation of the crawlspace at or above the lowest adjacent exterior grade."[18]

Atlas: Morton Newman, *Standard Handbook of Structural Details for Building Construction*[19]
Typical sizes: 830–1,328 sq. feet[20]
Spatial type: Separators

CRAWL SPACES

Several examples of possible building assemblies for the construction of wooden foundations that include a crawl space (with a clearance of 18 inches) as drawn by Morton Newman in *Standard Handbook of Structural Details for Building Construction*. Newman, *Structural Details*, 11-67.
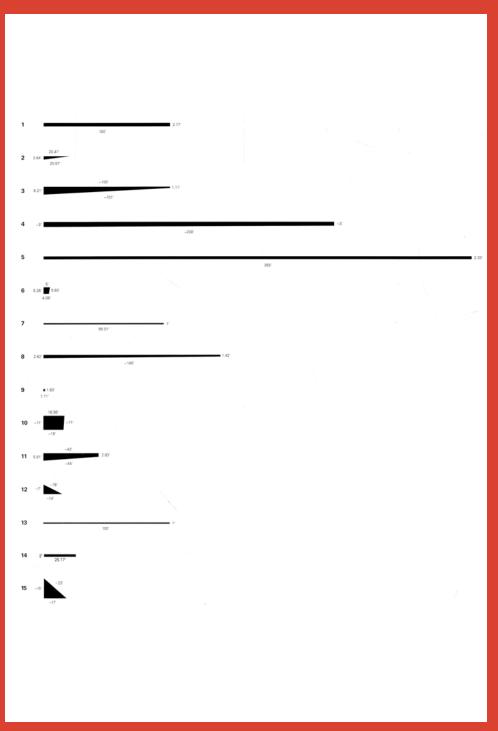
Surveying errors or mistakes in deed descriptions can produce gaps and overlaps between tracts of land. "Overlaps and gaps may be found when surveying or locating defects found in titles. The term hiatus, compound hiatus, confusion, point of confusion, area of confusion, and gore are used to express overlaps, gaps, and indefinite ownership areas between adjoiners."[21] A hiatus is a gap or unaccounted area, "usually a strip of land between two tracts where the two tracts do not adjoin because of faulty descriptions."[22] Similar to a hiatus, a gore is "a sliver of land usually of triangular shape between two tracts, resulting from failure of land descriptions to adjoin."[23] Opposite to a gap, "an overlap is an extension of a written title over and beyond another written title."[24] Overlaps and gaps (gores and hiatus) usually remain hidden, undiscovered by the inhabitants of the surrounding lots. Only when new survey maps are drawn do these spaces arise.

In 1973, the architect-trained artist Gordon Matta-Clark purchased fifteen lots in New York City. These lots, probably gaps he called microparcels due to their extremely small size, constituted his art piece "Fake Estates," a commentary on land ownership: "What I basically wanted to do was designate spaces that wouldn't be seen and certainly not occupied." He was interested in "something that can be owned but never experienced."[25]

Some gores, however, can be very large and even be populated by a handful of residents as attested by the few that can be found in Maine, New Hampshire, and Vermont. Moxie Gore in Somerset County, for example, is almost 12,000 acres and has seven registered residents.[26]

Atlas: Gordon Matta-Clark, "Fake Estates"[27]
Typical sizes: 2–827 sq. feet [28]
Spatial type: Imprecisions
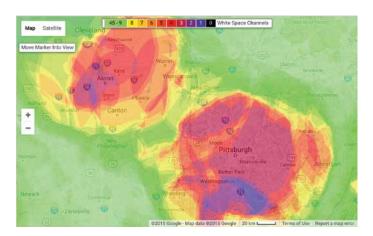
Drawing to scale of all 15 lots purchased by Gordon Matta-Clark as part of his work "Fake Estates." Kastner, Najafi, and Richard, *Odd Lots*, 2.

MICRO PLOTS
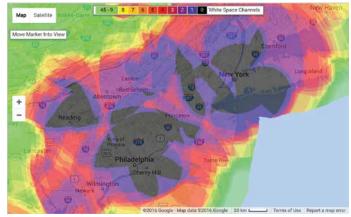
White space refers to the frequencies of the radio spectrum that have been dedicated to broadcasting services but remain locally unused. White space is necessary for technical reasons—as a safety zone to avoid interferences between different broadcasts—but they also appear due to technical obsolescence—a switch from one broadcasting technology to another one that uses less spectrum causes the emergence of white space. As scrap of radio spectrum, the nature of this newly emerged space is always uncertain and in question: does it need to be recommercialized via auctions or can it become publicly accessible and free to use?
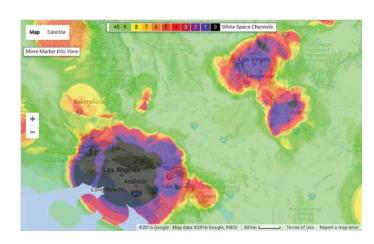
For example, the switch from analog to digital television has enabled the emergence of white space. In the US, in particular, most of the white space emerging from this switchover was located in the 700 MHz range. Following a series of public discussions, political lobbies, and lawsuits regarding the need for public open access to the newly freed airwave space, the 700 MHz band was finally auctioned by the Federal Communications Commission (FCC) in the Auction 73 that took place in 2008 and collected a little over $19 billion.[29] Google, who was one of the main advocates arguing for the newly freed airways to gain open access to the public, has continued its efforts to open up other bands and they have recently reported interest in the white space located in the 3.5 GHz range.[30]

Atlas: Google, "Spectrum Database"[31]
Typical sizes: 700–50 MHz (42.9–600 cm wavelength)[32]
Spatial type: Separators, Obsoletes

WHITE SPACES

White space channels available in the areas between Cleveland and Pittsburgh (left), New York and Philadelphia (center), and Las Vegas and Los Angeles (right). Map data by Google Spectrum Database.
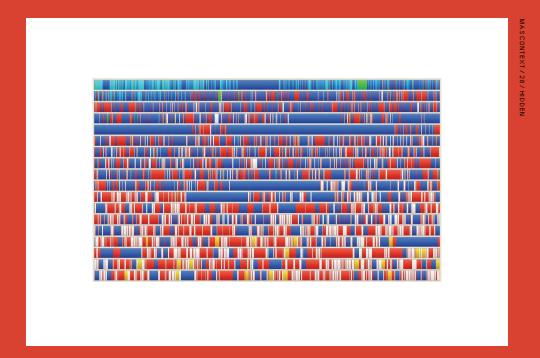
In computer hard drives, disk fragmentation happens over time as files are modified and deleted. The changes made to a file are often stored in a disk location different than the original file. Due to continuous use, data fragments end up in positions that are not immediately adjacent to one another, leaving small slots of unused storage space in-between them. From a practical point of view, these slots of storage space are in many cases also unusable due to their small size. These disk fragments can only be retrieved by defragmenting the drive with disk defragmenter software and consolidating all empty fragments into a sizable and usable slot of storage space.

Atlas: Any disk defragmenter software such as, for example, Microsoft Windows Disk Defragmenter, Diskeeper, AVG Disk Defrag, or UltimateDefrag.
Typical sizes: 4 KB–64 MB (0.00006–1.075 sq. millimeters)[33]
Spatial type: Imprecisions, Obsoletes
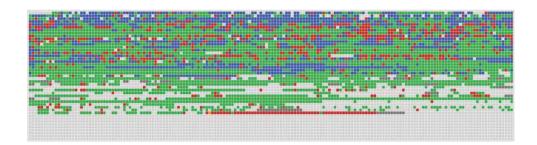
DISK FRAGMENTS

Typical layouts of fragmented data in a computer hard drive as recorded by Diskeeper (G1), AVG Disk Defrag (G2), or UltimateDefrag (G3): in all cases the white spaces indicate unused slots of disk space. Figure G1: Courtesy of Diskeeper. Figure G2: Courtesy of AVG Disk Defrag. Figure G3: Courtesy of UltimateDefrag.

ACKNOWLEDGEMENTS

[1] Several authors have dedicated multiple efforts to this venture. For example, see: Alan Berger, *Drosscape: Wasting Land in Urban America* (New York: Princeton Architectural Press, 2006).

[2] There are multiple similarities between these spaces and the ones that Lars Lerup calls dross. However, there are also several differences between these two terms (dross and archipelagos of detritus). It would require a lengthier text to properly address them but, in summary, dross seems to exist only at the urban scale and it is a continuous and exclusively physical substance while archipelagos of detritus are disconnected patches of space that exist in any medium and at any scale. See: Lars Lerup, "Stim & Dross: Rethinking the Metropolis," *Assemblage* 25 (1994): 82-101.

[3] "Flotsam and jetsam are terms that describe two types of marine debris associated with vessels. Flotsam is defined as debris in the water that was not deliberately thrown overboard, often as a result from a shipwreck or accident. Jetsam describes debris that was deliberately thrown overboard by a crew of a ship in distress, most often to lighten the ship's load." See: "What are flotsam and jetsam?" National Oceanic and Atmospheric Administration, accessed January 12, 2016, http://www.oceanservice.noaa.gov/facts/flotsam-jetsam.html.

[4] *Encyclopaedia Britannica Online*, s.v. "Excretion," accessed January 10, 2016, http://www.britannica.com/science/excretion#toc58676.

[5] Lerup, "Stim & Dross," 93.

[6] Ibid., 88.

[7] Berger, *Drosscape*, 37.

[8] Lerup, "Stim & Dross," 99.

[9] "America's First Superhighway," PA Turnpike, accessed January 5, 2016, http://www.paturnpike.com/yourTurnpike/ptc_75th_Anniversary.aspx.

[10] Pennsylvania Turnpike Commission, *The Pennsylvania Turnpike* (December 1940). 16-page booklet printed by the Pennsylvania Turnpike Commission presumably for public information.

[11] Typical sizes for these patches of land vary wildly depending on the type of highway interchange being considered. According to the number of roads connected as well as the layouts used, the Federal Highway Administration classifies interchanges as following: diamond, full cloverleaf, partial cloverleaf, trumpet, three-leg directional, four-leg all-directional, semi-directional, single entrances and/or exits (partial interchange), single point interchange (SPI), and other (i.e.: double crossover diamond, displaced left turn, diverging diamond). See: "Interchange Type," US Department of Transportation Federal Highway Administration, accessed January 6, 2016, http://www.safety.fhwa.dot.gov/tools/data_tools/mirereport/182.cfm.

[12] "History," Spoil Island Project, accessed January 9, 2016, http://www.spoilislandproject.org/about-us/.

[13] Charlie Hailey, *Spoil Island: Reading the Makeshift Archipelago* (Lanham: Lexington Books, 2013), 1.

[14] Typical sizes have been estimated from the map "Indian River Lagoon Aquatic Preserves Spoil Island Project," Spoil Island Project, accessed January 8, 2016, http://www.spoilislandproject.org/indian-river-county-spoil-islands/.

[15] Sergio Lopez-Pineiro, "White Space," *Places Journal* (November 2009), accessed January 6, 2016, http://www.placesjournal.org/article/white-space/.

[16] Snow mounds' footprints were estimated by the author when shooting "White Space."

[17] "Crawl Spaces," Green Building Advisor, accessed January 13, 2016, http://www.greenbuildingadvisor.com/green-basics/crawl-spaces.

[18] "Crawlspace," FEMA, accessed January 13, 2016, http://www.fema.gov/crawlspace.

[19] Morton Newman, *Standard Handbook of Structural Details for Building Construction* (New York: McGraw-Hill, 1993).

[20] These figures represent the average footprint of all new single-family homes built in the United States during the period 1973–2014. These sizes have been estimated based on the data available from the Census Bureau. "Characteristics of New Single-Family Houses Completed: Square Feet," United States Census Bureau, accessed January 13, 2016, http://www.census.gov/construction/chars/pdf/squarefeet.pdf.

[21] Walter G. Robillard, Donald A. Wilson, and Curtis M. Brown, *Evidence and Procedures for Boundary Location* (Hoboken, NJ: John Wiley & Sons, 2011), 336.

[22] American Land Title Association, "Glossary," accessed January 8, 2016, http://www.alta.org/consumer/ltiglossary1.pdf.

[23] Ibid.

[24] Robillard, Wilson, and Brown, *Evidence and Procedures*, 337.

[25] Pamela M. Lee and Gordon Matta-Clark, *Object to Be Destroyed: The Work of Gordon Matta-Clark* (Cambridge, MA: MIT Press, 2000), 103.

[26] Emily A. Schroeder, "Who lives in Misery Gore," *Bangor Daily News*, August 23, 2015, accessed January 9, 2016, http://www.bangordailynews.com/2015/08/23/news/state/who-lives-in-misery-gore/.

[27] Gordon Matta-Clark passed away before he could complete his work on "Fake Estates." To date, the most complete account of this incomplete art piece can be found in Jeffrey Kastner, Sina Najafi, and Frances Richard, eds., *Odd Lots: Revisiting Gordon Matta-Clark's "Fake Estates"* (New York: Cabinet Books, in conjunction with the Queens Museum of Art and White Columns, 2005).

[28] Based on the information collected in Kastner, Najafi, and Richard, *Odd Lots*, 2.

[29] "Auction 73: 700 MHz Band," Federal Communications Commission (FCC), accessed January 6, 2016, http://www.wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=73.

[30] Drew Fitzgerald, "Google Wants to Make Wireless Airwaves Less Exclusive, Cheaper," *The Wall Street Journal*, March 3, 2015, accessed January 6, 2016, http://www.wsj.com/articles/google-wants-to-make-wireless-airwaves-less-exclusive-cheaper-1425423763.

[31] "Spectrum Database," Google, accessed January 6, 2016, http://www.google.com/get/spectrumdatabase/channel/.

[32] These wavelengths are typical unused television frequencies that emerge due to the implementation of new digital television broadcasting technologies. As mentioned, in the US most of the white space emerging from this switchover was located in the 700 MHz range.

[33] These sizes have been calculated assuming a typical storage density of 300 Gb/sq. inch for a hard drive run by Microsoft Windows 7 set up with default defragmenting settings.

Exposed Urbanity

Project by Emily Louise Allen and Leandro Couto de Almeida

In the urban context, emptiness is seen as the absence of value. Those with a political or capital stake in urban decisions embrace the articulation of planned, predictable future scenarios. However, because these leftover lands operate outside of the confines of the neoliberal city structure, they harbor social and ecological potential that does not—and cannot—exist elsewhere. This proposal asserts and embraces the hidden value of these spaces and subtracts, scrapes, and excavates from the ground plane as a mechanism for revealing aspects of the site and the violence of urbanization processes.

Urban designs that embraces the potential embedded within abandoned sites must reject the contemporary narrative of "improvement," relinquish this position of power, and instead aim to establish conditions for a fuller urbanism to reveal itself.[1] Cultivating the growth of these latent social and ecological potentials requires the intentional construction of space without an identity, upon which any multitude of interpretations may be projected. The erasure of excess of design, composition, or representation on the production of cities and landscapes offers an opportunity to a more democratic and honest urbanity, without the concerns of formality and completion of architects and designers.[2]
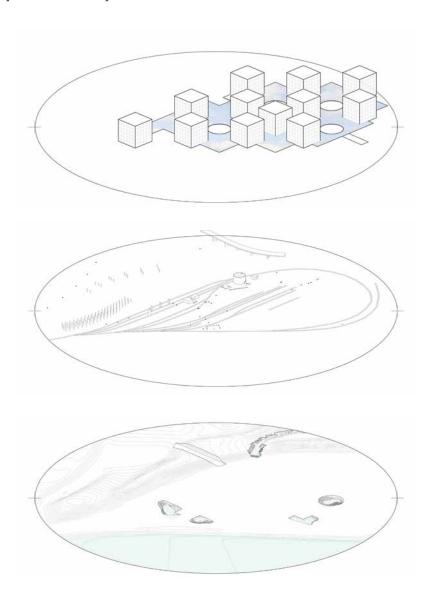
Urbanism is an inherently violent proposition.[3] The rigidity of highly designed, overly controlled urban spaces inhibit individual desires and social spontaneity, and cannot adapt to the messiness of open-ended systems. This disruption of social and ecological possibilities deprives us of discoveries and surprises and impedes novel futures.

Urban development hides its brutality through a shiny, sophisticated veneer—one so far removed from the reality of development processes that any connection between the two is nearly invisible. Through subtraction, excavation, and scraping, the proposed scheme exposes raw earth—the primary ground condition of urban development. These earthmoving methodologies are strategically intermixed within the proposal's polished surfaces to highlight the tension between urbanism's two paradigms.X

PROJECT BACKGROUND
This proposal was developed for the third semester core landscape architecture studio at the Harvard Graduate School of Design, with the instruction of Sergio Lopez-Pineiro.

