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MAS CONTEXT

9| **NETWORK** SPRING 11

MAS STUDIO

MAS CONTEXT

NETWORK

ISSUE 9 SPRING 11

Chicago Constellation
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MAS Context is a quarterly journal created by MAS Studio that addresses issues that affect the urban context. Its aim is to provide a comprenhensive view of a topic by the active participation of people from different fields and different perspectives. It instigates the debate.

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9 | **NETWORK** SPRING 11

We live in a world where everything - politics, economy, ecology, society and culture - is strongly connected. They create the apparent and illusive NETWORKS that shape our cities and the way we experience them. We explore some of them, whether physical or virtual, formal and informal, to understand their possibilities and power in our lives.

Part of your Network

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

While in our previous issue we looked at the topic of PUBLIC, in the current issue we are looking at NETWORK. Both elements have been crucial in the recent events in North Africa and are unequivocally connected. While the power of people has been the engine of the protests, telecommunication networks have been critical for their coordination. And physical networks have been equally relevant, from the public plazas used for gathering to the internet data centers disconnected by the government to control the information. Much has been written about these events but it is especially interesting in an Andrew Blum's essay in *The Atlantic* [1] where he establishes and identifies the internet choke points, physical data centers strategically located around the world.

In this issue, we look at the topic of NETWORK through a series of contributions that explore the physical and virtual relationships that shape our lives. One of the goals of MAS Context is to organize events that generate a discussion coinciding with the topics of each journal. For the event related to this issue, my design office, MAS Studio, along with the Chicago Architectural Club, organized NETWORK RESET, an international design competition to rethink the Chicago Boulevard System. With proposals received from all over the world, inside this issue you will find the winning entries as well as the honorable mentions.

Continuing with the exploration of physical infrastructures of Chicago, Bruce G. Moffat uncovers the freight tunnels that lay beneath the Loop. Currently housing communications and high voltage electrical conduits or lying empty, during the firs half of the 20th Century they were a vital network for the city and the images from Bruce's collection are a testimony of it.

Designer Nick Axel looks at the city of Phoenix and proposes in his thesis a sprawling form superimposed over its landscape. A juxtaposing of distinct spatial ecologies that engenders a dynamic landscape of differentiation and localization.

Transportation networks have a constant presence in the city. They overlap, connect, divide, evolve and become obsolete. Photographers Marc Goodwin and Cecilia Galera document the everyday traces left during the winter by the cars, streetcars, pedestrians, skiers and boats in the city of Helsinki.

Architect Ioanna Angelidou looks into two key conditions in contemporary Japanese architecture, namely genealogy and mediation. The first is relevant to Japan's long tradition of hierarchy and apprenticeship. The second is relevant to its contact with Western culture through Modernism. The two of them together essentially constitute aspects of network and networking respectively.

Media and information are generating new opportunities based on networking. The work of Aaron Koblin, featured in our Information issue is a great example of the possibilities of this approach. In this issue, Ethel Baraona and Cesar Reyes from dpr-barcelona talk to Beatriz Colomina on the idea of blogs and on-line conversation as the little magazines of our time and they discuss if it is the new adequate forum to speculate on the future of architecture.

Our second conversation revolves around the idea of looking at the city through existing food networks. Sarah Rich and Nicola Twilley, founders of the Foodprint project, respond to my questions about built environments, physical networks, food behaviors, the role of design and if food can ultimately help reshape the new American city.

Architect Jesse LeCavalier explores two accounts of architecture understood and deployed as a network of connected buildings in pursuit of a territorial agenda. Looking at these two examples together helps to better understand the possibilities of architecture to operate in unison, beyond the envelope of any single building.

But this territorial network can work at different scales and contexts. This is the case of Dafen, a village on the outskirts of Shenzhen Special Economic Zone. Through the essay by Jiang Jun, the diagrams by Underline Office, and the images of photographer Haibo Yu we understand the territorial strategy and building network of this town known for its replication of masterpieces and popular oil paintings.

And to start it all off, Paddy Harrington, creative director of Bruce Mau Design, opens the issue with his essay about the power of network. Our process to create MAS Context is based on that power. It is the way we collaborate with all contributors and the way we generate each issue. Let us be part of your network, connect with us.

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1. http://www.theatlantic.com/technology/archive/2011/01/tunisia-egypt-miami-the-importance-of-internet-choke-points/70415/

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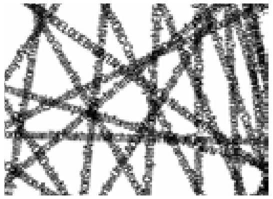

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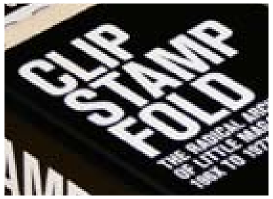
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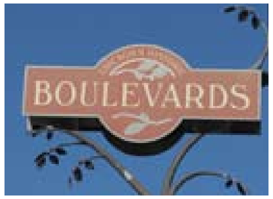
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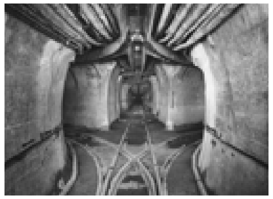

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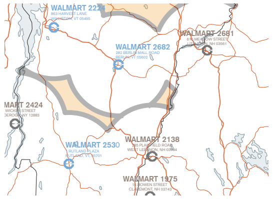
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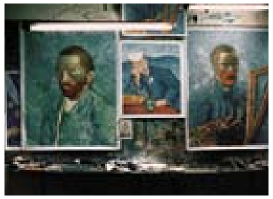

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Power of Networks

Essay by **Paddy Harrington**, creative director for **Bruce Mau Design**

facebook
December 2010

Visualizing Friendships
© Paul Butler

I was lying in bed one cold Toronto morning a few weeks ago trying to muster the motivation to go up the street for a run on a treadmill at the local gym that I'd just joined. I'd been in this situation before. Walking the thin line between yes and no and, more often than not, just staying in my warm bed. But this time was different. As I hazily mulled the decision, a thin sharp thought cut through the grogginess and moved me to action: "You have to run! You started sharing your runs on facebook!"

There has been exciting research to suggest that the power of networks to influence us is very real. In one Wired article, Jonah Lehrer writes about the power of social networks to influence individual behavior in the context of obesity. It turns out that your friends' nutritional behavior has a clear impact on your own. And, even more amazingly, the network's influence can travel great distances. "Your friends who live far away have just as big an impact on your behavior as friends who live next door," says James Fowler, a political scientist interviewed in the story. Lehrer goes on to summarize that "The individual is a romantic myth; indeed, no man is an island." [1]

Why is it that this romantic myth of the individual holds such power in our culture when we strongly recognize the power of communities, and of networks?

How do we rationalize our need for heroes with our strong sense that all of us is greater than one of us?

One clue might lie in the work of George Miller, the psychologist who founded the Center for Cognitive Science at Harvard in 1960 and who wrote the famous essay "The Magical Number Seven, Plus or Minus Two". In that essay, Miller argues that the number of items an average human can hold in working memory is 7, plus or minus 2. Further research since Miller suggests that, depending on the content, that number is even shorter. So, the most important tool we have for understanding and interpreting our world, our brain, has an almost comically limited capacity; at least when it comes to working memory. And in an environment where each one of us endures a daily carpet bombing of information, we need a short hand to sort through the chaos. We need to package complicated ideas into smaller tidy parcels. Heroes help us to do that. [2]

Heroes help us to make sense of our world. They compress complex ideas into compact packages.

Take Superman. As a cultural phenomenon, he became an icon for much of the 20th century. Over time, Superman became a symbol of the new, of progress, of integrity. In fact, if we were to unpack all the symbolism of Superman, we see that his greatest power may well be the efficiency with which he came to symbolize such a complex set of cultural ideas. You could love Superman as a savior of the American immigrant, or you could just love him because he could save your cat from a tree.