[1] James Corner, "Landscaping," in *Stalking Detroit*, ed. Georgia Daskalakis, Charles Waldheim, and Jason Young (Barcelona: Actar, 2001), 124.
[2] Ibid., 124-125.
[3] From the founding of Rome to contemporary redevelopment, cities are both a product and producer of violence. See Niccolò Machiavelli, *The Discourses*, ed. Bernard Crick, trans. Leslie J. Walker, S.J. (London: Penguin Classics, 2003), 131-134.

Exploded Systems Axonometric

Site Additions – Axonometric of proposed platform and typical plan buildings. The new design additions will be elevated from the existing surface level to create a higher level of contrast between the superimposed urbanism and the various ground condition treatments.

Existing Site – Axonometric of existing site conditions and infrastructures. Because the spatial relationship between buildings and voids is mediated by a modular system, existing systems can be dismantled or preserved as needed.
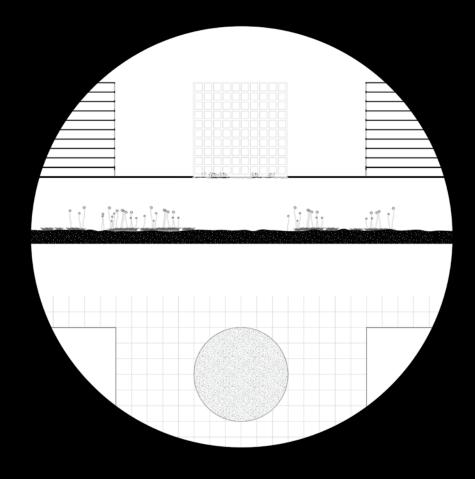
Site Excavations – Axonometric showing areas of the site to be excavated. By digging down to the water table, the excavations reveal the hydrological systems lost to reclamation, and create a network of runoff infiltration for the new development.
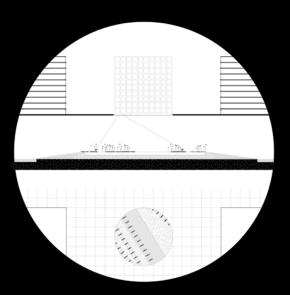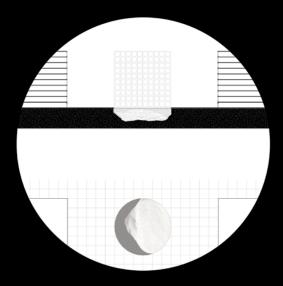
Detail Sections: Void Ground Treatment Strategies

The three void treatment strategies each reveal different layers of history, unseen value, and new potentials on the site.
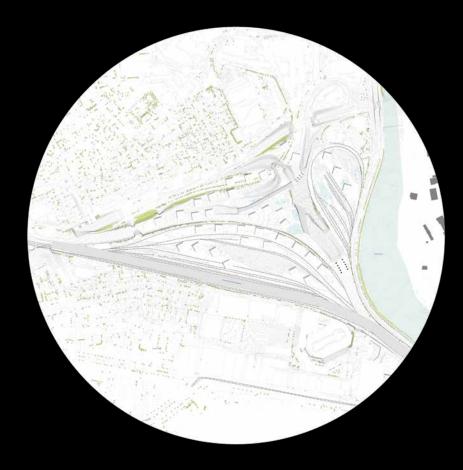

Ground Strategy 2: Scraping – Scraping the land—clearing and removing only the surface-level systems—exposes the earth to create new possibilities for spontaneous colonization and indeterminate social futures.
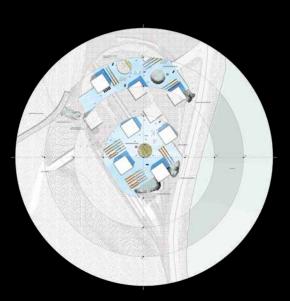

Ground Strategy 1: Preservation of Existing – Preserving existing ground conditions acknowledges the value of the current landscape in fostering spontaneous systems.

Ground Strategy 3: Excavation – Excavation is the counterpoint to historical land reclamation, recreating space for the ecological systems that have been lost to urbanization.
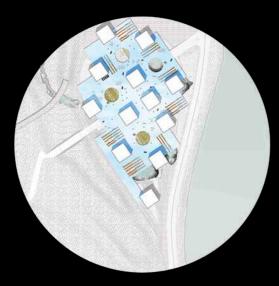
Plans
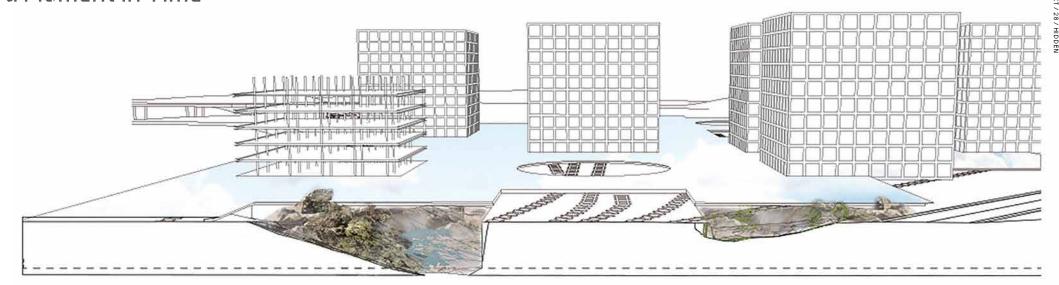
Plan 2: Site Plan Over Time – Deploying the strategy over a smaller area of the site, this plan explores the temporal relationship between the existing conditions, the planned future, and the construction phase between the two.
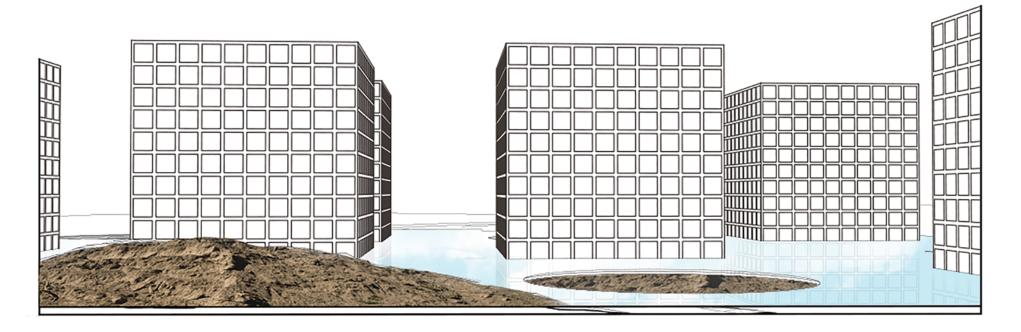
Plan 1: Landscape Systems – This plan is an early diagrammatic study that approaches how our urban design methodology might be deployed across the entire 60-acre site.

Plan 3: Site Plan as a moment in time

Vignettes / Site Perspectives
as a Moment in Time

Addition/Rawness

Excavation/Spontaneity

Conceptual Collages
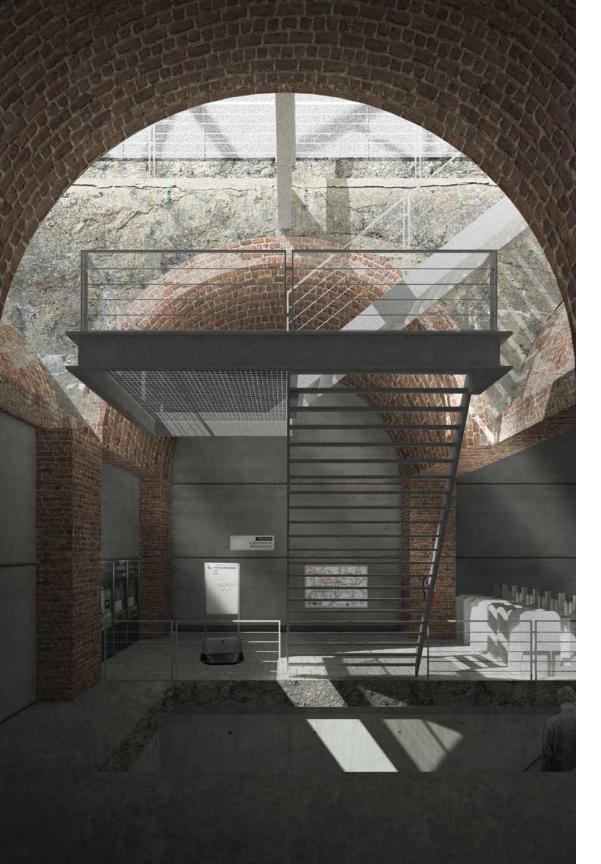
As a group, the conceptual collages express the three primary design goals of the site proposal.

Vastness - Conceptual collage highlighting the site's relationship to the greater Boston context through viewshed analysis.

Rawness - Conceptual collage showing unpredictable futures.

Spontaneity - Conceptual collage showing the potential for spontaneity on the site.

RECONCILING INFRASTRUCTURAL ARTIFACTS
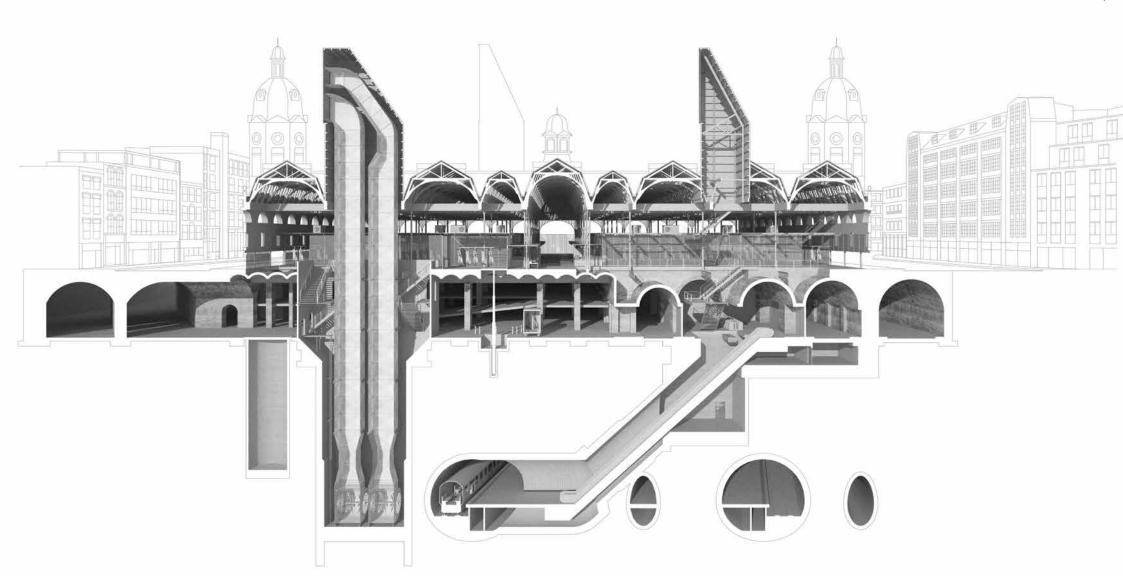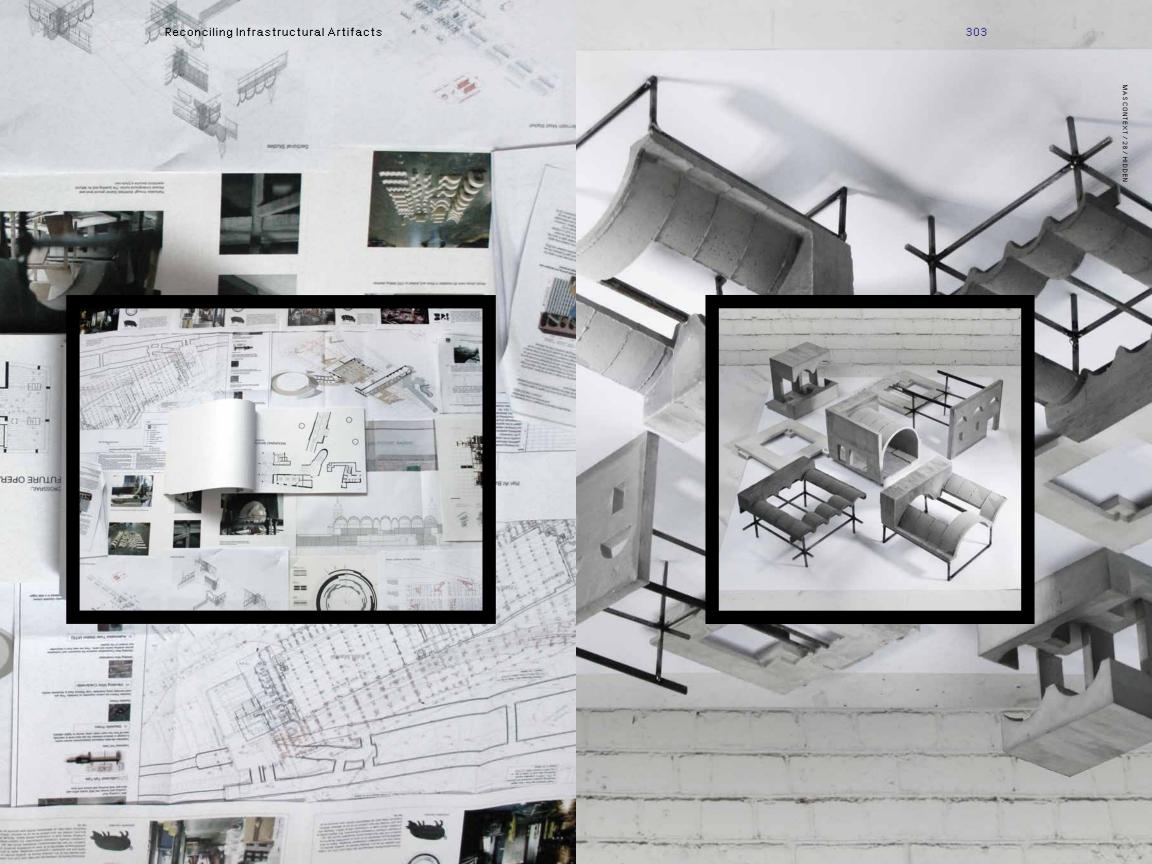
Is it possible that redundant operative form is able to define future infrastructure?