But something happened. The collective psyche began to shift throughout the course of the twentieth century and it was reflected in culture. In 1962, Mel Ramos painted a Superman who had lived through two world wars, and seen the beginning of the cold war. Things had become a little too complex for the solitary crusader to handle all on his own. Interestingly, comic books evolved to respond to the new complexity. Marvel Comics created the Avengers in 1963. In response to the shifting context, "the Avengers were born — to fight the foes no single super hero could withstand! Through the years, their roster has prospered, changing many times, but their glory has never been denied! Heed the call, then — for now, the Avengers Assemble!" [3]

What the Avengers managed to do was distill the concept of network into a singular super cool entity. We knew that there was something in the strength of the network, and now we had a simple idea that a mass audience could easily take up and carry forward. And if we look closely at the Avengers prologue, we see a couple insights that, whether consciously or unconsciously understood by the creators, outline key characteristics of the power of networks. First is the idea that there are certain kinds of challenges that a group can overcome where the individual cannot. And second, that the network need not depend on a specific set of individuals, but that the greater power lies somewhere between them all.

Today, 50 years later, the Avengers idea persists, and has been further substantiated. Kevin Kelly tells us that "a million individual minds applied to a problem are better than one. It's more likely someone will find a solution." He goes on to describe science itself as "a collective action, and the emergent intelligence of shared knowledge is often superior to even a million individuals." And finally, so that there may be no doubt, he declares that "the solitary scientific genius is a myth. Science is both the way we personally know things and the way we collectively know." [4]

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1. http://www.wired.com/medtech/health/magazine/17-10/ff_christakis?currentPage=all

2. http://en.wikipedia.org/wiki/The_Magical_Number_Seven,_Plus_or_Minus_Two

3. http://en.wikipedia.org/wiki/Avengers_(comics)

4. Kevin Kelly, What Technology Wants, 2010

There is no shortage of ideas about the power of networks. Clay Shirky tells us that it only took 1% of the time that American's spend watching television every year to create all of Wikipedia. [5]

What seems to have changed since the Avengers is the scope of the network. The Avengers concept helps us understand multiplicity as a singular idea. But what happens when membership explodes?

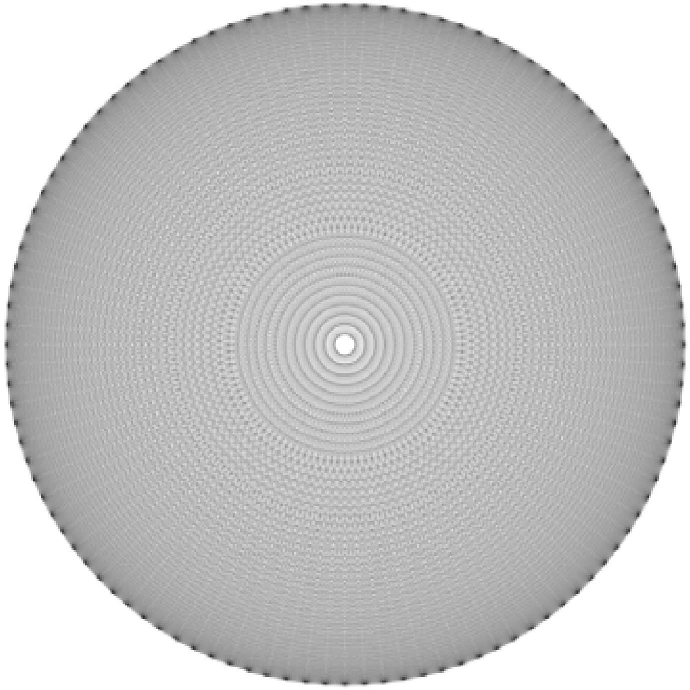
Paul Hawken talks about the power of a network that has expanded past our ability to comprehend its scale. The network he describes includes everything from "billion-dollar nonprofits to single-person dot.causes". He argues that "these groups collectively comprise the largest movement on earth, a movement that has no name, leader, or location, and that has gone largely ignored by politicians and the media. Like nature itself, it is organizing from the bottom up, in every city, town, and culture and is emerging to be an extraordinary and creative expression of people's needs worldwide." [6]

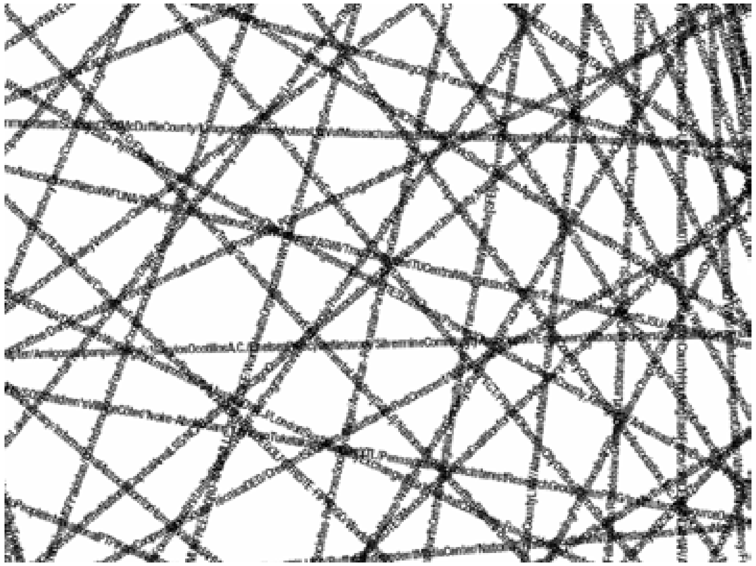
His idea is compelling because it inverts the organizational methodology of the human mind that typically starts with the top of a pyramid and builds downward. He starts from the bottom, and the base is incomprehensibly gigantic.

The artist Chris Jordan's work "E Pluribus Unum" attempts to visualize this complexity. It's a large artwork, 24x24 feet. And it "depicts the names of one million organizations around the world that are devoted to peace, environmental stewardship, social justice, and the preservation of diverse and indigenous culture." We know that the number of such organizations floats somewhere in the range of one and two million. And that number is growing. [7]

What strikes you when you look at the work online is that our eyes simply can't discern the intricacy and detail in the work. When you zoom way in you can make out the names, but at a certain point when zooming out, it dissolves into an abstract graphic pattern. And that's only one million names. Our world population is more than six billion.

Douglas Adams, the science fiction author, wrote, in the "Hitchhiker's Guide to the Galaxy", about a race of alien beings who build the universe to house a great machine to find the answer to everything. That machine is the earth. But when they build the universe they make it slightly smaller than infinity so that the human beings on earth could begin to comprehend it. With Hawken and Jordan, you begin to get a sense of the wisdom of that decision.





"E Pluribus Unum"
2010
Chris Jordan

24x24 feet, laser etched onto aluminum panels

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[5] http://www.herecomeseverybody.org/2008/04/looking-for-the-mouse.html

[6] http://www.blessedunrest.com

[7] http://www.chrisjordan.com/gallery/rtn2/#seeds

In the face of all this complexity we have to ask: what's the value? The network is huge, but how does that help me if I can't comprehend it? Well, for one, we know that things at that kind of scale have a complexity that can't be controlled by any single individual. And that's a good thing. In his article, "A Physicist Solves the City", Lehrer writes that "cities are unruly places, largely immune to the desires of politicians and planners... Cities can't be managed, and that's what keeps them so vibrant. They're just these insane masses of people, bumping into each other and maybe sharing an idea or two. It's the freedom of the city that keeps it alive." And cities innovate their way out of crises. When confronted with a shortage of resources, the sheer intensity of ideas produces solutions that solve the collective issues facing the city. The power of the network is far greater than the power of the individual. [8]

That doesn't mean you don't need talented individual effort. But it does mean that we have to get past the idea of the solitary genius. Brian Eno has a concept called 'Scenius'. It's that which "stands for the intelligence and the intuition of a whole cultural scene. It is the communal form of the concept of the genius." [9]

Every movement has its figurehead, but the risk comes when we do not recognize the individuals that make up the rest of the scene and the movement.

When we encourage a culture of the hero, we defer individual responsibility. When we come up against the limits of a challenge, it's easy to defer to the hero figure and expect that they will resolve the conflict. But to live that way is to live a shadow life, when really, for the force of the network to find its full potential, each member must take part in the assembly against the 'common threat' and deploy the full extent of one's capacity to solve the task at hand. When we can shift our thinking from passive waiting to active and vibrant participation then the network feeds itself and becomes more powerful. The individual is empowered and the collective can produce staggering transformation, innovation, excitement, vitality, life, love, change, strength, heart, intelligence, beauty, and ten million other ideas that we can only begin to comprehend.

But this isn't a rejection of Superman (or Superwoman). The hero is indispensable. The hero helps give direction in darkness. The hero inspires. The hero teaches through experience. But the hero is ubiquitous, in varying stages of emergence, in each member of the network.

We still gravitate towards individual icons. We still take comfort in the relative ease with which we can comprehend the basic unit of human existence, the individual. In an increasingly chaotic era, we need this simplicity more than ever. We have to embrace our human need to make things simple, but we also have to find non-reductive ways of understanding our world. As Einstein (a true hero) said, we need to make things as simple as possible, but no simpler. It takes a perception shift. We have to get to a simple concept that comes to signify the incomprehensibly deep and vast power of networks. We shouldn't let our need for the comfort of the singular hero to deny us the potential of the network.

I'd argue that there's great comfort in the idea of the incomprehensible network. Essentially it's the idea of family. And there's beauty in that. What if we were to build a table around the equator with a seat for every person on earth for one big family dinner? Imagine what such an act of singular focus might accomplish! The seal of the United States says: "E Pluribus Unum". Out of many, one. That's not as relevant anymore. We live in an era of "E Pluribus Magis". Out of many, more.

The potential of networks is beyond exciting. The 500 million facebook users spend 700 billion minutes a month on the social networking site. That equals 36,000 years of time, every month. That means that facebook users spend a total of 15,981,735 years on facebook... every year. Think about what we could do if we diverted a fraction of that time to improving our world. Imagine the opportunity that exists for those who figure out how to make it easy to do. It doesn't have to be complicated. In fact, it should be easy and fun. It's about designing the experience to leverage the special characteristics and properties of the network. [10]

Who knows, maybe I'll regret that gym membership. Maybe I'll end up quitting after a few guilt ridden months. But maybe the power of networks will keep me at it. Hopefully my friends will keep pushing me along. I know that I'll be better off if that happens. And I'm pretty sure that the network will be better for it too.

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[8] http://www.nytimes.com/2010/12/19/magazine/19Urban_West-t.html?pagewanted=6

[9] http://www.kk.org/thetechnium/archives/2008/06/scenius_or_comm.php

[10] http://www.facebook.com/press/info.php?statistics

From Xerography to HTML

Ethel Baraona and **César Reyes** from **dpr-barcelona** interview **Beatriz Colomina**, architectural historian and theorist.

If we think about the explosion of little architectural magazines in the 1960s and 1970s as the instigators of the radical transformation occurred in the architectural culture, enhanced by the access to new reproduction devices as xerography and photocopy; we can talk now about networking, supported by wide TIC access and 2.0 web phenomenon, as a new way to explore the world. Under these conditions media and information reveal as a new ship to explore the global map in several unexpected ways, a path to create new cartographies based on networking that generates this new terra incognita. As examples there can be stated some networking initiatives such as "Reading The Infrastructural City" [1] or discussions like the "Glass House Conversations" [2], which are aimed to expand the concept of books and traditional publications. Colomina answers our questions on the idea of blogs and on-line conversation as the little magazines of our time and we discuss if it is the new adequate forum to speculate on the future of architecture.

We have invited Beatriz Colomina to discuss her research and focus not only on the past, but using this experience, to talk about the future; the network phenomenon as substrate to create a new relevant group of forward-thinkers for the near future.

The interview was done at the last Beyond Media Festival in Florence (2009), coinciding in time with the Clip/Stamp/Fold exhibition she curated travelling around the world.

CLIP STAMP FOLD
THE RADICAL ARCHITECTURE OF LITTLE MAGAZINES 196X TO 197X
ALLES IST ARCHITEKTUR
megascope two

Book cover of *Clip/Stamp/Fold* published by ACTAR (2010)

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1. http://m.ammoth.us/blog/2010/03/reading-the-infrastructural-city-proposal/
2. http://glasshouseconversations.org/

DPR: Good morning Beatriz. First of all, and to start with a complete understanding of your work, we want to know how and why you started working on the *little magazine*'s subject?

BC: Well... with the little magazines, it's easy to understand. They not only interest me as an external subject, the thing is that I was part of that movement. When I was in Barcelona, we started working on *El Carrer de la Ciutat*, within the political conflicts that happened in Spain in the times of Franco. Before *El Carrer de la Ciutat*, there was a bulletin called *El Bulletí*, focused more on political issues and we wanted to go on when they closed.

In this context, *El Carrer de la Ciutat* [3] was halfway between political pamphlet and scholarly review. Expendable but necessary, the magazine was a consequence of the urgency of the Spanish political transition and the institutional renovation of the School of Architecture of Barcelona. With the experience of being part of the editorial board of the publication, I now try to explain how the communication media allows other ways of thinking and working.

DPR: We visited the Clip/Stamp/Fold exhibition in Barcelona and saw the original layouts of *El Carrer de la Ciutat* and *Arquitectura Bis*. How did you manage to work on each issue?

BC: We used to work with handmade DIY techniques and the thermal printing that were developed around 1972. Using this new techniques, we had a whole technique, we had a whole new world to explore. We worked every time in a different place, such as the room of the architecture department of the school, in a completely amateur way of working. All the team was passionately involved, people like Txatxo Sabater and Helio Piñón, who were of the same generation as Quetglas, but mostly all of us have been students of Joseph Quetglas and the generational gap was important at that time. He always used to have a team with young students.

> **"The determination of the authors of Carrer de la Ciutat was visible from the very beginning. In 1977, they conceived a magazine that would coincide letter for letter with Das Andere, the Viennese magazine that Adolf Loos published in 1903. This began by clipping the ITC Golden Type from Das Andere's pages to compose Carrer de la Ciutat's title block. Later, Carrer de la Ciutat would adopt some of the literary disguises of its model. Its advertisements, conceived as civilizing recommendations for the public, were cutouts from little architecture magazines of the 1910s and 20s rather than contemporary commercial sponsorships. By 1980, the process of replication reached its apotheosis, with issue 9-10 reproducing and translating Das Andere in its entirety." [4]**

DPR: Yes, Quetglas keeps on the same line; he's still interested in students and fresh ideas...

BC: Yes, that's why we can go on with the previous idea when we where talking about twitter, facebook and all the current media. Revolutions have always been linked to new media and communication formats, i.e., in Barcelona in those years, we had the opportunity to access print technologies such as hot pressing, that allows you to print in an easier and simpler way than before. This new technique allowed us to organize a political manifesto through the magazine. The first issue was an A4, black and white and typewritten publication.

DPR: Sometimes people wonder if it's possible to control this kind of communication, what do you think about it?

BC: This is an interesting topic. People ask me how you can control networks like twitter or facebook, and I just tell them that is the same that happened in the 60s and 70s: you can't control it! This lack of control is the great thing about this kind of network. For example, who could imagine some years ago the important role that twitter would have on political issues like Iran [5].

That's why I think a media revolution like the current one has also happened before. If you look back, you find the same relationship between politics and media, and relating this with architecture, you have to think that in the decade of the 1970s, the political agenda was almost part of our architectural curriculum.