The testing grounds are the mutually exclusive operational fields of Smithfield Meat Market (1868) and Farringdon Crossrail Station (2017) in London. The latter is projected to pass twenty-seven meters below the market building. As the operations of the meatpacking shrink because of demand, its obsolete infrastructural elements are revealed through a process of dismantling, cutting, and underpinning. The strategy is to puncture the horizontality of the Market with the verticality of the Crossrail, and to negotiate material and operational aspects into new form by reutilizing what is able to gather and transmit. The reconciliation in question is part Meat Market, part Crossrail, and it immediately calls into question known conventions of both operative forms. X
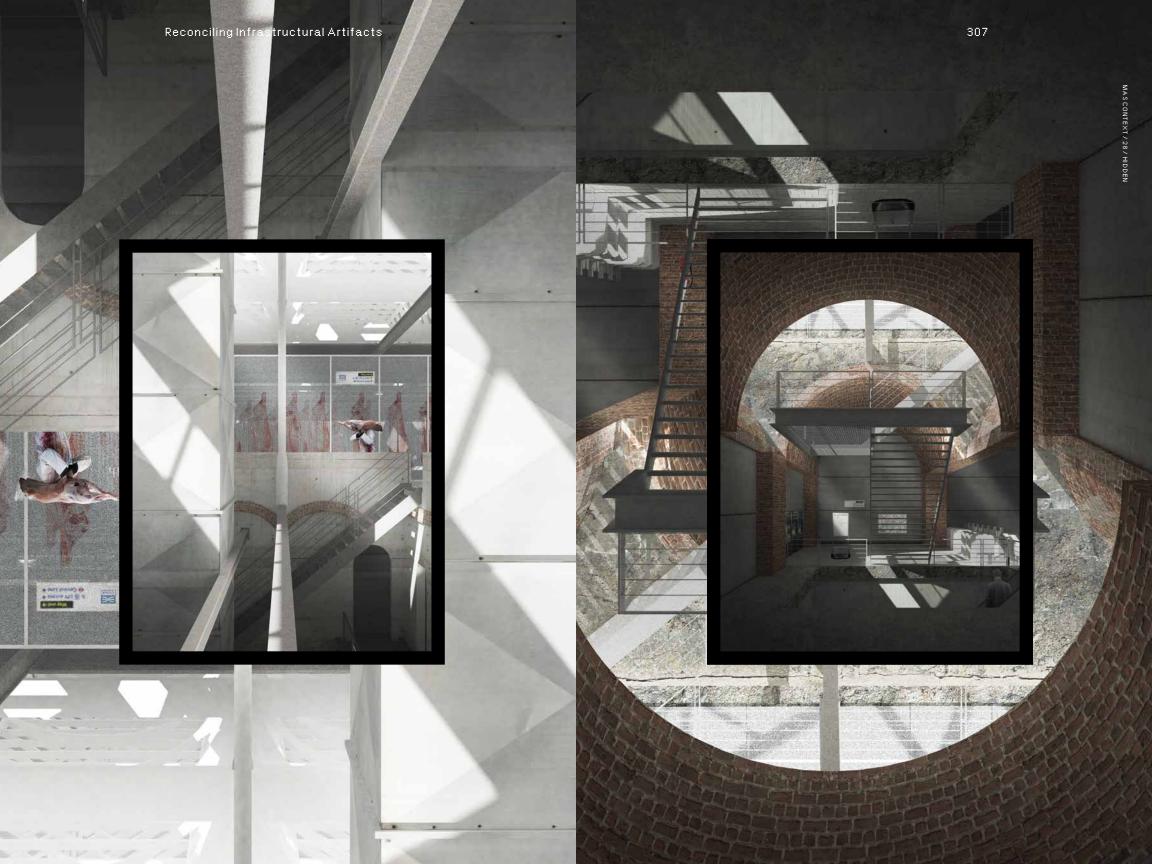
Project by Roberto Boettger

Requiem for the Hidden

Essay by John Stirratt

I couldn't figure out why I couldn't get a grasp on Monty Python's *Matching Tie and Handkerchief* Side 2, a hand-me-down. I loved the skit "Minister for Overseas Development" in which Terry Jones and Michael Palin are old ladies talking to an adult professional John Cleese like he's a baby. When I put the needle down on vinyl, it would sometimes be there, but other times there was an entirely different performance. I was probably too young to understand the mechanics behind the idea of the double-grooved record, but that's what it was, Side 2 mastered with two concentric grooves that played different recordings depending on where you dropped the needle. That it was this irreverent group that joined in what was already a rich culture of vinyl mastering trickery is understandable, but backmasking, run-off grooves, and run-off groove messages reflected the times of the 60s and 70s and the medium. These were ways for artists to create intrigue, to speak to their fans obliquely. Though with backmasking, or backwards

recording, it was sometimes accidental; the backwards-playing human voice was easily misread. And it was usually associated with the ominous, beginning with "Paul is Dead" from "Revolution 9," to the Judas Priest fan suicide trial. Run-off grooves and run-off groove messages were other anomalies of the era, mysterious, recorded snippets appearing at the end of a side, between the end of the groove and the label, sometimes with associated messages etched into that part of the vinyl. The etchings in this "dead wax" zone were often as mysterious. If you looked at every side of The Clash's double album *London Calling*, you would get one word per side, telling you to Side 1: *Tear* Side 2: *Down* Side 3: *The* Side 4: *Walls*. Surely the most chilling message had to be Joy Division's *Still* LP, with the words "The Chicken Stops Here," referring to the final scene in the Werner Herzog film *Stroszek*, which shows a dancing chicken in an arcade as the protagonist ends his life offscreen—the movie singer Ian Curtis watched just before committing suicide.

It shouldn't come as a surprise Beatles started this practice, with the ghost track "Can You Take Me Back" on Side 4 of *The White Album*, to "Her Majesty," a track omitted from Side 2 of *Abbey Road* and randomly tacked onto the end of the master by a young assistant. Instead of firing him, the band liked it, included it on the pressing, and the hidden track as we know it was born.

The idea of art within art has been around forever—artists from Michelangelo to Pollack have left messages in their work. Subliminal messages in film have always been a thing, from Stanley Kubrick's *2001* reference in *A Clockwork Orange* record store scene, to Alfred Hitchcock's sneaky cameo in *Lifeboat*. You could say artists use whatever methods inside or outside the medium to create allegory, but more importantly, they're playful and precocious people who like to have fun with whatever tools they have available.

For bands, it was the introduction of the CD that created whole new set of opportunities for the artist, giving a whole new bag of tricks to use on your

The idea of art within art has been around forever

more obsessive/attentive audience. The pregap, (or track 0) unearthed a track by pressing the back button immediately after play at the start of a CD. I remember a college DJ conspiratorially showing me this trick on Nine Inch Nails album *The Fragile*. But it was the conventional, twenty seconds after the end of the record-type track that had its heyday in the 90s. In the late 80s and 90s, it became de rigueur for bands to include these song or songs at different lengths after the initial sequence was over. There are few examples of a hidden
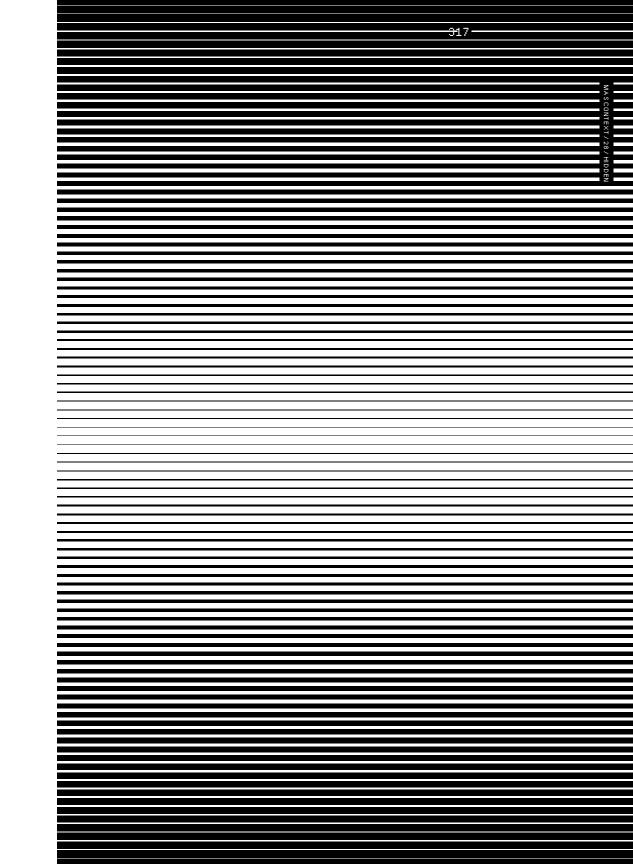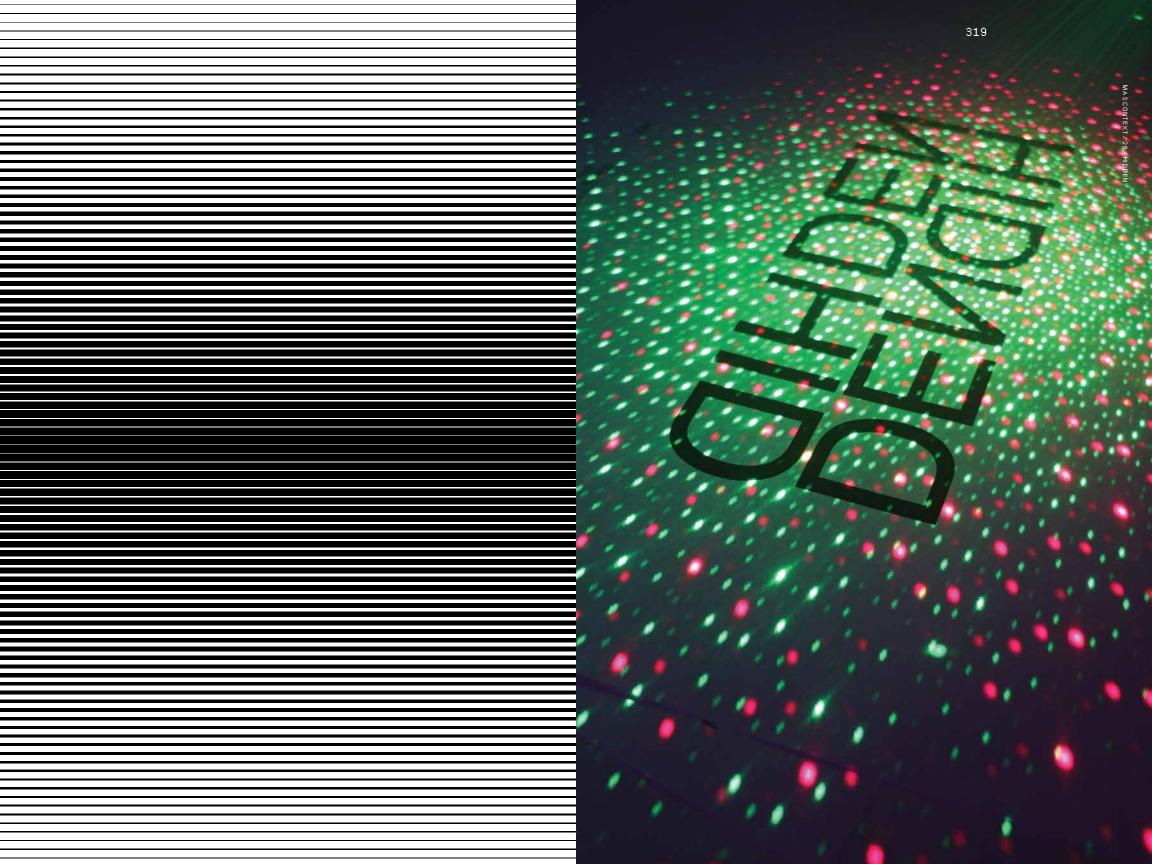
track in this era that might have improved a record. There was the occasional hit, like Cracker's "Eurotrash Girl" or Lauren Hill's "Can't Take My Eyes Off of You," that was nominated for a Grammy. My band Wilco's third album *Summerteeth* from 1999 was released dead in the storm of the craze—we liked our song "Candy Floss" enough to not let go of it, but it was a bit of an outlier and we couldn't find a home in the sequence of the record. We hid it twenty seconds after the last song on the sequence, along with a remixed "Shot in the Arm" that was rejected by us for the main body of the record. This was what the hidden track was to many bands—a song that you were attracted to but couldn't fit in the overall scheme of the album. But many memorable hidden tracks represented departures and anomalies. Beck's "Diamond Bollocks," from *Mutations* was a good example of this; a more rocking piece in what was a more traditional, muted album for him. The CD format gave the artist extra time at his disposal—74 minutes, and had changed the dynamic from the LP

medium immensely. The idea of a fourteen-song, sixty-minute record would have been unfathomable in the fast-moving 60s, where bands recorded three albums a year that would often reflect huge creative change in that time period. Releases were now farther apart and longer, time-wise, adding a more self-conscious and pressure-filled aspect to releases—this idea of your next record as a "statement." And adding to this slightly bloated format was the opportunity to add MORE tracks to the album. Was it just artists wanting to share more with their audience, to see a different or unguarded angle of the band? Some artists felt it added value to a record for the fans, or to reward the more staunch supporters. Or was it more of a reflection of the post-Nirvana industry boom years, big budgets, more space, more content—a precursor of the Internet era?

Although the practice of hiding tracks still continues with CDs and the vinyl resurgence, streaming and iTunes has rudely exposed hidden songs—demystified them and left them suspended—in files right below their previous tracks, out of context forevermore. X

Beyond the Proscenium Wall

Essay by Odile Compagnon

In 1618, the Teatro Farnese in Parma was the first theater to establish a clear separation between the stage and the house. Since then, the proscenium has become a common element in most theaters: the central arch frames the perspective that the set creates while the wall on either side hides the mechanisms and artifacts necessary to provide special effects and dramatic entrances. As a result, while the theater as a whole is by essence an interior space, the area beyond the proscenium can be an interior, an exterior, an imaginary place, with which directors and designers transport actors and spectators into a different space and time altogether.

As a specific type of constructed environment, the stage offers particular ground for the exploration of architectural principles and concepts. When architects have worked as scenographers and understand what the proscenium wall is concealing, they seem to gain a particular realization of how the real and the imaginary can coexist within one harmonious space. They are able to measure the amount of order that is necessary for understanding and fascination to prevail even when chaotic actions take place and random objects appear on stage. The proscenium wall and arch evoke two worlds beyond the space of the stage itself: the imaginary world that the action conjures and the technical world of smoke and mirrors, pulleys and rigging ropes. How do these translate into architectural terms? By looking at a few examples, we can learn how the "real" and the "unreal" worlds collide and/or merge in the theater and be inspired to apply the same ideas outside of the theater, in our cities and buildings. As architects study stage set design, or work for the theater, they deal with the hidden dimension: the representation of specific memories, cultural, and social abstractions. They build philosophical and mathematical mechanisms that allow them to conceive rational spaces. The necessity to create forms that use not only physical materials but also memories and expectations is expressed in the architect's Aldo Rossi's analogy of a building to a sea shell:
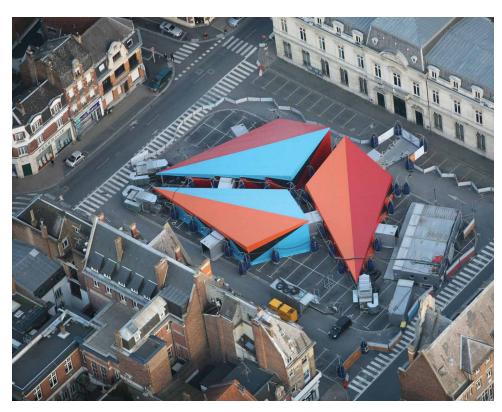
> The sea seemed to me a coalescence capable of constructing a mysterious, geometric form made up of every memory and expectation. Perhaps it was really a verse from Alcaeus that led me to architecture: "O seashell / daughter of stone and the whitening sea / you astonish the minds of children." The lines go approximately like this, and in them are contained the problem of form, of material, of imagination–that is, of astonishment. Rossi. (*A Scientific Autobiography*, 25)

The world of theater is built upon a comparable necessity to give materiality to ideas, poetry, and thoughts and, as far back as the Greek antiquity, architects have certainly concerned themselves with its design. Vitruvius in 70 BC, Alberti in 1450 and Palladio a century later have written rules in their treatises, for the construction of the perfect stage. But the first to address the design of scenery itself was Inigo Jones, in England in the early seventeenth century. The English classical architect, Jones, came back from a two-year tour of Italy in 1615, his sketchbook filled with observations of ancient and classical architecture. He had a particular interest for Palladio's buildings, whose secrets he received from Palladio's own pupil, Scamozzi. On January 20, 1615, he wrote that the Italian mannerism inherited from Michelangelo was a detriment to architecture and that buildings, as people, should keep a solid, grave appearance to contrast and highlight the internal extravagance that one's imagination can set on fire. Before Jones's trip to Italy, he was famous, essentially, for the sceneries that he designed for the Royal Masques, a sort of entertainment on which he collaborated with poets and bards for the English court. Jones's sets and costumes had been inspired by an earlier trip he took to Italy, while in his 20s, and bore the influence from Italian Intermezzo, which were magnificent, elaborate, and lavish. The architecture represented was fantastic, sometimes vernacular and always rich and filled with ornaments. Upon returning from his second trip to Italy, Jones, already forty years old, saw his practice expand as he began to apply the principles he learned from Palladio and Scamozzi to actual architecture. Surveyor of the King's Works, Jones designed and oversaw the construction of important buildings such as the Covent Garden façade and church, Whitehall Banqueting House, The Queen's Home in Greenwich, and Saint Paul's Cathedral's West front and portico. While doing so, Jones continued to design sceneries for the Court's Masques, working mostly with the poet Ben Jonson, whose writing contained much political subtext and satire. It is through a well-documented quarrel between Jonson and Jones that we can best understand the architect's position on design and the meaning of the statement he wrote in his "Italian Sketchbook." As his partnership with Jonson progressed, the two had constant arguments over what constituted the soul and what constituted the skin of the Masque. Jonson insisted that the poetry should reside solely in the text, while Jones argued that his own craft, sceneries, and costumes were just as instrumental in providing spirit to the entertainment. During Jones's voyage in Italy, he had found in classical architecture and its juxtaposition to mannerist details the arguments to make his point more astute, referring to Palladio and Scamozzi's architecture to give his own designs more intellectual meaning. The controversy ended in 1631 when the poet and the architect had a final dispute. Jonson's thinly veiled attack was included in one of his poems, where he compared the architect with a cook, affirming that the recipe was more important than the tools to give the meal its taste. Jones continued to design sceneries for masques that included an intricate layering of architectural details, while he gave his buildings the ordered form that his studies of Palladio had inspired. With its simple shape, and clean Doric order, Saint Paul Church at Covent garden, for example, presents what Jones described as a façade, that "carrieth a gravity in Publicke Places," allowing the imagination to create its own interior extravagance.