DPR: This happened in some different countries at the same time, in Italy, France, the UK...

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3. There is a valuable resource with the digitalized issues of El Carrer de la Ciutat at UPC Commons (http://upcommons.upc.edu/revistes/handle/2099/199) and also the complete collection at El Carrer de la Ciutat (http://www.scribd.com/collections/2860962/El-Carrer-de-la-Ciutat).

4. Beatriz Colomina, from the book Clip/Stamp/Fold

5. The interview was done at Beyond Media Festival [2009]. In this context, the reference to Iran protests were highly new.

ANDREA BRANZI

Images from the book Clip/Stamp/Fold published by ACTAR (2010)

BC: Yes, but in the UK, the political agenda was not so important, i.e., like if May '68 simply didn't happen. But a thing that was really interesting is how they fought for educational rights. If you look at the Architectural Association for those years, it was involved in an irreverent student movement and the only one who was "untouchable" was Cedric Price.

> **"As with the historical avant-garde, there were also networks of little magazines in the 1960s and 1970s. For example, *Oppositions* was in a network with *Arquitecturas Bis* of Barcelona and *Lotus* of Milan [...] Likewise you can talk about the connections between London, Florence and Graz. And it is also interesting to note that it is Florence, not Milan or Rome, and Graz, not Vienna. Many little magazines emerged in secondary cities. At some point we thought about a map that would track these networks of magazines..."** [6]

DPR: It is interesting to analyze that it was almost a worldwide movement, but it had differences between countries, cities and the local context.

BC: It is completely true. I remember that Bernard Tschumi offered to the AD to write an article on the protests of May '68 and when they agreed, more than a year had passed. He was really happy with his article and going further, he proposed to write an article based on the political issues of Ireland and he was rejected. This is the kind of difference that we can find in the media of those years and that we wanted to document on the *Little Magazine*'s project, which was born with educational purposes from my PhD students on Princeton.

DPR: This is an issue that has always interested you personally, isn't it?

BC: Yes. When I was teaching at Columbia, I gave a class on the *avant-garde* publications starting in the decade of 1920. *L'Espirit Nouveau, De Stijl*, all the magazines that are part of the historical *avant-garde* on art and architecture, because you cannot understand the *avant-garde* without their publications. The media cannot be dissociated from the artistic and architectural movements. On the contrary, they became the place where this movement happened.

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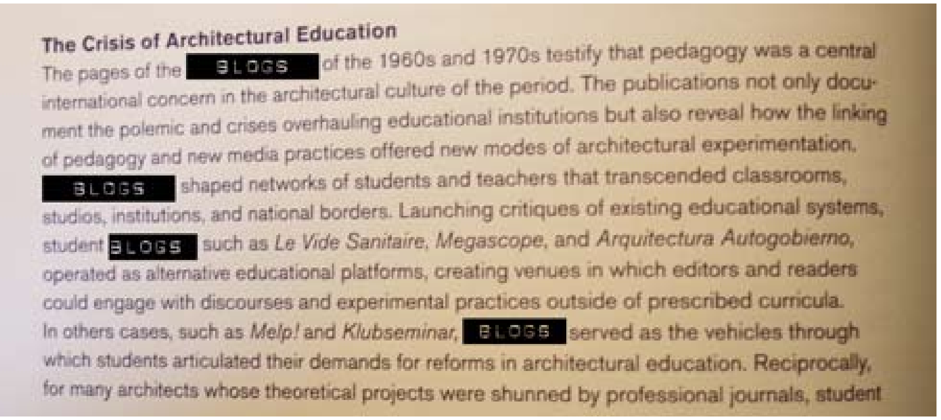
[6] Beatriz Colomina. From the book Clip/Stamp/Fold.



The Crisis of Architectural Education

The pages of the BLOGS of the 1960s and 1970s testify that pedagogy was a central international concern in the architectural culture of the period. The publications not only document the polemic and crises overhauling educational institutions but also reveal how the linking of pedagogy and new media practices offered new modes of architectural experimentation. BLOGS shaped networks of students and teachers that transcended classrooms, studios, institutions, and national borders. Launching critiques of existing educational systems, student BLOGS such as *Le Vide Sanitaire*, *Megascope*, and *Arquitectura Autogobierno*, operated as alternative educational platforms, creating venues in which editors and readers could engage with discourses and experimental practices outside of prescribed curricula. In others cases, such as *Melp!* and *Klubseminar*, BLOGS served as the vehicles through which students articulated their demands for reforms in architectural education. Reciprocally, for many architects whose theoretical projects were shunned by professional journals, student

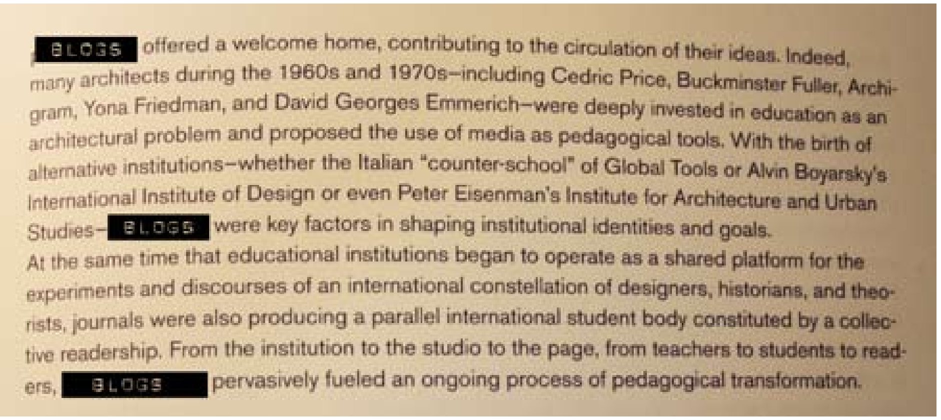
"The Crisis of Architectural Education" An intervention by dpr-barcelona on a fragment from the introduction of the book Clip/Stamp/Fold. What happens if we superimpose the word "blog" every time that the words "little magazine" appear?

DPR: What about Le Corbusier and the way he used media as an architectural marketing tool? How architecture is constituted in and through the media?

BC: I think that Le Corbusier was the first architect who really understood the media of the 20th century. By the way, this was the key reserach of my PhD thesis, about architecture and communication and was the starting point of the book *Private and Publicity*. In the book there's a chapter called "Publicity," which is based on the research I did among Le Corbusier archives.

It is anecdotal that when I asked at the *Fondation Le Corbusier* for their archives on *L'Espirit Nouveau*, they told me, "We have lots of boxes with material classified as *L'Espirit Nouveau*" and they brought the first box. I was amazed that I only found catalogues, advertising, trend magazines, etc. Researching box by box, I only found the same kind of material until I realized that it was exactly this that interested Le Corbusier. He used images of cars and planes to illustrate his articles and this point is what I found really innovative, to mix architecture with every day objects: the Parthenon with a modern car in front of it.

DPR: Do you think that marketing strategies at the beginning of the 20th century were related to the small publications of those years?



BLOGS offered a welcome home, contributing to the circulation of their ideas. Indeed, many architects during the 1960s and 1970s—including Cedric Price, Buckminster Fuller, Archigram, Yona Friedman, and David Georges Emmerich—were deeply invested in education as an architectural problem and proposed the use of media as pedagogical tools. With the birth of alternative institutions—whether the Italian "counter-school" of Global Tools or Alvin Boyarsky's International Institute of Design or even Peter Eisenman's Institute for Architecture and Urban Studies—BLOGS were key factors in shaping institutional identities and goals.

At the same time that educational institutions began to operate as a shared platform for the experiments and discourses of an international constellation of designers, historians, and theorists, journals were also producing a parallel international student body constituted by a collective readership. From the institution to the studio to the page, from teachers to students to readers, BLOGS pervasively fueled an ongoing process of pedagogical transformation.

BC: It was an interesting experience to be researching in the Le Corbusier archives, because I had the opportunity to take a look at marketing pamphlets, flyers and all kinds of printed material related to marketing: the association of ideas with things that have nothing to do with each other, i.e., a Caribbean hotel and a pack of cigarettes.

Le Corbusier used the same strategies to create the feeling of modernity and luxury related with his projects.

DPR: This is something that in the US was a common practice on those years.

BC: Yes, and Le Corbusier used them to communicate ideas that were not only related to architecture, but to cities and history.

DPR: Can we say that the media acts as a site for architectural production?

BC: If you make a review on all the architects of the 20th century, they all have this in common, starting with Mies van der Rohe. Often people don't even realize that the Mies we all know is basically produced through magazines and publications. His five famous projects (the two skyscrapers, the brick house, the concrete house, etc) are really *paper architecture*, produced within the context of some international exhibitions and are quite different from the projects he was building at the same time (the Mosler House, the Eichstaedt House)

that were really conservative. All of the modern architects were involved in one way or another with the publishing industry.

DPR: And it is a cyclical part of architectural evolution.

BC: Yes, of course. At those years, in the decade of the 1920s, architects built themselves through the magazines. After that, in the 60s, the idea is the same. The better known case is Archigram. They were a group of architects working on this magazine, yet there's not an Archigram's office, they don't even know themselves as "Archigram" on those years. Archigram is simply what they do, a magazine.

And it's only when they realize that people were asking "who is Archigram?" that they started using the name to refer to themselves, as a group.

DPR: Nowadays, the relationship between media and architecture is an assumed fact. Architects are used to sending press releases to blogs and media. Around five years ago, we had the feeling that the new generation was more inclined to do monographs of their own work and in some sense, be less collaborative. Now, since 2007 and the real state crisis, we are witnessing again a collaborative movement, supporting DIY initiatives, unsolicited architecture and more, all of them using the social networks as their main tool of communication and research, in a similar way that the 60s avant-garde groups did. What do you think about it?

BC: I think that we are facing a very interesting era, because architecture always develops in a deeper way in moments of crisis. In the decade of the 60s and 70s, we had the oil crisis, the war, and other conflicts and we had the time to think about ecology, emergency housing, new materials, the space program, etc. And now that we are living in a similar state of the world, we can discover again some similar responses and recover the principles that we have lost.

DPR: What can you say about blogs as the new *little magazines*?

BC: Yes. We are also witnessing a whole new world related to media and communication formats. Blogs, twitter, facebook are these new tools. We can point to Marcos Novak when he talked about the Iraq

la que salta del llit i
dóna 25 voltes a l'edifici.

POSTOPOLIS!DF

Top: Networking off-line. Conversations around the exhibition Clip/Stamp/Fold.
Bottom: Networking on-line. Caption of Postopolis! DF, a public five-day session of near-continuous conversation curated by some of the world's most prominent bloggers from the fields of architecture, art, urbanism, landscape, music and design.

War and the way that the US government has hidden information, but I think that talking about that is a common place within this discussion.

We all know that there is hidden information, but it is more interesting to say that now we have new tools that help us to share information in real time. We cannot keep complaining about how the government acts; we need to analyze how the new tools leak all this information and take it to the population [7].

When you look back to the 60s and 70s, this was the kind of information that motivated architects to create the *little magazines* as communication tools. In an era when the state controlled all the media, suddenly it was possibly to work on pamphlets and DIY magazines that you can do at home and express yourself without any censorship.

This is an example that there are always more ways to react than we think. Who would have thought that a television camera could be used as an element of civil protection? Now, beyond public surveillance we also have civil surveillance. Population is also able to control what politicians and police department are doing [8].

DPR: In this sense, we think that in America, the feeling of civil surveillance is more powerful than in Europe.

BC: Yes, I think that the American people easily understand video cameras as a way of self-protection, too.

DPR: Derrick de Kerckhove always talks about the issue that now it's not only the population who uses social networks as communication tools, but that everyday, more politicians are also using them to get closer to the people. What are your thoughts on this issue?

BC: I think this is the other side of the story. We talk about twitter and facebook as a tool that is only being used for activism, but we don't talk about the state's appropriation of these tools. We can expect that all governments that had been "attacked" by its population using these tools will start, sooner or later, using them, too.

---

7. In some way, Colomina is anticipating facts as Wikilieaks started in 2006 and reached a world audience in 2010.

8. In this case, Colomina's observation can be directly linked with the most recent revolts at Arab countries enhanced by the use of social media tools.

DPR: So, talking again about the similarities between the little magazines and the blogs and social networks, is there any specific blog that you find similar to the *Archigram* or *Casabella* of the 1960s?

BC: This is a thing that you may tell me! I think it's a bit soon for that. Maybe we need more time to see how this movement develops.

DPR: So, do you think there is a kind of nostalgia now for the theoretical movement of the 60s and 70s?

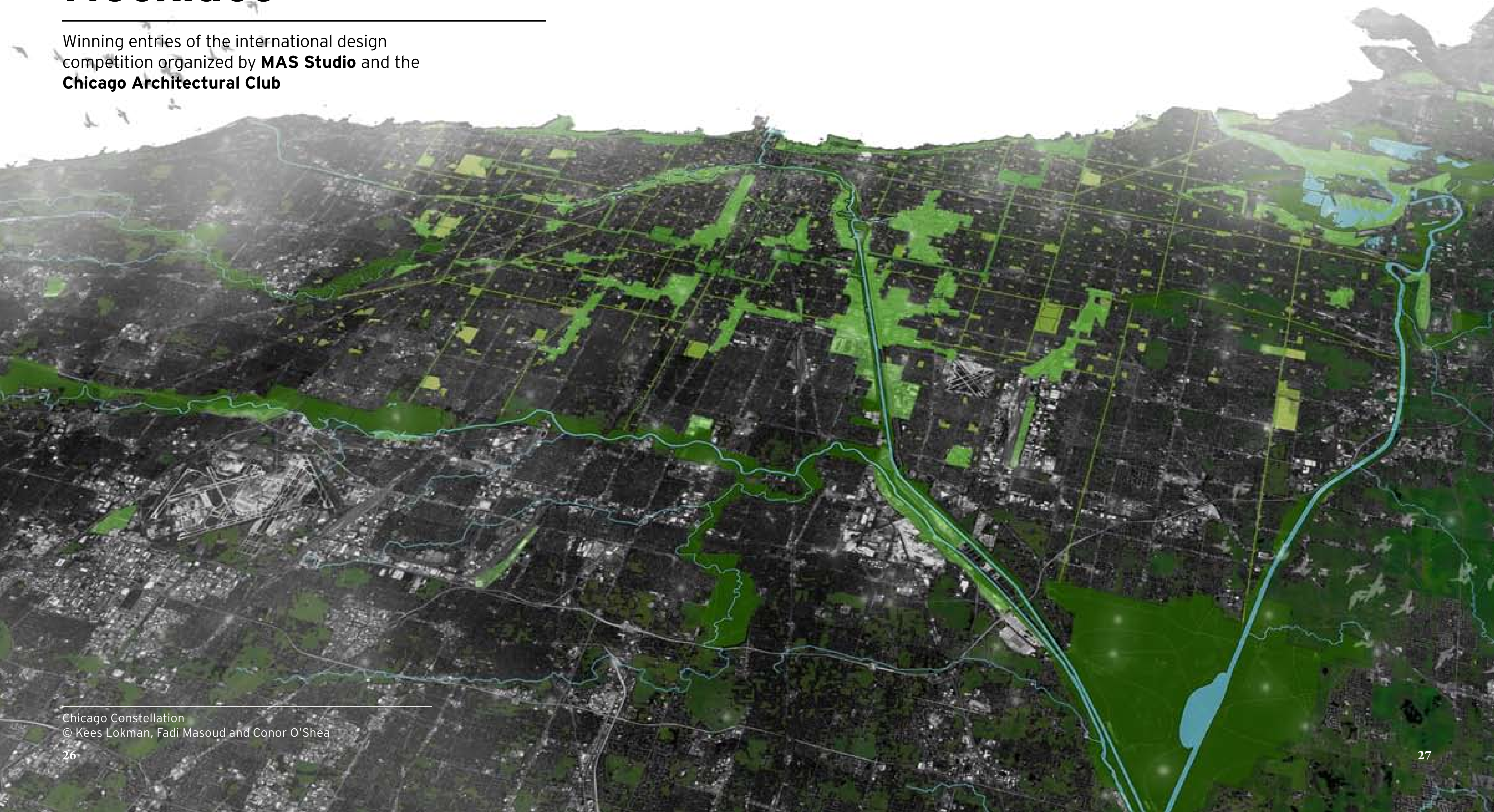
BC: As Walter Benjamin wrote, we always have nostalgia of what is left behind.