Two and a half centuries later, in Venice, the Italian architect Aldo Rossi used a theatrical scene to describe the chiasm between the shell and the soul. The Teatro del Mondo, which he designed to float in the lagoon for the 1980 Venice Biennial is the expression of his lifelong interest for an architecture that could express meaning and science, philosophy, and craft. The presence of the water surrounding the theater rendered it yet more similar to the seashell from Alcaeus poem: mysterious and made up of every memory. At about the same time, in his Scientific Autobiography, Rossi described two kinds of conditions where disorder could be perceived: one, which he detested and called forgetfulness, resulting from plain indifference for any system, and another one, which he described as a natural state of mind, that results from an honest discomfort with a system. He saw the latter as a sign of humanity that allowed for imagination and fascination to develop, as in the seashell he so admired. Borrowing from the theater experience and from the proscenium's ability to separate the real from the fantastic, Rossi described that in architecture, as on the stage, the wall, any wall, marks the boundary between order and disorder. The wall is mathematical and contains what Rossi called "small things": memories, collected objects, everyday actions. Rossi had always been interested in the relationship between those "things and situations" that are about to be stated and the mechanisms by which they are stated. All of his buildings were simple in appearance, they obeyed to a strict geometric rule, just as Jones's Covent Garden did, to allow for the astonishment to reside inside: within the mind of the visitor as well as within the walls of the building. As an architect, Rossi always oscillated between the strict geometry of the envelope and the "quasi-naturalism of the objects within" and this oscillation resulted in buildings as apparatus, machines for recalling memories. His theater in Venice was one such machine: at the same time a place of science and a place of memory, the place where architecture ends and the world of the imagination—or even the irrational—begins.

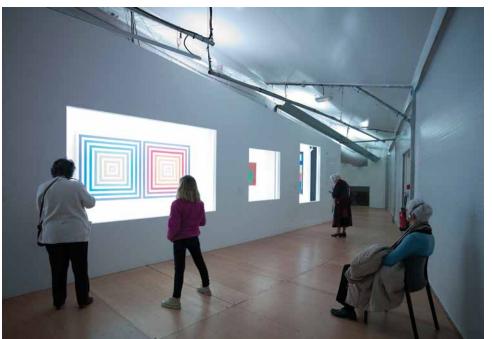Centre Pompidou Mobile, Cambrai - Construire Architects, photography Studio Déclic, February 2012.

Centre Pompidou Mobile, Chaumont - Construire Architects, photography Cyrille Weiner, November 2011.

Today, Patrick Bouchain, a French architect, principal of a practice called CONSTRUIRE, has developed alternative ways of producing buildings, involving future users as actors in the construction process and builders as actual users of the construction sites. Bouchain is equally interested as Jones and Rossi, in the discourse between the freedom of objects or people to change and the rigor of the envelope. In 2006, at the Venice Biennial, Bouchain and his team lived inside the French pavilion during the whole duration of the show, to address and illustrate his approach to dwelling and appropriation of space. Bouchain has worked for many years with artists and performers and he speaks about the relationship between an artistic concept and its realization in a public space. This inspired the architectural concept of the *non fini*, a design method, which establishes a new order, where objects and buildings can be organized while giving the users complete freedom to change, move, alter, and reorganize everything. For Bouchain, architects are not mere overseers, but belong to a de facto type of users: together with all other users of the space, they are actors whose performances are never finished. The realizations are always in progress, and necessitate a kind of nomadic being. Bouchain and his partner Loic Julienne designed a museum for the Centre Pompidou, which was made of three movable tent structures that could be assembled and installed in various manners depending on the sites that they were brought to and the content that they housed. As Aldo Rossi's floating Teatro del Mondo, which navigated from city to city before being taken apart, Bouchain's Centre Pompidou Mobile also took on different roles, told various stories. From one place to the next, the form remained the same allowing the content, and the context to trigger the imagination of the visitors.

Jones, Rossi, and Bouchain have included themselves among the users of their own designs. As they shared their own memories and narratives, they have created places that others can "appropriate," they made buildings that evoked both respect and humanity, bringing together craft and intellectual thinking. All three architects have contributed to the understanding that architecture should reside between art and technology, and be at the intersection between liberal arts and mechanics. They have shown us to use the stage as a precedent for the defiance of canonical rules, the challenge of perspective and gravity, and resistance to given tenets. While doing so, they have succeeded in transporting the audience, and the users into a subtle world that is more than the sum of its part, and plays with familiar, often overlooked realities. The buildings they have given us recreate this world: microcosms flexible enough for the interior to become exterior, the exterior interior, for the shell not only to surround the soul, but to also contain it. Inigo Jones's Masques are present in his design for Covent Garden; Aldo Rossi's public spaces evoke entrances and exits of prima

Centre Pompidou Mobile, Le Havre - Construire Architects, photography Bertrand Prévost, February 2013.

donnas and luminaries. Patrick Bouchain plays with buildings as if they were stage properties and we the actors. They all translate into the "real" world some of the trickeries of the "unreal" one. Covent garden, Teatro del Mondo, and Centre Pompidou Mobile are all envelopes whose strict geometries and simple forms allow for spiritual content to develop, apparatus for events to take place, and intrigues to unwind.

The collaboration between the poet and the cook, between the actor and the craftsman has given the buildings their forms: just as the sea, for Aldo Rossi, gave the shell its shape, made of memories and surprise.X

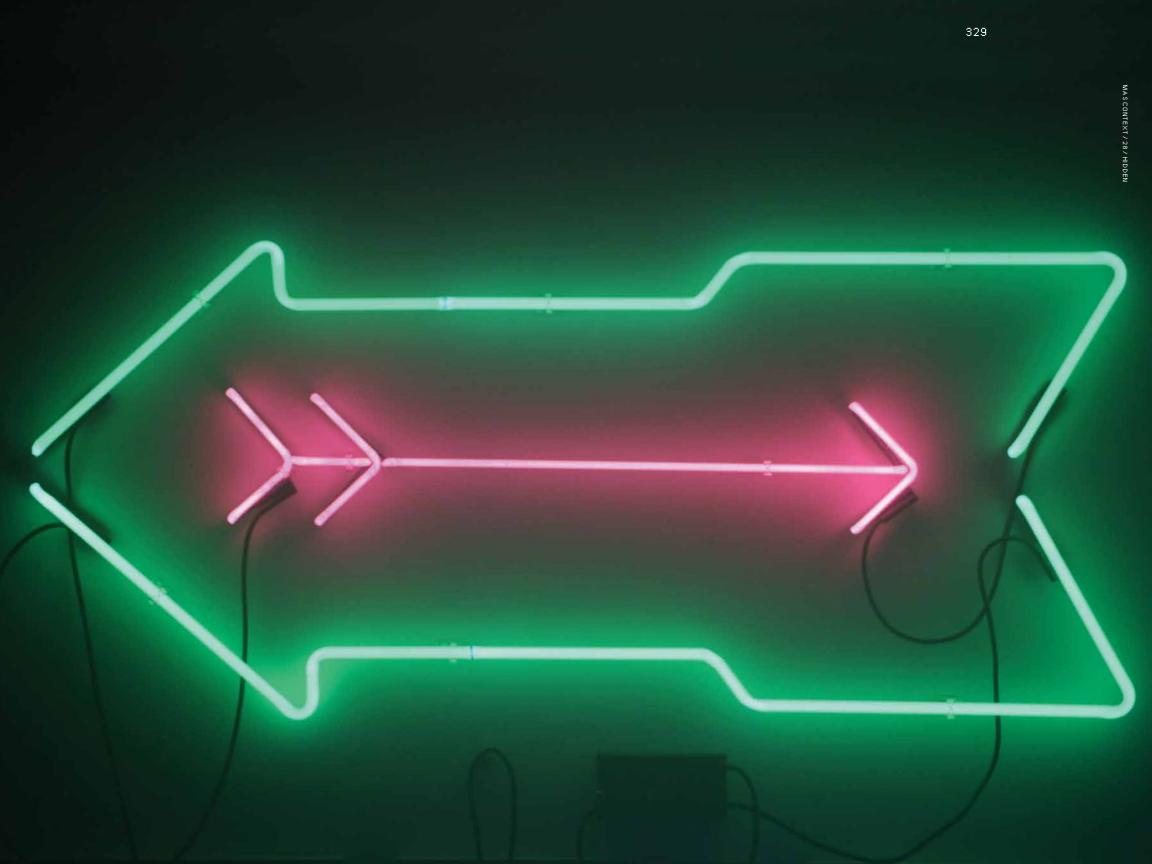Bouchain, Patrick. *Construire Autrement: Comment Faire?* Arles (Bouches-du-Rhône): Actes Sud, 2006.

Gordon, D.J. "Poet and Architect: The Intellectual Setting of the Quarrel between Ben Jonson and Inigo Jones," *Journal of the Warburg and Courtauld Institutes,* Vol. 12 (1949): 52-178.
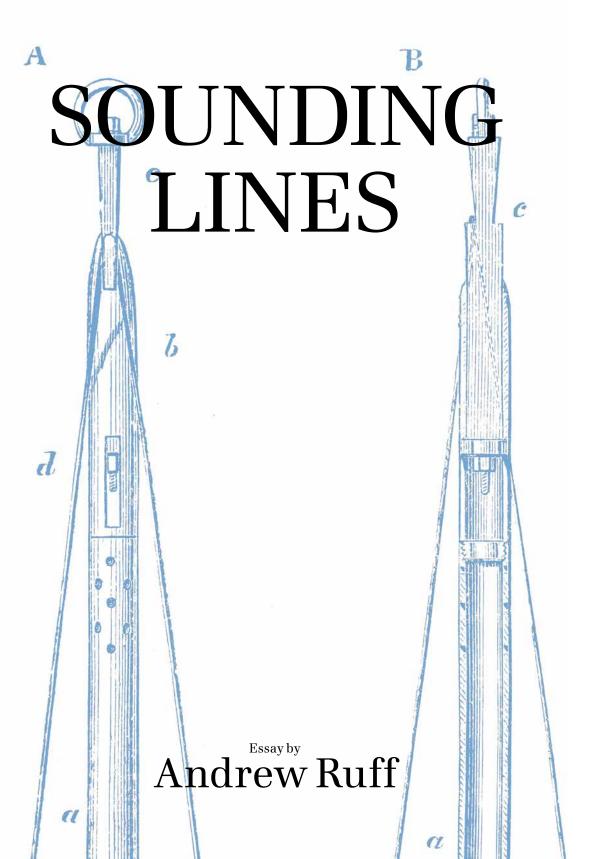
Peacock, John. "Inigo Jones's Stage Architecture and Its Sources." *Art Bulletin* 64, no. 2 (June 1982): 195-216.

Rossi, Aldo. *A Scientific Autobiography.* Cambridge, MA: MIT Press, 1981.

Summerson, John. *Architecture in Britain* 1530 to 1830. Harmondsworth: Penguin, 1963.
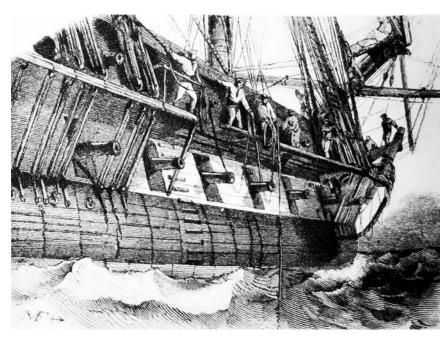
SOUNDING LINES

Essay by
Andrew Ruff

The history of cartography may be understood as a between the known and the unknown; in cartographic terms, between the *terra cognita* and the *terra incognita*. The role of the cartographer is to record particular moments of that endless negotiation, inscribing a subjective— and likely fleeting—perception of territory onto the smooth surface of the map. As historical objects, maps present recordings of a translation from wilderness to territory, a translation of spatial knowledge into a stable artifact.

Once land has been found, surveyed, charted, and inhabited, its originally mysterious topographies are ultimately tamed by abstract lines that mark borders, districts, cities, and nations. These artificial armatures transform the character of telluric landscape; the periphery of the map ossifies as once-wild lands succumb to the theodolite and the sextant. In contrast, oceans retain their dynamic nature despite attempts to chart their constantly changing, liquid surfaces. The ephemeral disposition of the sea presented a challenge to traditional cartographic techniques that sought to present stable, permanent images of space rather than accepting the possibility of more fluid geographies.

Unlike terrestrial landscapes, whose vast expanses can be immediately grasped through vision, the sea demands a more tactile engagement with its elusive territories, an engagement that transcends the planimetric terrestrial surface and embraces the sectional condition of its liquid volume. The sounding line, cast into uncharted waters, is a spatial instrument that physically mediates between the hands of the surveyor and the depths of the sea. A constructed line marked with the dimensions of the human body, the sounding creates a connection between an invisible, undersea topography and a position on the map determined through readings of the night sky. The sounding does not merely sink beneath the waves, but marks a solitary point in space, a singular volumetric reading in the text of the hidden unknown. As the ephemeral seam between two worlds, the sounding line both reveals the unknown and creates new knowledge. The sounding is a record of discovery, an instrument of exploration, and an armature for creation.
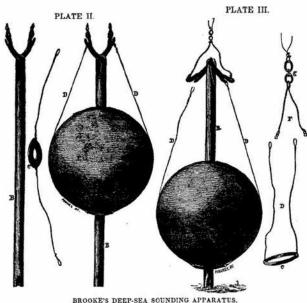
An ancient technology mediating between the ship and the sea, the sounding has plumbed the depths of the oceans ever since sailors began to venture beyond the security of shore and into the open sea.[1] As maritime trade developed across increasingly large bodies of water, sailors could no longer rely on familiar knowledge of harbors nor constant visual contact with the coastline. When approaching new ports from the sea, sailors often sounded the depths to determine whether their ship would run aground against the seabed's hidden topography. The line itself was marked with a coded system of colored fabric, and as the leaded weight sunk beneath the waves the maritime surveyor would record the maximum depth in the ship's log.[2] These fathom marks
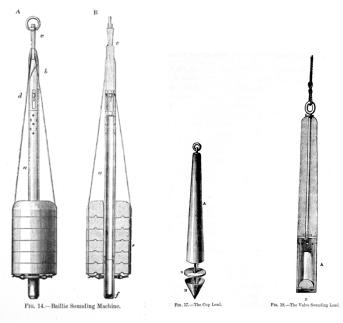
Antoine Léon Morel-Fatio, "Mesure du fond avec la sonde sur une frigate," in *La Marine: arsenaux, navires, équipages, navigation, atterages, combats*, Eugène Pacini, 1844.

dotting the waters surrounding ports created an in-formal knowledge system—a rhizomatic network of depths aggregated around heavily trafficked harbors—that traced the invisible trajectories of ships across the constantly changing surface of the sea. Despite the rudimentary nature of its cartographic technology and the complex performance required to ascertain the ocean's depths, this technique allowed early maritime merchants and explorers to enter into uncharted waters with a fleeting, yet critical knowledge of the unseen bathymetry beneath the waves.
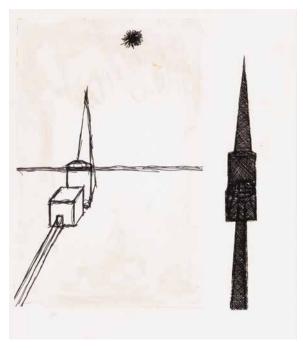
Unlike the trigonometric survey, which projected sight lines into uncharted territory as it traced a future trajectory across the landscape, the sounding operated as an archaeology of the unknown, a tedious, blind excavation of space beneath the ship. These projective castings not only revealed the depth of the sea, but the geological condition of the seabed itself. As each sounding returned to the surface, it carried a miniscule core sample of the ocean floor: grains of soil, shells, and sand which adhered to the tallow footing of the sounding weight.[3] Through this multiplication of cartographic information, the sounding was able to serve as an effective instrument of embodied spatial knowledge: as the official hydrographer to the British Navy once proclaimed: "navigating is not by chart and compass, but by the sounding lead!"[4]
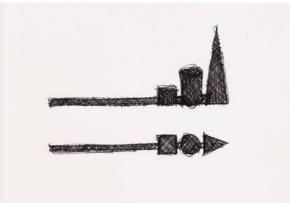

BROOKE'S DEEP-SEA SOUNDING APPARATUS.

FIG. 14.—Baillie Sounding Machine.

FIG. 17.—The Cup Lead.