We can find similarities between little magazines, blogs and criticism. These two quotes refer to different moments of architectural communication, separated by more than forty years one from the other, but they are talking of the same topic.

> "What I was trying to see is whether you will agree that criticism was already something that was difficult to achieve, even for Oppositions, and that it has only become increasingly more difficult."
> - Beatriz Colomina in conversation with Peter Einsenman. New York, January 23, 2007.
>
> "There's an interesting and provocative article in the most recent issue of *Blueprint* called "The New Establishment," by Peter Kelly. In it, Kelly takes issue with the lack of formal criticism in architecture blogging today, writing that "one tends not to find rigorous criticism of significant new buildings" on sites such as Strange Harvest, things magazine, and BLDGBLOG."
> - Geoff Manaugh from BLDGBLOG on his post on critical condition

Network Reset: Rethinking the Chicago Emerald Necklace

Winning entries of the international design competition organized by **MAS Studio** and the **Chicago Architectural Club**



Chicago Constellation
© Kees Lokman, Fadi Masoud and Conor O'Shea

Earlier this year, the design studio MAS Studio and the Chicago Architectural Club organized the competition NETWORK RESET. Sponsored by Adrian Smith + Gordon Gill Architecture LLP, the international competition sought to provide ideas and actions that could reactivate the Boulevard System of Chicago and rethink its potential role in the city.

Proposed by John S. Wright in 1849, the system was envisioned twenty years later when the State Legislature established the South, West, and Lincoln Park Commissions. Also referred to as the "Emerald Necklace" since the 1893 World Columbian Exposition, it is composed of a series of streets and parks, some of them designed by Frederick Law Olmsted and William Le Baron Jenney. After the mid-twentieth century, the lack of proper funding, the split of management of the system as a whole (parks would be managed separately from the streets) and the migration of residents to the suburbs were some of the circumstances that accelerated the deterioration of the system. While portions of it, such as the Logan Square Boulevards District (an official city landmark district since 2005) still maintain the original character, other parts have just become underutilized areas and oversized streets that act as barriers within neighborhoods.

Given the current situation of the system, the competition asked participants to look at the urban scale and propose a framework for the entire boulevard system as well as provide answers and visualize the interventions at a smaller scale that can directly impact its potential users. To be able to do that, they had to ask themselves a series of questions: What if the system becomes a new transportation corridor in the city? What type of transportation would that be? What if the open space becomes an active layer and not just a passive one? What if this system provides activities that the city as a whole is lacking? What if the system becomes a tool for social cohesion? What if the system has a strong visual identity? What if it becomes an economic catalyst for the neighborhoods? What if the system is all of this and more?

In the end, through images, diagrams and drawings, designers were asked to share their soft or hard, big or small, temporary or permanent interventions that could reactivate and reset the Boulevard System of Chicago.

Before the competition deadline by the end of February, we received entries from Chicago, but also from other cities in the US, Canada, Mexico, Brazil, Belgium, Italy, Russia, Serbia, Spain, Sweden, China and Australia. In early March, a jury reviewed, first individually and then collectively, all the submmitted entries. In order to approach the entries and system itself from different perspectives, the jury was formed by Jeffrey Sriver (CREATE Program Director, Chicago Department of Transportation), Paul Preissner (Partner, Paul Preissner Architects Ltd), Peter J. Kindel (Director of Urban Design, Adrian Smith + Gordon Gill Architecture LLP), Peter L. Osler (Director, Program of Landscape Architecture, IIT), Sally A. Kitt Chappell (Architectural Historian and Author), Sarah Dunn (Principal, UrbanLab), and Timothy Brown (President, Chicago Architectural Club).

During the collective review, a series of interesting conversations between the jury members emerged from the different proposals. While some entries opted for an intense programming of the existing system visualized with evocative images, others incorporated new transportation systems such as dedicated bike lanes and light rails. A third category, unexpected and provocative , was the objectification of the system, a way to recognize visually and market economically the Boulevard System. In the end, it was evident the complexity of the System but also the immense opportunities that it holds.

In the following pages, you will find the names and boards of the three winning entries as well as the five honorable mentions. For more information about the awarded entries, please visit:
http://www.mas-studio.com/network_reset_results.html

Building upon the effort of this competition and inspired by the excellent quality of the entries, we hope that a fruitful discussion is generated in Chicago around the Boulevard System. Lectures, panel discussions, workshops, visits and interventions should follow this competition to reactivate and use to its full extent this incredible asset of the city.

FIRST PRIZE

Chicago Constellation

Kees Lokman, Fadi Masoud and Conor O'Shea

SECOND PRIZE

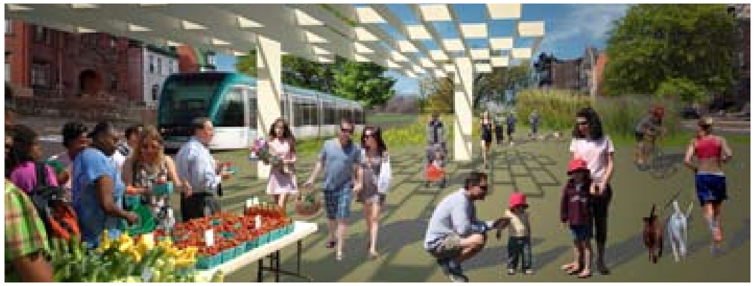
(in)voluntary prisoners of climate

Aptum Architecture: Julie Larsen, Roger Hubeli, Gale Fulton
Student Contributors: Danny Duong, Rossitza Kotelova, Jasmine Lee, Alvaro Luna, Brian Vesely and Wallo Villacorta

THIRD PRIZE

The Ring Line

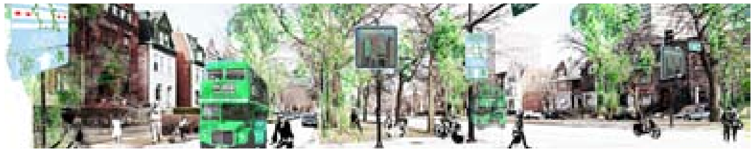
Timothy Bacheller, Charlotte Page and Christopher Phillips



HONORABLE MENTIONS

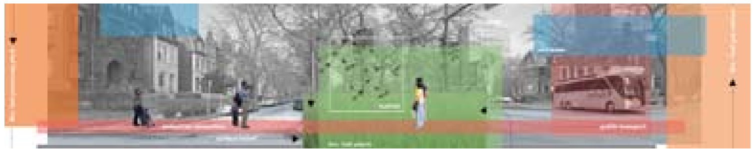
The Emerald Necklace Scenic Circuit

Jennifer Birkeland, Nancy Kim and Kerry Rutz



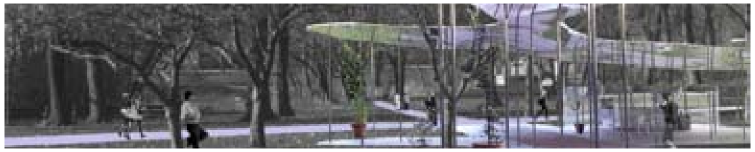
system>reset>renewal>connect

Sharon Mackay, Tom Lenigas, Chris Yandle, Catherine Smith, Jason Cuffe and Dana Gopffarth