FIG. 18.—The Valve Sounding Lead.

(top) Matthew Fontaine Maury, *Brooke's Deep-Sea Sounding Apparatus*, 1858, *Physical Geography of the Sea* (New York: Harper & Brothers,1858), 250.

(bottom) Thomson, Sir C. Wyville and John Murray, *Report on the Scientific Results of the Voyage of the H.M.S. Challenger During the Years 1873-76*, vol. I (London: H.M.S.O. 1885), 60.

(top) John Hejduk
**Soundings: Tomb for Space Shape/Form
Light: two perspective views
1991, ink on paper, mounted on paper
28 × 21.6 cm**
DR1998:0129:067:002, John Hejduk fonds
Collection Centre Canadien d'Architecture/
Canadian Centre for Architecture, Montréal
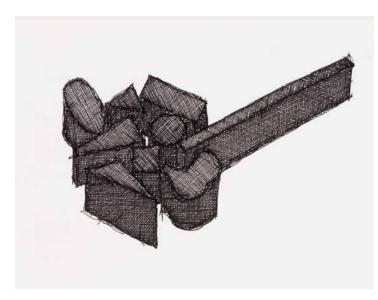
(bottom) John Hejduk
**Soundings: Tomb for Space Shape/
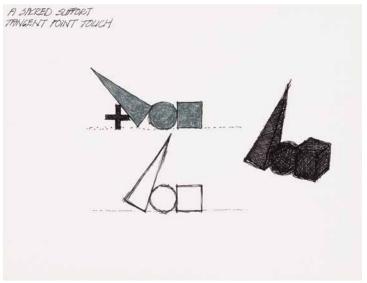Form Light: perspective view and plan
1991, ink on paper
21.6 × 28 cm**
DR1998:0129:067:005, John Hejduk fonds
Collection Centre Canadien d'Architecture/
Canadian Centre for Architecture, Montréal

There is a certain power in embracing the unknown. Just as the sailor and the cartographer constructed images of hidden worlds through weighted lines and vertical sections, the architect, poet, and educator John Hejduk sought to construct worlds through lines of text and assemblages of images. He proposed that architecture and cartography share a similar relationship to *terra incognita*: they both inhabit the concealed spaces between the world we know and the possible worlds which lie ahead. His 1993 publication *Soundings* adopted cartographic metaphors to create a tapestry of texts and images enraptured in his imagination. Like the cartographers who mapped the constantly shifting surface of the ocean, Hejduk's work emerged from the fluid spaces between fiction and reality, territories of the imagination ripe for exploration.

Hejduk, along with his editor Kim Shkapich, presented his figural speculations in stark pen and ink sketches that were accompanied with poetic musings printed in sans-serif font. Exploring this dialectic between image and text was one of Hejduk's critical projects. Bound within *Soundings'* heavy, white cover were 73 architectural projects grouped into seven chapters. Mimicking the size and weight of earlier cartographic tomes, Hejduk's work formed an atlas of architectural speculations exploring formal possibilities at the periphery of contemporary spatial practices. In each project, Hejduk articulated his architectural position through intertwined pen-drawn lines and carefully composed text. These two lines- the quick, overlaid, and night-black lines of his sketches and the carefully composed, minimal lines of his poetry and notes- constituted the entirety of his architectural syntax.[5] Hejduk did not make any grand claims about his work; he did not step outside of the text to introduce it nor did he attempt to contextualize it. The work was presented as a newly discovered World: 400 pages of fictions, fabulations, and figurations directly from Hejduk's episodic *flânerie* through the unknown.

It is only appropriate, then, that the title of this work speaks to the exploratory nature of the projects: architectural figures wandering beyond the cartographic edges of the known world and into the uncharted lands of Hejduk's dreams. Seen in its entirety, Hejduk's work rejected permanence in favor of more nomadic explorations. His "soundings" were projective measurements—both calibration and fabrication—translating the horizontal span of *terra incognita* into inscriptions of unseen vertical depths.

In *Soundings*, Hejduk's vivid drawings and poetry were introduced by a rigidly set Table of Contents, portraying his work as a precise collection of unique figurative specimens. Unlike an entomological exhibit, though, Hejduk's work cannot be pinned to the page; each project reverberated with the rest of the volume, forms
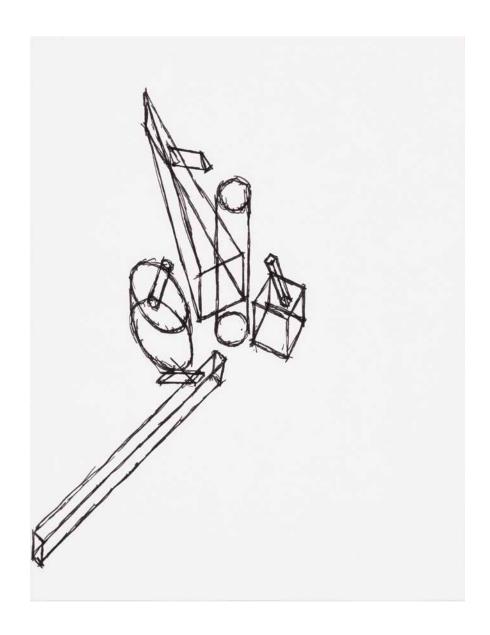
A SACRED SUPPORT
TANGENT POINT TOUCH

(top) John Hejduk
Soundings: Rooms of/for Justice:
perspective view
1991, ink on paper
21.6 × 28 cm
DR1998:0129:027:003, John Hejduk fonds
Collection Centre Canadien d'Architecture/
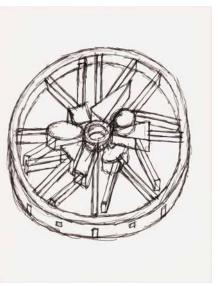Canadian Centre for Architecture, Montréal

(bottom) John Hejduk
Soundings: the Architect's Balance:
a sacred support: tangent, point,touch
1991, ink and coloured pencil on paper
21.6 × 28 cm
DR1998:0129:005:001, John Hejduk fonds
Collection Centre Canadien d'Architecture/
Canadian Centre for Architecture, Montréal

(top) John Hejduk
Soundings: Museum for Picasso, Brancusi,
Matisse and Giacometti: perspective view
1991, ink on paper
28 × 21,6 cm
DR1998:0129:019:005, John Hejduk fonds
Collection Centre Canadien d'Architecture/
Canadian Centre for Architecture, Montréal

disappearing only to reappear unexpectedly in projects separated by time, space, scale, and program. In the first chapter, he folds a single line into a set of Platonic solids, comprising "The Architect's Balance": a pyramid, cube, sphere, and cross arranged in a series of aggregated compositions, recalling Le Corbusier's abstracted and idealized sketches of Rome.[6] These Platonic forms later reappeared in projects strewn throughout the volume, in "Home of the Architect," "Museum for Picasso, Brancusi, Matisse and Giacometti," "Rooms of/for Justice," and "Tomb." Each project created successive evolutions and variations on the original, idealized composition: collectively, these iterations established a syntactical, reciprocal dialogue amongst projects of divergent intentions and histories. This aggregate of figurations existed in a state of continuous in-between; they were not bounded by section titles and page numbers, or by the traditional considerations which delineate architectural typologies, but threaded throughout the book, tracing complex networks and new constellations.

In *Soundings*, the line is the main instrument through which Hejduk crafted personal fictions and founded imagined worlds. The line was both the armature of discovery and the medium of representation, a product of geometry which produced the universe anew. Expanding the formal implications of Carlo Levi's axiom that the origin and the terminus of a single line were determined by two one-dimensional points, poet Jorge Luis Borges wrote that the line was "made up of an infinite number of points; the plane of an infinite number of lines; the volume of an infinite number of planes; the hypervolume of an infinite number of volumes."[7] In this way, Borges suggested how the solitary, single line was interwoven into the fabric of the universe; how the line was an Ariadnian thread connecting us all. Hejduk's architectural line did not find easy rest between the pages of the book, nor did it remain fixed between the poles of beginning and end. Just as Borges' line emerged from the plane to construct new worlds, so did Hejduk's work wander from the paper, flickering with memories of distant pasts and projections of as—yet—unrealized futures.

Although the sounding line provided a theoretical structure to Hejduk's work, his architectural creations did not ascribe to a linear teleology. Rather than presenting his work as a clear narrative, Hejduk and Shkapich structured *Soundings* as an experiment in constructing multiple, ambiguous readings. Just as the cube, pyramid, and sphere of "The Architect's Balance" existed in a continual state of reemergence throughout *Soundings*, other distinct figures and formal operations echoed in the chambers of this volume. The spiral held within the boundary of "Victims," bears a striking resemblance for Le Corbusier's recurring model for a Museum of Unlimited Growth.[8] Hejduk also incorporated the spiral into the sketches for "Sanctuary," in the plan

(top) John Hejduk
Soundings: The Architect's Wheel: perspective view
1991, ink on paper
28 × 21.6 cm
DR1998:0129:004:002, John Hejduk fonds
Collection Centre Canadien d'Architecture/
Canadian Centre for Architecture, Montréal

(bottom) John Hejduk
Soundings: The Architect's Wheel: perspective view
1991, ink on paper
28 × 21.6 cm
DR1998:0129:004:001, John Hejduk fonds
Collection Centre Canadien d'Architecture/
Canadian Centre for Architecture, Montréal

of the "Museum for Words," in the figuration of "The Three Serpents," and in the hierarchical, Dantesque diagram for "Cemetery." Another formal archetype in "Cemetery," the spoked wheel, emerged as the primary organizational diagram for both "The Architect's Wheel," and "Eight Night Chapels." This slippage of formal tropes between projects forced a positional reckoning with Hejduk's conception of the line. Was the line created once, as both a unique performance and object which cannot be repeated? Or was the line an armature which vacillates between many spaces and times simultaneously, following the reader's eyes from chapter to chapter, page to page? To frame this binary within the language of the map, did Hejduk repetitiously cast a sounding line, slowly charting the unknown through linear strokes? Or was he simultaneously casting an infinite number of soundings at once? Perhaps a means to approach this fundamental question is to consider Hejduk's work not as a series of discrete architectural projects, but as an architectural text.

As the only writing which did not find itself directly associated with an architectural project, Hejduk's introduction framed his work in a larger theoretical perspective: "If one gyrates, rotates ellipses with sufficient energies they become a straight line moving from space to space, from time to time. The original curvature is unseen but nonetheless felt."[9] Hejduk considered his work as a series of successive figurations, explorations of the line's potential to migrate and deform, to become simultaneously ephemeral and generative. The geometrical principles underlying Hejduk's introduction, that the transformation of a curved enclosed into a linear element through stress and force would not entirely remove the genomic identity of its original form, found themselves reminiscent of Nicholas of Cusa's own mathematical theorems postulated in his theological text *De Docta Ignorantia*.[10] Cusanus wrote that while the straight line is simply a section of the infinite line, the curved line relates to the infinite through "mediate and remote participation."[11]

The mediating line offers a potential insight into the relationship between the formal limitations of the signs, symbols, and emblems in *Soundings* and the infinite concepts which they address: death and preservation, religion and myth, heaven and hell. For Hejduk and Cusanus, the curvature of the line revealed a latent desire to enclose and delineate between interior and exterior, to define finite territories from infinite space. These territorial boundaries became the means by which the finite communicates with the infinite, a malleable and permeable threshold between worlds. In this reading of *Soundings*, the sketched plans, elevations, and axonometric projections scattered throughout the volume do not present themselves as isolated symbols or discriminate members of an alphabet yet to be deciphered. Instead, the

author Wim van den Bergh described these figures as "runes: the signs, so it seems, of a geometric language, a language about space and time," a language which has been lost to modern man and was never meant to be recovered.[12] Hejduk's narrative for the consular official in "Berlin Nights" illuminated how he created a figural architectural language which could simultaneously speak to and create the cosmos:
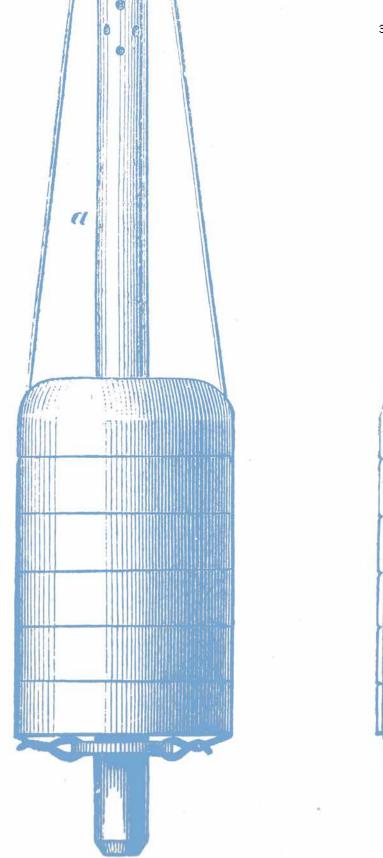
[The Consular Official] thinks about the reality of still/frame images. Things are flattened out for image/thought transferences and transmissions. The three-dimensional world is fabricated in order to be two-dimensionally transferred into an image where its maximum potency is still/stopped. And its most intensive energy is reflected into nature morte, still life [13]
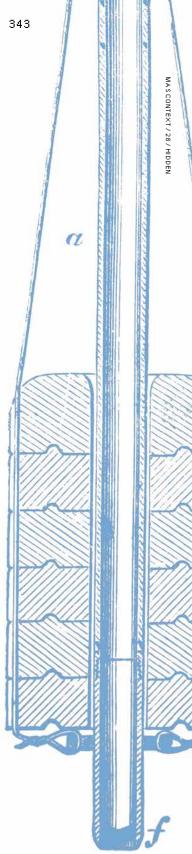
Hejduk's commune with the infinite could not be translated into symbolic communication, but was replicated in a potent, empathetic act of representation. The inaccessible opacity between the finite and the infinite was rendered in the flatness of Hejduk's architectural figures. Their homogeneously rendered facades implored the reader not to inhabit the forms, but to join the images in their inhabitation of the space of the book. In this text of indecipherable signs, the infinite could not be possessed through knowing all the emblems; only by becoming "an emblem among emblems" could one hope to enter Hejduk's invented universe.[14]

In its sheer density and intensely personal nature, *Soundings* does not easily lend itself to analysis. Despite the iconographic symbols which illustrate the projects, there was no clear internal language to be translated, no objective truth to be extracted from the pages, no code to be deciphered. As van den Bergh wrote in the preface to the book, "Hejduk's work ridicules this objective view, as there is no absolute meaning in it, no objective outside."[15] If *Soundings* lacked an outside, then perhaps the entire volume was constructed as an exposed interiority, an architecture which had been meticulously unfolded to reveal something of the hidden *terra incognita*. The notion that Hejduk's work emerged from a source of discovery may explain van den Bergh's consideration of Hejduk's work as "a kind of many-folded space, a labyrinth, or a maze.[16] *Soundings* does not have an objective outside, only an exposed interiority. Understood in this sense, Hejduk's architectural atlas, with its opaque figurations and mysterious writings, was stimulated through intentional interactions with its exterior: shelters for his architectural wanderings to condense, to nucleate new spatial possibilities from within the *corpus* of his first line.

Mediating between the interiority of John Hejduk's architectural subject and the objective infinite, the book serves as both the cipher and the fabric of the universe. The necessity for bridging between the universal and the singular was reflected in Hejduk's

architectural project, and the tenuous path between the finite and the infinite found its means of articulation in the line.[17] While Hejduk devoted the first page of *Soundings* to exploring the possibility of compressing the world into a straight line, the final page of the book revealed an alternate reality: a line which became a world.[18] Positioned horizontally across the stark white paper, a single, black line was struck across the middle of the otherwise empty portrait. No longer did the sounding stretch towards the depths of the unknown; instead, Hejduk constructed an artificial horizon, a line adrift in a sea of white, a thin filament momentarily holding the center. Rotated from its vertical orientation, the sounding line became unanchored, tenuous, loosened from space and time. This austere mark concluded the encompassing worlds of Hejduk's volume, a fitting end to his cantos of symbols and emblems. Unlike the nautical soundings which were the namesake of his text, Hejduk's projections into the unknown did not strike a hidden surface beneath the black water. His soundings informed an architecture which extended to infinity, never reaching an edge, following the endless curvature of the universe. X

[1] *The Navel Chronicle: Containing a General and Biographical History of the Royal Navy of the United Kingdom with a Variety of Original Papers on Nautical Subjects, Volume II* (London: Bumney & Gold, 1799), 180-181.

[2] Ibid., 364.

[3] Francis Lieber, ed, *Encyclopaedia Americana: A Popular Dictionary of Arts* (Philadelphia: Lea & Blanchard, 1849), 496.

[4] As quoted in Clifford Conner's *A People's History of Science: Miners, Midwives, and "Low Mechanicks"* (New York: Nation Books, 2005), 236.

[5] The architect Andrew Macnair grouped John Hejduk, Raimund Abraham, and Lebbeus Woods together as "the Blacks." Herbert Muschamp, "John Hejduk, an Architect and Educator, Dies at 71," *New York Times*, published July 6, 2000, http://www.nytimes.com/2000/07/06/arts/john-hejduk-an-architect-and-educator-dies-at-71.html.

[6] John Hejduk, *Soundings*, ed. Kim Shkapich (New York: Rizzoli, 1993), 32-35. See Figure 02

[7] Jorge Luis Borges, *The Book of Sand*, trans. Norman Thomas di Giovanni (Middlesex: Penguin Books, 1979), 87.

[8] Deborah Gans, *The Le Corbusier Guide* (New York: Princeton Architectural Press, 2006), 213.

[9] Hejduk, *Soundings*, 17.

[10] Nicholas of Cusa, *On Learned Ignorance*, trans. Jasper Hopkin (Minneapolis: Arthur J. Banning Press, 1990), 7., "A finite straight line, insofar as it is straight (minimal curvature is a reduction to that which is straight) participates in the infinite line according to a more simple participation, and a curve [participates in the infinite line] not [according to] a simple and immediate participation but rather [according to] a mediate and remote participation; for [it participates] through the medium of the straightness in which it participates."

[11] Cusanus is a shortened reference for Nicholas of Cusa.

[12] Wim van den Bergh, "Seven Memos on the Geometry of Pain," *Soundings*, 19.
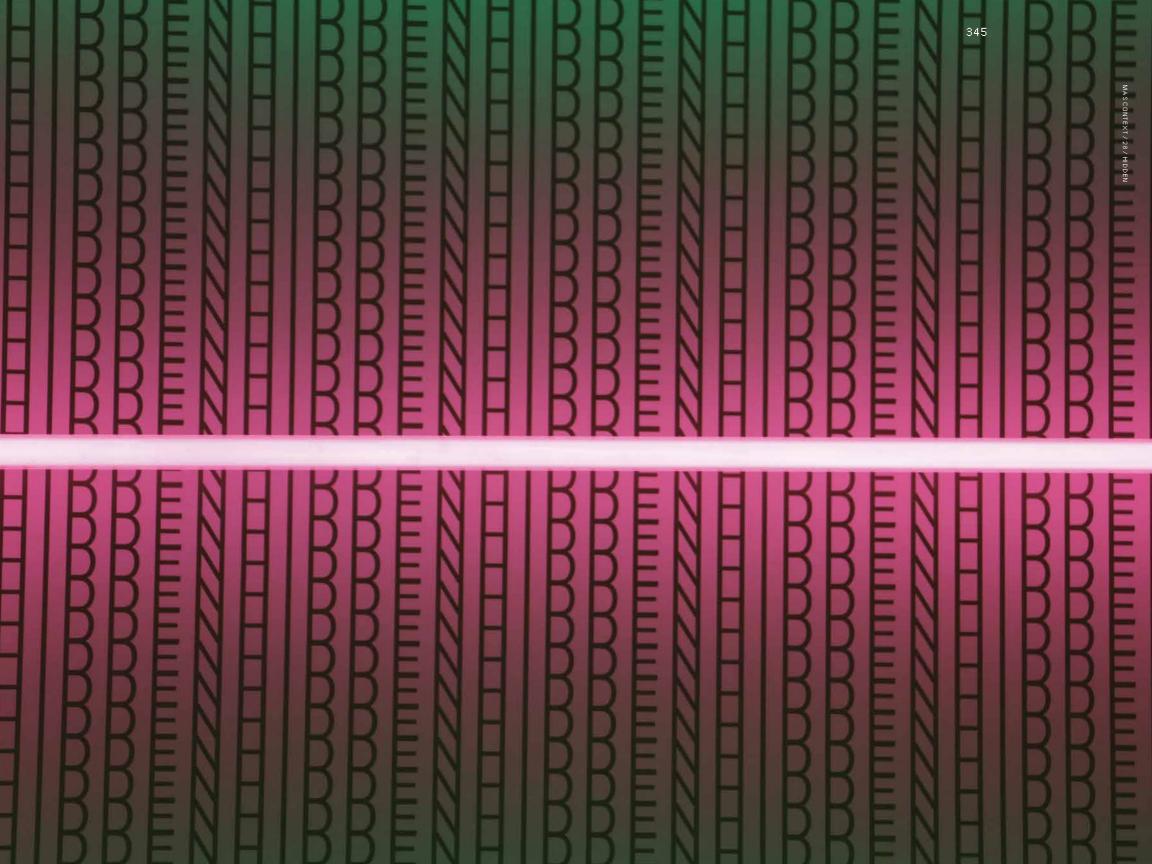
[13] Hejduk, *Soundings*, 160.

[14] Ibid., 22-23.

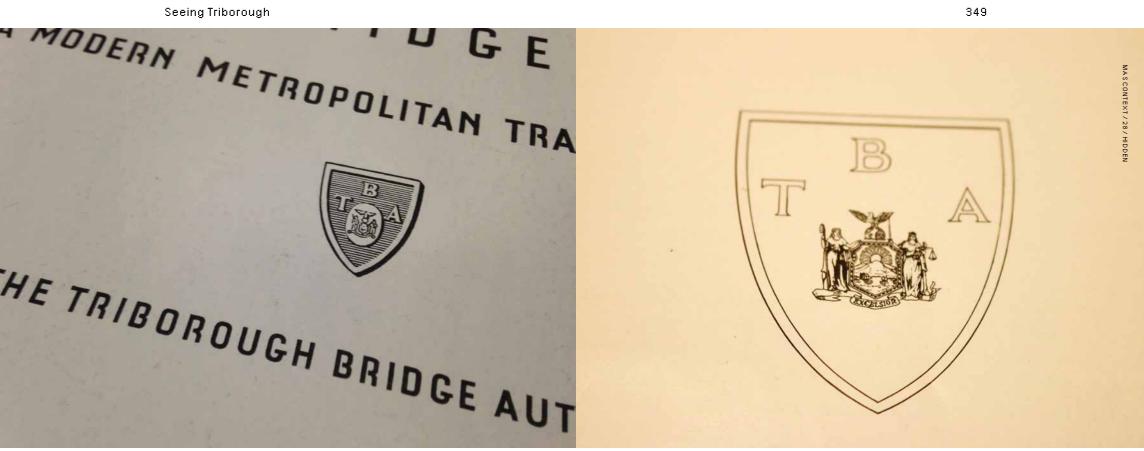[15] van den Bergh, "Seven Memos on the Geometry of Pain," 23.

[16] Ibid., 22.

[17] Ibid., 12.

[18] Hejduk, *Soundings*, 399.

Seeing Triborough

This brief visual essay traces the visual identity of the Triborough Bridge and Tunnel Authority —the idiosyncratic fiefdom of Robert Moses. The piece pulls apart the heraldry of Triborough's crest and insignia, and examines the architectural artifacts of its rein (the bridges and tunnels themselves as well as the hidden-away headquarters building on Randall's Island from which Robert Moses issued orders to mayors and governors). What happens when we examine innocuous logos and bland buildings in comparison to the real human costs of power and dynasty?

Visual Essay by Sam Holleran

For much of the twentieth century quasi-independent public authorities controlled infrastructure development in New York City and state, holding vast tracts of land and commanding massive amounts of capital. The most famous of these is the Triborough Bridge and Tunnel Authority—the idiosyncratic fiefdom of Robert Moses.
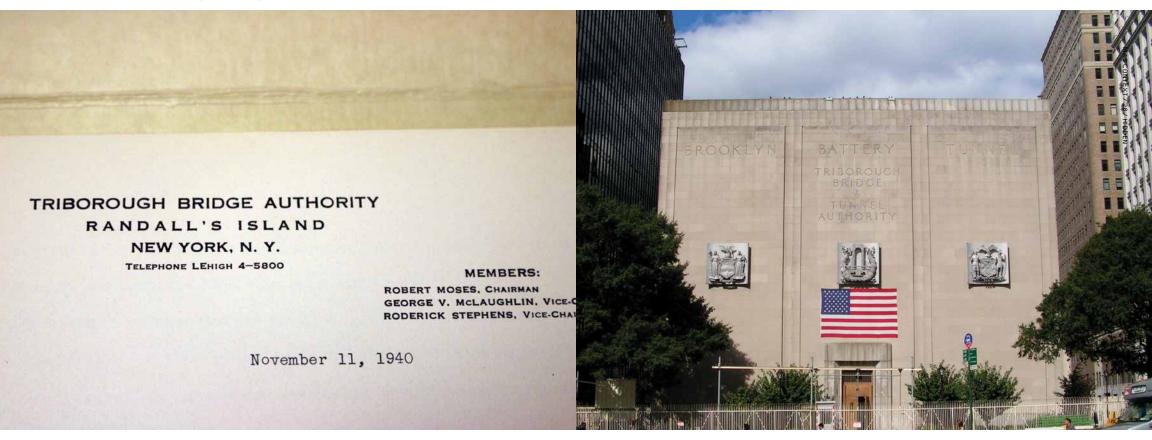
image: Sam Holleran

Before the 1950s there was little cohesive branding. Companies and government agencies did not have style guides, and made use of a variety of logos, stationary, and marks. Triborough was no different; it would often employ New York State's coat of arms and "Excelsior" motto, while occasionally dismissing it for a more modern, streamlined corporate wordmark.

image: Sam Holleran

Robert Moses with model of
proposed Battery Bridge in 1939.
One of the few moments when
Triborough Bridge Authority's
hidden powers were publicly
called into question.
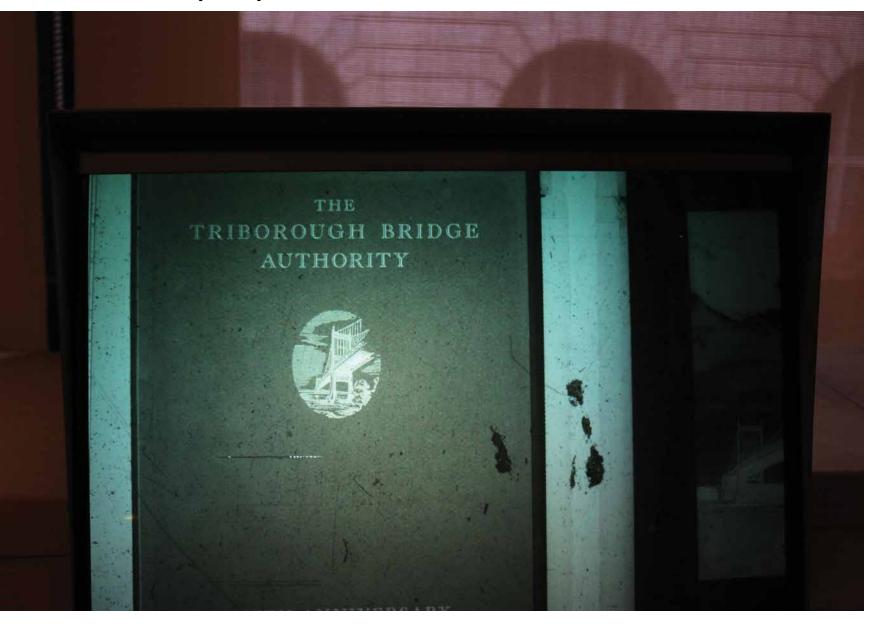
image: courtesy of the Library of Congress

TRIBOROUGH BRIDGE AUTHORITY

RANDALL'S ISLAND

NEW YORK, N. Y.

TELEPHONE LEHIGH 4—5800

MEMBERS:

ROBERT MOSES, CHAIRMAN
GEORGE V. McLAUGHLIN, VICE-C
RODERICK STEPHENS, VICE-CHAI

November 11, 1940

BROOKLYN   BATTERY   TUNNEL

TRIBOROUGH
BRIDGE
&
TUNNEL
AUTHORITY

The design of the Triborough Authority's materials spans the decades when American branding was coming into its own, commercial artists morphed into the graphic designers we know today. The innocuity of logos and the blandness of buildings created for Triborough belies the real human costs inflicted by the Authority's goliath projects.

image: Sam Holleran

The Manhattan portal to the Brooklyn-Battery Tunnel (now the Hugh Carey Tunnel), built in the solid Stripped Classicism favored by Moses, this windowless ventilation tower has been used by the *Men in Black* film series as the headquarters of a secret organization where agents and friendly aliens can meet.

image: Flickr, M. Jeremy Goldman

THE
TRIBOROUGH BRIDGE
AUTHORITY

Nowhere is the power and dynasty of Triborough more clear than in the image of the massive bridge itself.

image: Sam Holleran

The Triborough Bridge and Tunnel Authority's (TBTA) crest deployed on a tie bar. The TBTA, now part of the Metropolitan Transportation Authority (MTA), still has nearly 1000 officers in law enforcement and toll collection, who have distinct heraldry, uniforms, and insignia.

image: copshop.com, wikimedia commons

Triborough's crest features a wise owl and industrious beaver flanking the bridge's tower. In the postwar era the relative independence of agencies like the Port Authority and the Triborough Authority was seen as a plus point—they were capable of cutting through red tape, bureaucratic dithering, and political corruption.

image: wikimedia commons

The popularity of authorities was often linked to the perception that they were entirely self-paying.
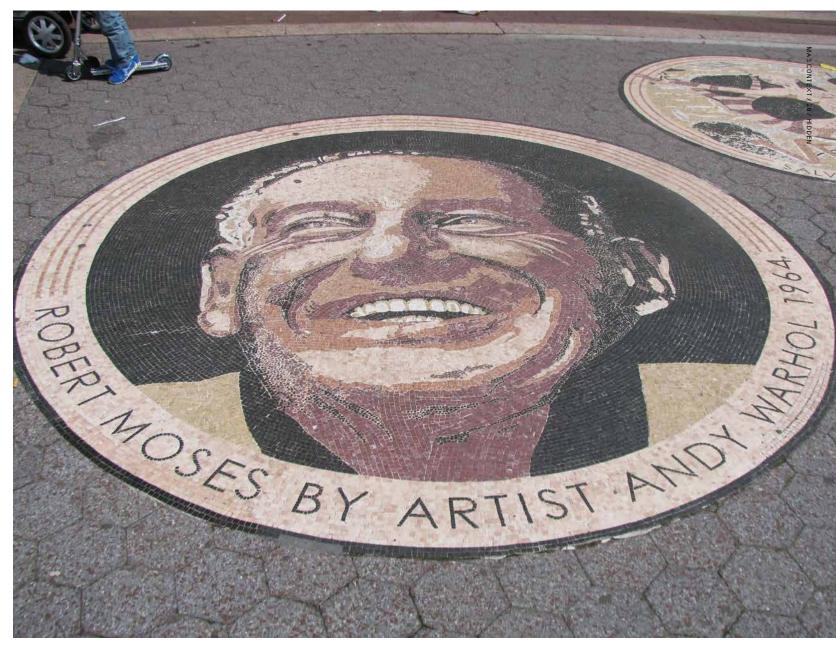
image: Sam Holleran

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The Triborough Bridge Authority Administration Building on Randall's Island was built in 1936; it was from this relatively undistinguished three-story office complex that Robert Moses built many of New York City's largest public works.