MetaBoulevard

Noa Peer, Flore Raimbault and Clélie Protière



Narcissus Echo-City

BXLMRS: Antoine Chaudemanche, Lionel Bousquet, El Hadi Ketumem and Lessi Stoirdamore

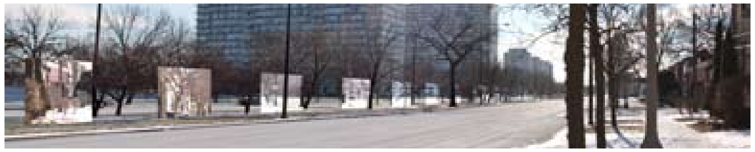
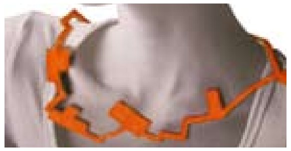
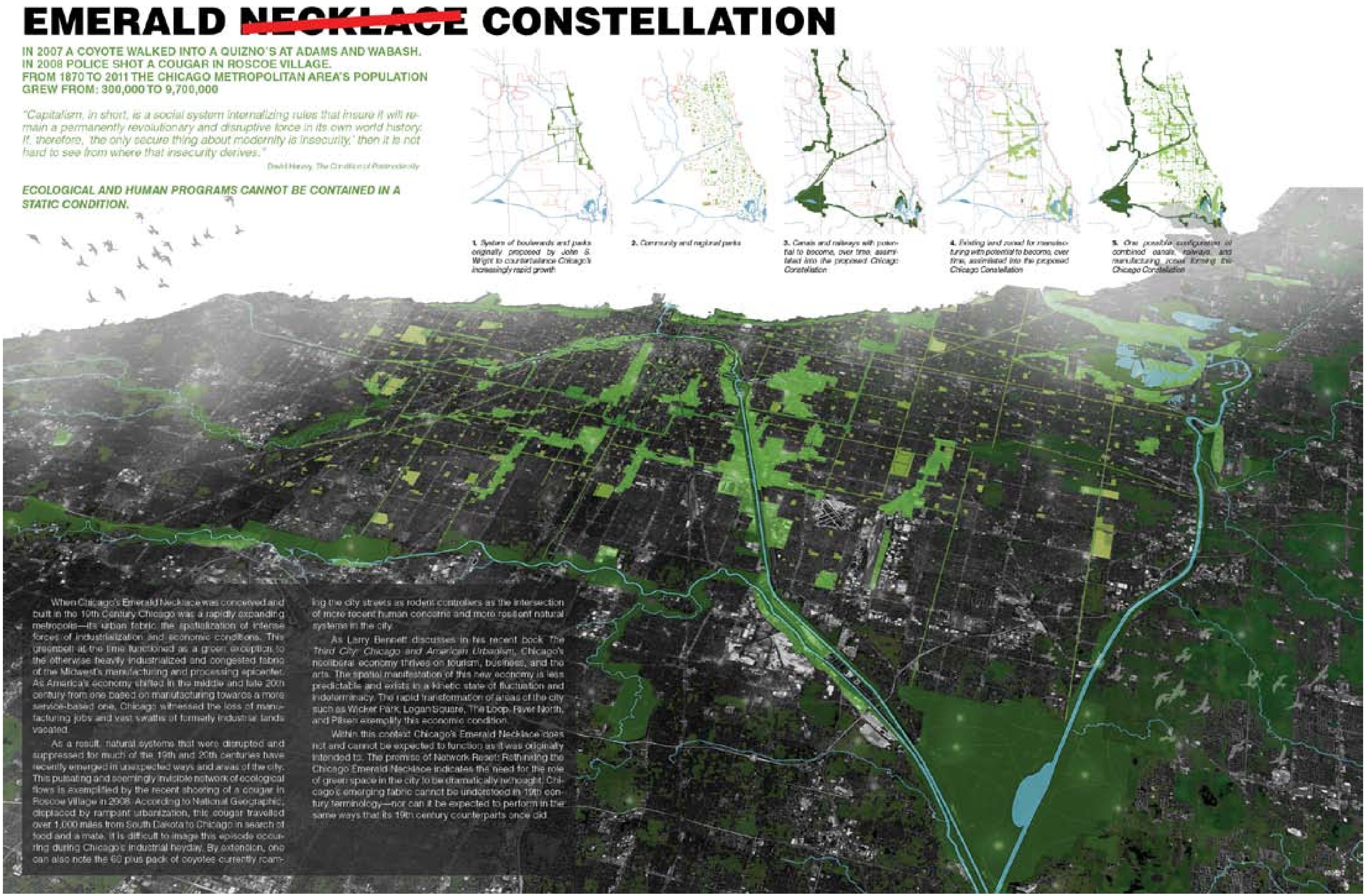


Figure that

Jenna Wolf and Lyndsay Pepple



FIRST PRIZE | Chicago Constellation



EMERALD ~~NECKLACE~~ CONSTELLATION

**IN 2007 A COYOTE WALKED INTO A QUIZNO'S AT ADAMS AND WABASH.
IN 2008 POLICE SHOT A COUGAR IN ROSCOE VILLAGE.
FROM 1870 TO 2011 THE CHICAGO METROPOLITAN AREA'S POPULATION GREW FROM: 300,000 TO 9,700,000**

> *"Capitalism, in short, is a social system internalizing rules that insure it will remain a permanently revolutionary and disruptive force in its own world history. If, therefore, 'the only secure thing about modernity is insecurity,' then it is not hard to see from where that insecurity derives."*
>
> David Harvey, *The Condition of Postmodernity*

ECOLOGICAL AND HUMAN PROGRAMS CANNOT BE CONTAINED IN A STATIC CONDITION.

1. System of boulevards and parks originally proposed by John S. Wright to counterbalance Chicago's increasingly rapid growth

2. Community and regional parks

3. Canals and railways with potential to become, over time, assimilated into the proposed Chicago Constellation

4. Existing land zoned for manufacturing with potential to become, over time, assimilated into the proposed Chicago Constellation

5. One possible configuration of combined canals, railways, and manufacturing zones forming the Chicago Constellation

When Chicago's Emerald Necklace was conceived and built in the 19th Century Chicago was a rapidly expanding metropolis—its urban fabric the spatialization of intense forces of industrialization and economic conditions. This greenbelt at the time functioned as a green exception to the otherwise heavily industrialized and congested fabric of the Midwest's manufacturing and processing epicenter. As America's economy shifted in the middle and late 20th century from one based on manufacturing towards a more service-based one, Chicago witnessed the loss of manufacturing jobs and vast swaths of formerly industrial lands vacated.

As a result, natural systems that were disrupted and suppressed for much of the 19th and 20th centuries have recently emerged in unexpected ways and areas of the city. This pulsating and seemingly invisible network of ecological flows is exemplified by the recent shooting of a cougar in Roscoe Village in 2008. According to National Geographic, displaced by rampant urbanization, this cougar travelled over 1,000 miles from South Dakota to Chicago in search of food and a mate. It is difficult to image this episode occurring during Chicago's industrial heyday. By extension, one can also note the 60 plus pack of coyotes currently roaming the city streets as rodent controllers as the intersection of more recent human concerns and more resilient natural systems in the city.