image: courtesy of the author

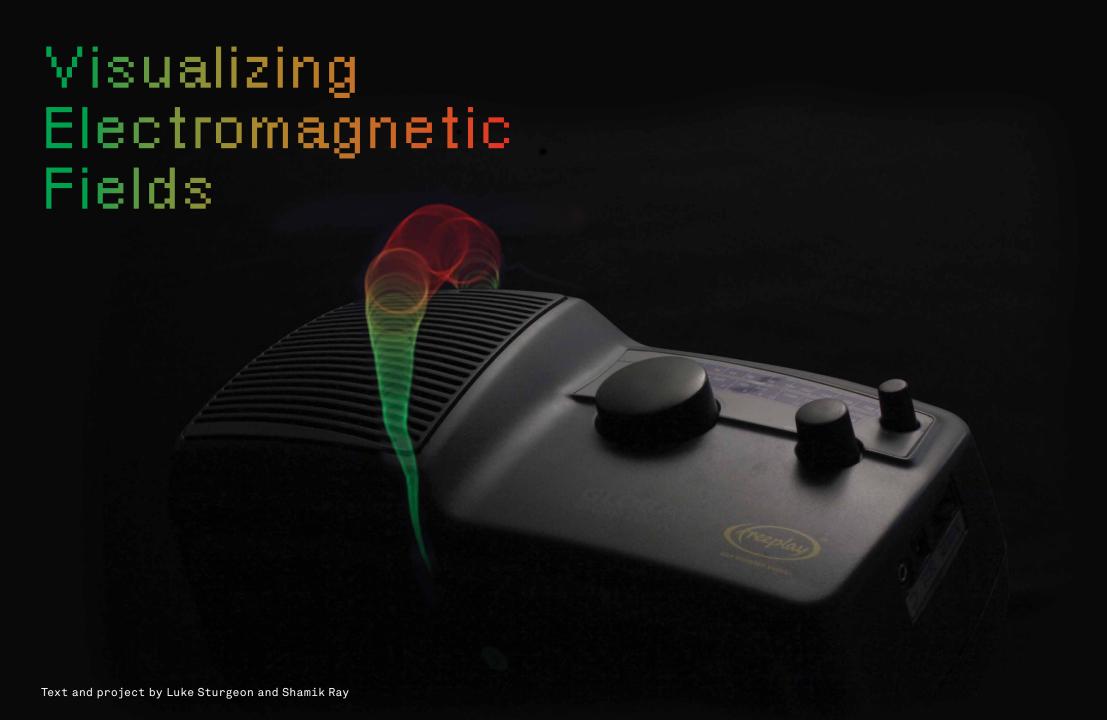ROBERT MOSES BY ARTIST ANDY WARHOL 1964

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY
Triborough Station, Box 35, New York, New York 10035

TBTA

By the late 1960s when Robert Moses had finally fallen from power, the Triborough Authority was absorbed into the MTA. A lockup from the early 1970s shows the Authority's letterhead, flanked on one the right by the old TBTA logo, and on the left by the two-toned "M" logo, designed by the firm Peter Muller-Munk Associates and introduced in the late 1960s in conjunction with Massimo Vignelli's systemization of MTA signage.

image: Flickr, AllWaysNY

Without a clear graphic identity, Triborough was often attached to the image of Moses, his imposing figure and "swarthy" smiling face (the good looks, ancestry, and phenotype of the "olive-skinned, big-eyed" Moses are thoroughly inspected in Robert Caro's *Powerbroker*) became a proxy—the visible tip of a vast and largely-submerged organization.

image: Flickr, Eden, Janine and Jim

Visualizing Electromagnetic Fields

Text and project by Luke Sturgeon and Shamik Ray

This project developed from a desire to address a growing concern within design and design research. As designers, scientists, and engineers, we often use and talk about hidden and invisible technologies.[1] Yet how can we be sure that our own mental model of these technologies is accurate and is a mental model shared by others, most importantly our target audience?

In recent years the design industry—those who work primarily in the consumer market, producing products, services, and systems for human use—has actively promoted the use of "seamlessness" in design proposals and creative solutions. Despite relatively limited critical debate surrounding this approach, Matt Ratto's *Ethics of Seamless Infrastructures: Resources and Future Directions* raises important questions about the act of deliberately making invisible—or hiding—many of the technologies that make a system or product function in a desired way. As a critical rejection of the "making invisible" of everyday technology, and that which Bruno Latour terms the intentional blackboxing of technology, this project was intended to do more than visualize data. The focus of the project was to enable communication and discussion around hi-tech and emerging technologies within the public domain, and to bridge the gap between design, engineering, and end-user of these "hidden" technologies.

As strong advocates of a learning-by-doing approach to work, it was through playful but deliberate visual experimentation that we developed a method for understanding and discussing the practical and material qualities of electromagnetic fields.[2] Through experimentation we developed an understanding of both the photographic principles and limitations of light painting, and the powerful technologies available to us inside a mobile phone. Using the open-source programming language Processing[3] and the open-source Ketai[4] software library, we developed our own data visualization application by accessing real-time information from a phone's magnetometer sensor. We described this custom drawing tool as a digital light-painting brush that works on any mobile phone, which only leaves a mark when it's passing through an electromagnetic field.

The creation of a very simple software tool enabled us to experiment with different visual languages that might help us communicate and visualize the material qualities of the electromagnetic fields that can be detected around everyday objects—to navigate across the unfamiliar and invisible landscape of hertzian space.[5] Shape, size, color, speed, depth, resolution, and time were all parameters that could be adjusted for each image. Through experimentation we arrived at a limited palette that could be successfully and repeatedly used to visualize and compare the electromagnetic field surrounding any everyday technological object.

The final images were published in a public Flickr group titled "The Secret Life of Everyday Objects," a decision that allowed anyone around the globe to access and contribute to the project, participating in a common discussion around invisible phenomena and hidden technologies. In addition Vimeo was used to host a short video that documents the entire image-making process so that anyone can download the tools we designed and create their own images, contributing by optionally sharing on Flickr.[6]

This open approach to the project caught the attention of the Science Museum, London in late 2014, who approached us to run a participatory workshop. Taking our method of combining technological and photographic techniques, we allowed a small group of participants to explore the museum's own collection of everyday objects that spans over a century of human innovation and inventions.

Participants of the workshop had backgrounds that ranged from photography, design, and art to software engineering, social sciences, and business strategy. They all shared a common interest in both understanding more about this unseen technology, and experimenting with visual ways to communicate the invisible. Participants were paired and each given a camera, tripod, and blacked-out photography station. Through hands-on learning and collaboration they were about to develop thorough understanding of light painting and electromagnetic fields using our custom tool,

within a few hours. Collectively producing over three hundred photographs, they were presented by each pair at the end of the day, describing their own methods, hacks, and experimentations alongside the visual output.

In the end, the project has resulted in a better understanding and case-study for the engagement of a wider audience in the conversations around technology, design and science. Through the careful representation of information in an accessible and comprehensible visual vocabulary, open discussions can be achieved across discipline and regardless of technical experience. Provoking conversation and new work, through the collaboration of different disciplines.X

[1] We define "invisible" data as "statistical information and phenomenological data that describes the material properties of a phenomena that cannot be seen naturally by the human eye."

[2] "It is only through a process of exploration and revelation that we are able to develop our 'object-world' understandings as designers, in order to assemble new perspectives on, and meanings around, emerging technology." Timo Arnall, "Making Visible: Mediating the Material of Emerging Technology" (PhD diss., Oslo School of Architecture and Design, 2014).
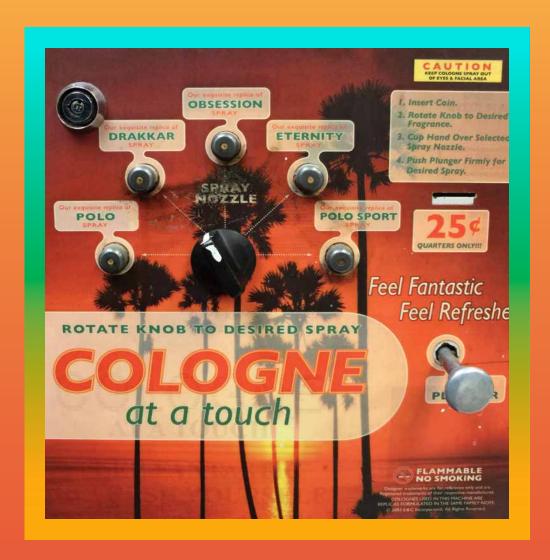
[3] "Processing Programming Language," accessed January 4, 2016, https://processing.org/.
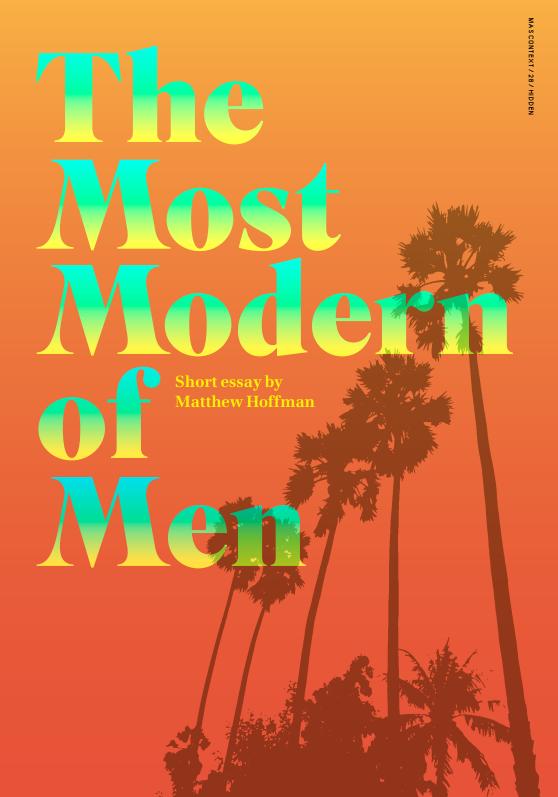
[4] "Ketai Library for Processing," accessed January 4, 2016, https://code.google.com/p/ketai/.

[5] Anthony Dunne, *Hertzian Tales* (Cambridge: MIT Press, 2008).

[6] "Visualizing Electromagnetic Fields," accessed January 4, 2015, https://vimeo.com/65321968.

The Most Modern of Men

**Short essay by
Matthew Hoffman**

While my wife and I were traveling through upstate New York late at night this past summer, we pulled off the highway to make a pit stop. We followed directional signs and pulled into the parking lot of Love's Travel Stop a few minutes later. It looked like it hadn't been touched since the 80s. It was a low-slung building turned at a 30-degree angle to the road. It was clad in cheap wooden siding and surrounded by yellowing street lamps that cast lazy circles around the parking lot. We worked our way inside, past the Day-Glo tchotchkes, single-serving Tylenol, and rotisserie hot dogs, while news of ISIS played on the TV. In the bathroom was a cologne dispenser that offered the following selection: Polo, Drakkar, Obsession, Eternity, or Polo Sport. Scattered throughout the dining space were truck drivers from all corners of the continent. A few wore wrinkled faces and wiry *Duck Dynasty* beards, while others looked like they just turned seventeen. Things were generally quiet. There were a few small groups talking, but most were sticking to themselves, reading a book, or watching the TV.

A soft static over the intercom, and then: "*Ticket number 113 to shower stall 4.*"

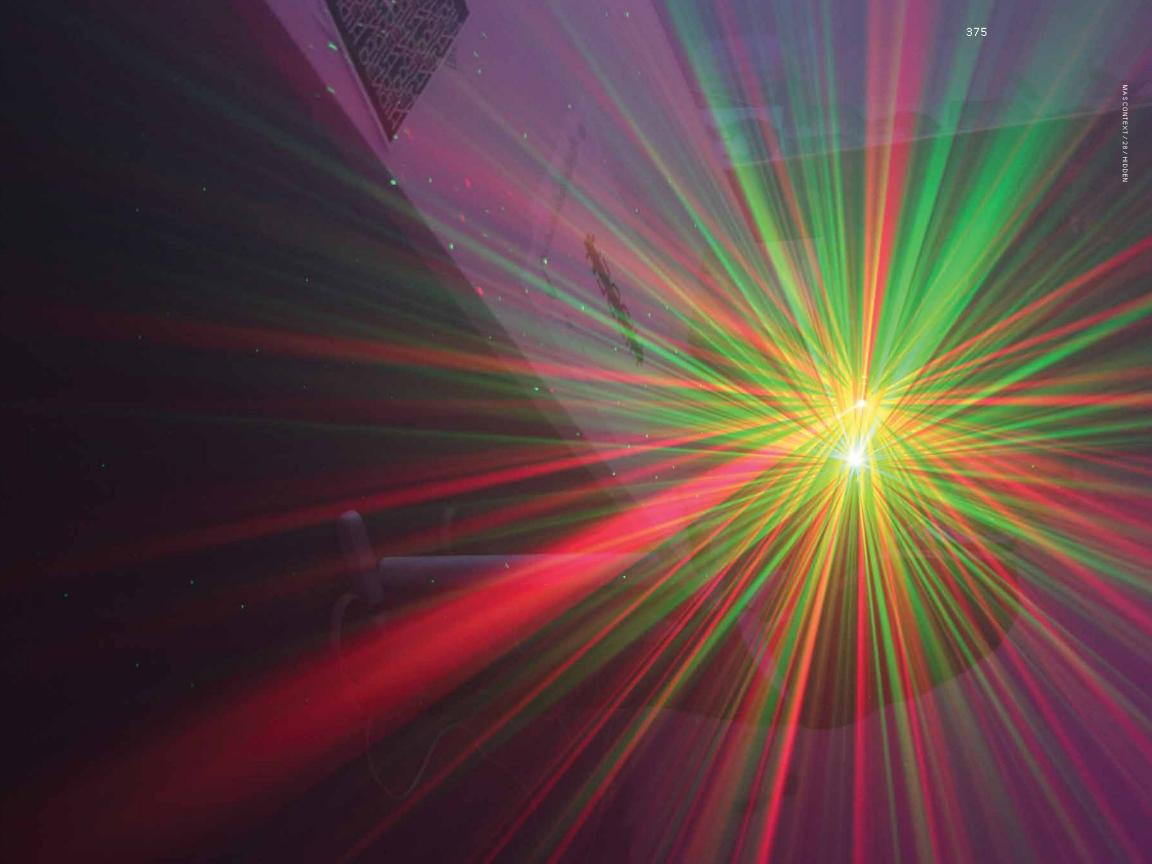I watched as a single driver trundled off for his allotted shower time.

I was struck at how incredibly modern it all was. It was perhaps one of the most progressive spaces I had been in. While a majority of America still lives in housing that hasn't changed significantly in the past few decades, here was a group of individuals that live largely without a stationary home that stop only to refuel, grab food, take a shower, and stretch their legs. Their modernity isn't one of hoverboards and tweetstorms—it is one of non-ownership and transience. The truck stop fulfills all of their needs in one compact building.

My wife and I sat at a table far from the entrance of the stop and ate a snack that we picked up from the counter. I was overwhelmed with a bittersweet emotion. It was equivalent to entering an alternative reality, and knowing that you'll never be back. That truck stop had its own culture and logic and value systems. It was lightly based on my own reality, but made its own rules to serve its own needs. The individuals inside had their own lives, and they were far different than my own.

That truck stop was the perfect social condenser. It was an extension of the 60s counterculture. It embodied the dream of the Situationists. It was the ultimate Metabolist structure. And it will remain hidden from most of us. X

PRE OCCU PIED

Words by Naomi Evans
Illustrations by Julio Brenes

Our cities are the playgrounds in which people and places collide. A walk through its streets might reveal any number of sparkling moments in shops, offices and restaurants. Windows and doorways hint at activity beyond…people together, and people on their own. Stairways and elevators beckon us to discoveries on rooftops above, and in basements below. There is so much to see if we are aware enough to notice! And yet, how easy it is to miss the details of life when we are preoccupied in our own space; lost in our thoughts…faces glued to our phones…headphones on and music blaring.

Yes, we are a part of our glistening cities. But so often we're oblivious to the lives being lived around us because we are absorbed, distracted, or disinterested. In a preoccupied daze, moments of public life may go unnoticed…and become effectively "hidden."

It is with this in mind that we present Preoccupied, a series of urban vignettes in rhyming stanza that illustrate missed moments in public life. Each verse features a different character, and collectively they form a familiar portrait of contemporary society. The characters represented may be well intentioned, but they fail, nevertheless, to see beauty or opportunity around them, and behind a veil of distraction the city is hidden. X
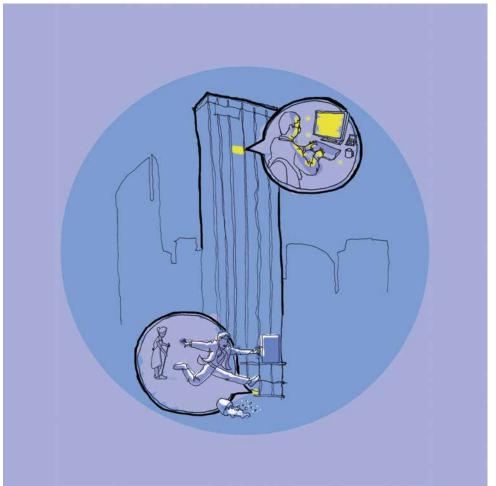
High above the footpath in a city skyscraper
sat a man at his desk, he was a software creator.
He had a wife and three kids who he couldn't wait to see
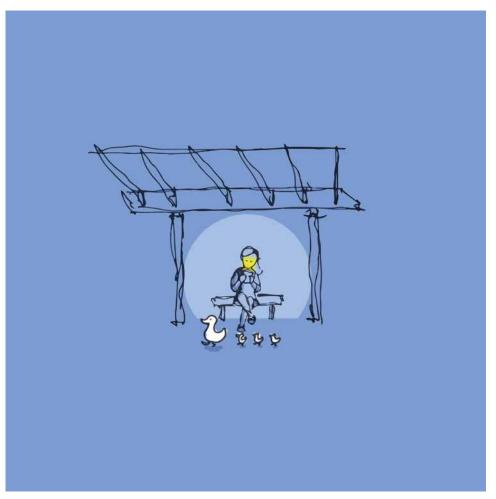At the end of each day, before bath time and tea.
When 5:30 came he was determined to beat
the peak hour rush that crowded the streets.
Had he not been in a hurry as he flew out the door,
he might have noticed the cleaner (she was mopping the floor).
But as it happened, he wasn't even aware
that he knocked over her bucket as he raced down the stairs.

Daisy Delaney was an average school girl,
Facebook and Snapchat and Insta were her world.
When she went out with friends, and when she was alone
she was always fiddling with her iPhone.
One morning she sat as she waited for the bus
when a duck and her ducklings decided to pass.
If her eyes had not been glued to the screen,
Daisy would have cooed at the sweet little scene.
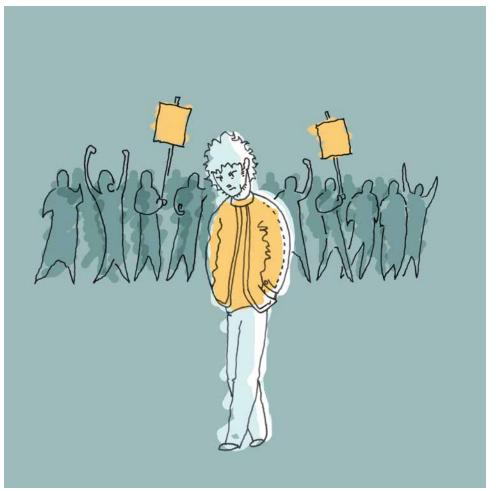But as it happened, she did not see
mother duck waddle by with her family.

A man with a mortgage left work very cross,
because he'd misplaced receipts, and had a row with his boss.
He threw open the door and stormed out to the street,
his hands in his pockets, his eyes at his feet.
Lost in his thoughts he did not notice
a passing parade, a political protest.
Had he not been engrossed in his own bitter thoughts
he might have joined in the rally to support a good cause.
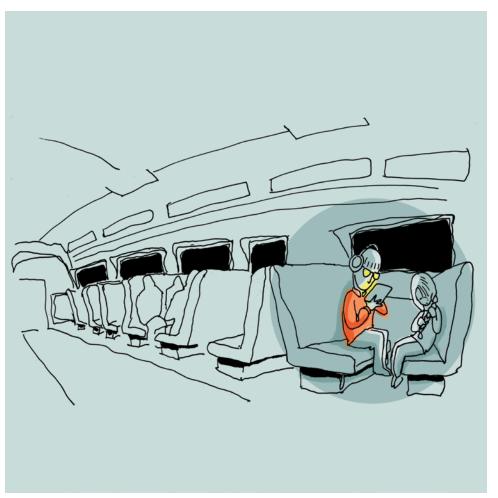But as it happened, he did not see
the crowd giving voice to what they believe.

On the 9:15 train young Timothy sat
next to a girl with a long golden plait.
He scrolled through his playlist and eventually chose
"Around the World" by Natalie La Rose.
With his headphones on he did not hear
a gentle sniffle as the girl shed a tear.
Had the volume been lower, or the tempo been light,
he might have heard her and asked if she were alright.
But as it happened, he did not see
the girl cry quietly in her misery.

Lily Lamont was dressed very fine;
in a suit made of silk she looked simply divine.
Because she was famous she was accustomed to hide
behind glasses and a hat with a brim very wide.
As she left the hotel with her entourage
she was carefully concealed in her camouflage.
Had she lowered her glasses and lifted her eyes
she would have noticed the sunset as it colored the sky.
But as it happened, she did not see
the pinks, golds, and reds spread over the city.

Emily Louise Allen explores design agency within both physically and socially constructed landscapes. She is currently a Master in Landscape Architecture I Candidate at the Harvard Graduate School of Design. Emily graduated cum laude from New York University Gallatin, where she concentrated in Sustainable Urban Design and Planning. Emily's work has been featured in the *New York Times*, the *Greenpoint Gazette*, *Ink!*, *NYU Alumni Magazine*, and on *ABC News*.
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Chris Bennett is an architect, designer, and researcher from Chicago, Illinois. His work focuses on large scale urban processes that expand beyond the typical building site, questioning how to operate in the built environment as well as post-industrial landscapes. He holds a Master of Architecture from the University of Michigan with High Distinction, and a Master in Design: Urbanism, Landscape, and Ecology from the Harvard University Graduate School of Design with Distinction.
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Roberto Boettger is an architect trained at the Architectural Association and based in Rio de Janeiro and London. He has worked in The Netherlands with OMA and contributes to *The Architectural Review*, *Domus*, and *AU*.

Julio Brenes is a Melbourne-based illustrator and architect. He has practiced in both his native Costa Rica and Australia. Julio has taught at the Canberra University Design School and participated in Urban Art interventions. The declining practice of freehand drawing within the architectural industry led Julio to facilitate regular outdoor sketching groups for architectural professionals in Melbourne. His drawings and writings are published on his blog.
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Odile Compagnon is an architect with a practice in Chicago and Paris, and a professor at the School of the Art Institute in Chicago. Her area of expertise is the development of civic spaces serving communities whose needs reside at the intersection of architecture, urbanism, and performance.
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Counterspace is a Johannesburg-based collaborative studio of young architecture graduates, established in 2014 by Sarah de Villiers, Michael Flanagan, Amina Kaskar, and Sumayya Vally. Counterspace is dedicated to research-based projects, which take the form of exhibition design, competition work, urban insurgency, and public events. Their work is predominantly concerned with ideas for future and otherness; it plays with image and narrative as a means of deconstructing and reconstructing space and city and aims to incite provocative thought around perceptions of Johannesburg.
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Leandro Couto de Almeida completed a Bachelor of Architecture at Fluminense Federal University, Brazil. His work has been exhibited at the São Paulo International Architecture Biennale, the South American Landscape Seminar, and the Companhia Brasileira de Trens Urbanos. Currently, he is a Master in Landscape Architecture candidate at the Harvard Graduate School of Design.

Patxi Eguiluz is an architect with more than fifteen years of experience in building construction and urbanism. His work has received multiple awards and has been published internationally. He is a permanent contributor to the Spanish edition of *Architectural Digest* (AD España).
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Naomi Evans is a Melbourne-based architect and writer. A graduate of both the University of Melbourne and RMIT University, Naomi has since worked on a number of significant public architecture projects in Australia and abroad. She has written for publications in the UK and Australia and writes for her blog Melburnienne.com.
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Iker Gil is an architect, urban designer, and director of MAS Studio. In addition, he is the editor in chief of MAS Context. He is the editor of the book *Shanghai Transforming* (ACTAR, 2008) and has curated several exhibitions, most recently "BOLD: Alternative Scenarios for Chicago" as part of the Chicago Architecture Biennial. He is the recipient of the 2010 Emerging Visions Award from the Chicago Architectural Club and has been recognized as one of "Fifty Under Fifty: Innovators of the 21st Century" by a jury composed by Stanley Tigerman, Jeanne Gang, Qingyun Ma, and Marion Weiss.
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Luke Hegeman is a landscape architect and designer from Green Bay, Wisconsin. He is the founder of MODUS Collective, an aerial analysis and cinematography firm focused on utilizing unmanned aerial systems to investigate new frameworks for analysis and visual representation. Luke holds a Bachelor of Science in Landscape Architecture from Colorado State University and a Master in Landscape Architecture from Harvard University Graduate School of Design.
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As Madeline Gins once defined him, Matthew Hoffman is an architectural "coordinologist." Matthew founded Blank Space, an online platform for architecture, in 2013 with Francesca Giuliani. Through competitions and publications, Blank Space uncovers the true power of architecture by creating new opportunities for design to engage the public. Matthew has collaborated with C-LAB, HWKN, Polar Inertia, and Bruce Mau Design.

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Sam Holleran is an interdisciplinary artist, writer, and educator. He is the Participatory Design Fellow with the Design Trust for Public Space, working with the Queens Museum and the New York City Department of Parks and Recreation to engage communities surrounding Flushing Meadows Corona Park. He also works with the Center for Architecture and the 92Y, developing art, architecture, and urban design curriculum for public high school students.

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Tom James is a writer, self-publisher, and artist based in London. His projects have included imaginary tourist boards, fanzines about cities, and a heroic-but-doomed attempt to reuse a pair of abandoned cooling towers as spaces for public art. His work has been featured across the British press, and his fanzine project, *GO*, is held in the permanent collection of the V&A. He's currently producing a DIY guide to surviving in the bitter, barren future we're creating for ourselves, which is a laugh a minute.

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Rene Kersting, born 1989 in Düsseldorf, first studied architecture at the Peter Behrens School of Arts. Since 2013 he has been studying architecture with Calle Petzinka, Max Dudler, and Nathalie de Vries at the Kunstakademie Düsseldorf. In 2015 he received the Gargonza Arts Award for architecture. In his dispute over architectural ideas he works with different methods—especially photography.

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Sergio Lopez-Pineiro designs and writes about gaps found in everyday spaces and appearing due to mismatched relationships between social structures and spatial organizations. As the founder of Holes of Matter, he gives form to these gaps in buildings, landscapes, and cities. Lopez-Pineiro is a Lecturer in Landscape Architecture at the Harvard Graduate School of Design, where he held the 2014–2015 Daniel Urban Kiley Fellowship. He has taught widely, primarily at the University at Buffalo, where he was the 2006–2007 Reyner Banham Fellow.

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Reinaldo Loureiro works with found and archival images, together with his own photography, creating photographic essays that address the complexity of migratory movements in the present context of political and economic inequality.

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Geoff Manaugh is a freelance writer and curator, as well as the author of BLDG-BLOG, a website launched in 2004 to explore "architectural conjecture, urban speculation, and landscape futures." His latest book, *A Burglar's Guide to the City*, about the relationship between burglary and architecture, is forthcoming from Farrar, Straus and Giroux in April 2016.

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> @bldgblog

Julie Michiels is a contributing editor to MAS Context as well as an architect and senior project designer with Perkins+Will. With a focus on shaping how people experience interior spaces, she has worked on projects that range in location, scale, and program, from pre-K, to international transit hubs, workplace, and residential.

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Conor O'Shea is a landscape designer and urbanist based in Chicago, Illinois where he is Visiting Assistant Professor in the Master of Landscape Architecture program in the College of Architecture at the Illinois Institute of Technology. In 2014 he founded the design research office Hinterlands Urbanism and Landscape. His current research uses critical urban theory to inform contemporary landscape architectural theory and design research.

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Jennifer Park is principal and owner of Jurassic Studio, a firm exploring form, patterns, composition, and their translation into our social context. Jennifer received a Bachelor of Arts in Architecture and Art History from Columbia University in New York and her Master of Architecture from the University of California, Los Angeles. She currently serves as an adjunct professor for the College of Architecture at Illinois Institute of Technology.

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Shamik Ray is an interaction designer who believes that design is a force multiplier to create better lives. Currently he is a Design Lead in the Barclays Global Design Team in London, UK and working on the "Future of Banking" by bringing his Interaction and Service design expertise. He also spends time connecting the startup and corporate world by being an active mentor under the Barclays Accelerator and Rise programs. Having graduated from the Copenhagen Institute of Interaction Design and Indian Institute of Technology, he believes in designing not only "for" people but also "with" them, putting a lot of emphasis on prototyping from early stages of the design process. His favorite materials are paper and wood and lately code and electronics.

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Charles Rice is Professor of Architecture at the University of Technology Sydney. He is the author of *The Emergence of the Interior: Architecture, Modernity, Domesticity* (Routledge, 2007) and *Interior Urbanism: Architecture, John Portman and Downtown America* (Bloomsbury Publishing, 2016).

Andrew Ruff is an architect, educator, and writer whose work examines the "unknown" as a spatial construct intimately bound to our understanding of architecture and the natural environment. He is currently a Research Associate with Gray Organschi Architecture and has held teaching positions at Wesleyan University, Yale University, and Georgia Tech.

Dan Rybicky is an award-winning artist and teacher whose photographs, installations, and plays have been seen in venues in New York, Chicago, and Los Angeles. After receiving his BA at Vassar College and his MFA at NYU's Tisch School of the Arts, Dan began working with and consulting in various production capacities for filmmakers Martin Scorsese, John Sayles, and John Leguizamo. Dan recently directed the feature documentary *Almost There*, which screened at over thirty film festivals in 2015 before being distributed theatrically and digitally throughout the world. Dan is currently an Associate Professor in Cinema Art + Science at Columbia College Chicago where he designs and teaches both graduate and undergraduate courses.
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David Schalliol is an assistant professor of sociology at St. Olaf College who explores the transformation of urban centers through hybrid ethnographic, filmic, and photographic projects. His work was recently featured in the Chicago Architecture Biennial, and in 2014 the Japanese publisher Utakatado released his first book, *Isolated Building Studies*. Schalliol contributed to *Highrise: Out My Window*, an interactive documentary that won the 2011 International Digital Emmy for Non-Fiction. His current film project, *The Area*, is about the displacement of more than 400 families by the expansion an intermodal freight terminal.
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Theo Simpson lives and works in the South of England. His works examine and document British material culture and heritage through the examination of the built environment, vernacular architecture, and objects of the everyday. Simpson's work has featured most recently in *Shooting Space: Architecture in Contemporary Photography* (Phaidon, 2014) and exhibited at RIBA in London. His work is also held in various international public collections including the V&A National Art Library, Fotomuseum, Winterthur, and the Tate Artists' Book Library.
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Smout Allen is a London-based studio funded by Mark Smout and Laura Allen. Their work takes two routes: (1) architectural competitions, where the particular rigor of the competition brief, site, and program provide the basis for new investigations, and (2) conceptual design projects that test out the agenda and methodology of the design research practice. They focus on the dynamic relationship between the natural and the man made and how this can be revealed to enhance the experience of the architectural landscape. Mark and Laura are both Senior Lecturers at the Bartlett School of Architecture, UCL.
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John Stirratt is a bassist, multi-instrumentalist, and producer best known for his work in the acclaimed rock band Wilco, which he co-founded with Jeff Tweedy in 1994. Stirratt lives in Chicago with his wife Crissy and daughter Tallulah.
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Luke Sturgeon is a London-based designer with extensive experience in the design of interactive experiences, services, and tools. Through artistic exploration, collaboration, teaching, and multidisciplinary research his work finds ways to perceive the invisible world around us with a focus on the digitization of reality, self-perception, and the perceptions of others. He is a visiting lecturer at University of Herts, visiting faculty at CIID, and is currently pursuing an MA in Design Interactions from Royal College of Art.
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Jan Theun van Rees is an Amsterdam-based photographer whose work documents the inner workings and hidden spaces of buildings and visualizes interconnected spatial structures. His work has been exhibited internationally and he is the author of *One Wall Away: Chicago's Hidden Spaces* (US Equities, 2007) and *VERBORGEN STAD / HIDDEN CITY Amsterdam 2003–2013* (one wall away, 2013).
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Florence T. Twu is an emerging voice, currently working through issues of knowledge, space, and power in our contemporary political economy. In design practice, she has contributed to projects ranging from installations to supertall buildings. Her perspective reflects her education in social theory and architecture.
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Faiza Uppal is an intern at Jurassic Studio and a fourth-year Bachelor of Architecture student at Illinois Institute of Technology. At Jurassic Studio, she helps to research ornamentation, patterns, and the use of parametric tools to translate the decorative to the spatial.
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Our spring issue will feature eighteen projects that explore new possibilities for the city of Chicago. Generated by both emerging and established Chicago-based architects and designers, these projects rethink the future of the city and, at the same time, they explore the agency of the architect in shaping these scenarios. While they are generated without a client, these projects operate fully aware of the constraints and realities of Chicago with the intention to engage in fruitful conversations with public and private agencies to shape its future.

The projects featured in the issue were part of the exhibiton "BOLD: Alternative Scenarios for Chicago" included in the inaugural Chicago Architecture Biennial.

Emily Louise Allen
Chris Bennett
Roberto Boettger
Julio Brenes
Odile Compagnon
Carlos Copertone
Counterspace
Leandro Couto de Almeida
Patxi Eguiluz
Naomi Evans
Iker Gil
Luke Hegeman
Matthew Hoffman
Sam Holleran
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