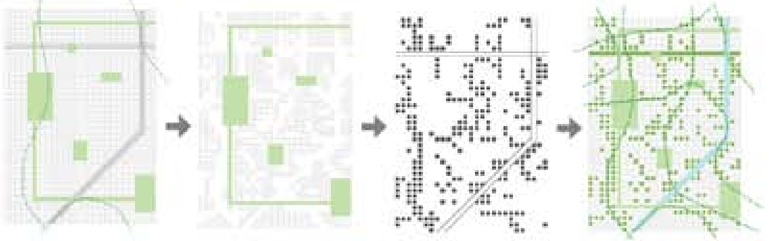
As Larry Bennett discusses in his recent book *The Third City: Chicago and American Urbanism*, Chicago's neoliberal economy thrives on tourism, business, and the arts. The spatial manifestation of this new economy is less predictable and exists in a kinetic state of fluctuation and indeterminacy. The rapid transformation of areas of the city such as Wicker Park, Logan Square, The Loop, River North, and Pilsen exemplify this economic condition.

Within this context Chicago's Emerald Necklace does not and cannot be expected to function as it was originally intended to. The premise of Network Reset: Rethinking the Chicago Emerald Necklace indicates the need for the role of green space in the city to be dramatically rethought. Chicago's emerging fabric cannot be understood in 19th century terminology—nor can it be expected to perform in the same ways that its 19th century counterparts once did.

FIRST PRIZE | Chicago Constellation

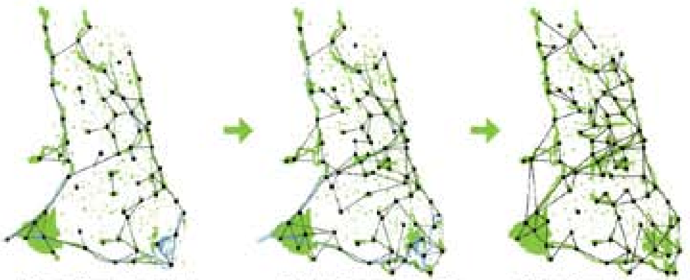
STRATEGY

BELOW: *After rapid industrial growth in the 19th century, Chicago's growth was stunted by a loss of manufacturing in the mid and late 20th century. By 2070 we envision an Emerald Constellation that adapts to shifting human and ecological programming*



Our proposal is a long term strategy that uses landscape as a framework for directing multiple functions and needs such as ecology, recreation, infrastructure, and development. It reconceives the city as a network of overlapping and intersecting cultural, economic, and ecological networks. This flexible and open-ended system is a 21st Century version of the Emerald Necklace that accommodates immediate human and ecological programs of Chicago and anticipates unforeseen events. It is associated with a 21st Century American economy, not a 19th Century one. More specifically, it is achieved by reconditioning abandoned swathes of industrial property and their associated connective infrastructure such as rails and canals for new uses.

This evolving network can and should include current projects underway such as the Bloomingdale Trail, but will ultimately render any linear open space network in the city invisible. Sally A Kitt Chappell's recent book *Chicago's Urban Nature* begins to illustrate this complex relationship of Chicago's built fabric and its landscape systems. Underlying our proposal is the understanding that open space, urban land uses, and ecological integrity is constantly fluctuating and is best understood as a system of gradients, and not a single use linear space. We call it the Chicago Constellation: A New Framework for Conducting the Forces of Urbanization in 21st Century America.



1. *Chicago Constellation, possible configuration 1*

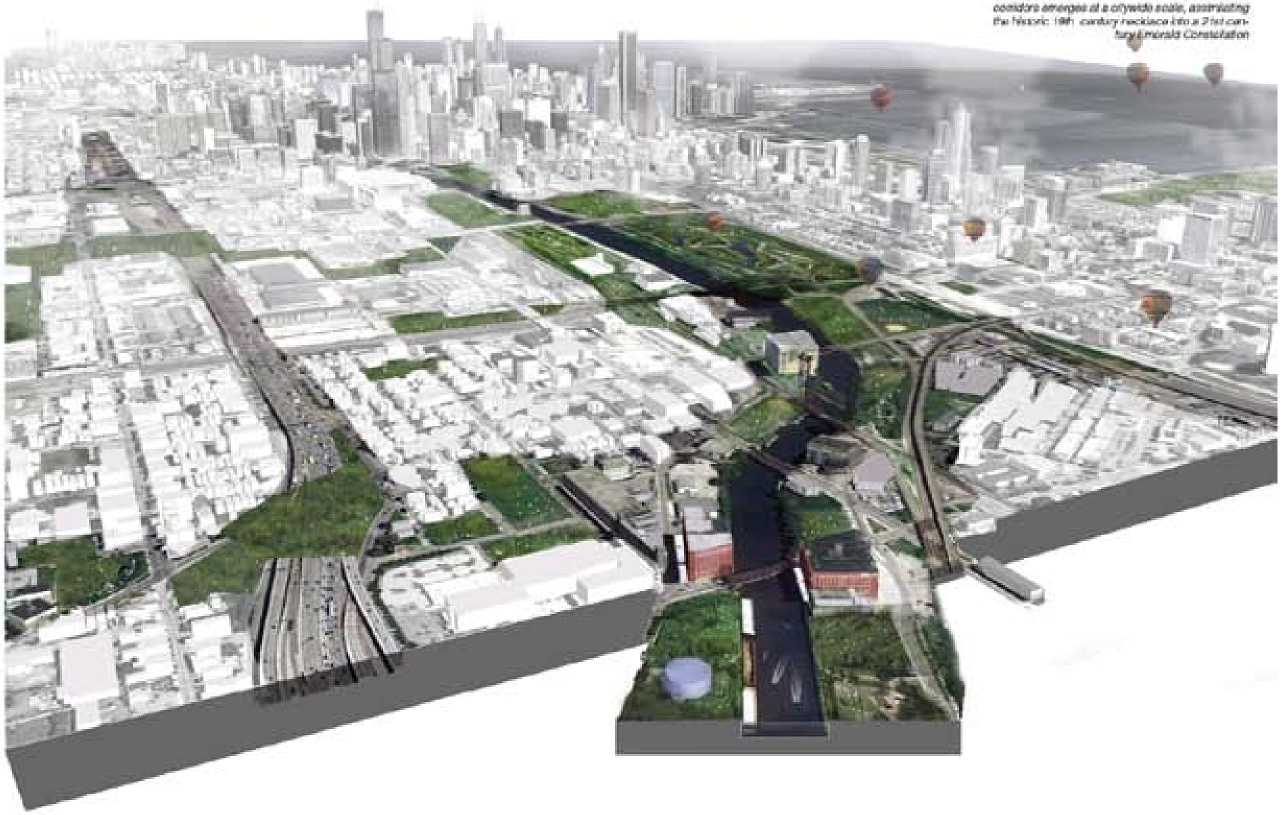
2. *Chicago Constellation, possible configuration 2*

3. *Chicago Constellation, possible configuration 3*

BELOW: *Chicago's Emerald Necklace is similarly scaled to the 1870 limits of the city*

BELOW: *Chicago's Emerald Necklace is dwarfed by the limits of urbanization in the Chicago metropolitan area in the 21st century*

BELOW: *Over time , a flexible field of patches and corridors emerges at a citywide scale, assimilating the historic 19th century necklace into a 21st century Emerald Constellation*

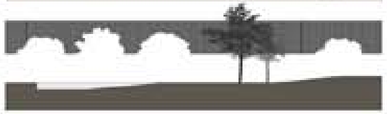


BELOW: *Deindustrialized sites across Chicago become opportunities for human and ecological programming, forming a 21st Century Emerald Constellation*

SECOND PRIZE | [in] voluntary prisoners of climate change

HISTORICAL AND FUTURE PHASING OF SITE

[in]voluntary prisoners of climate change



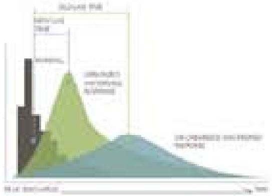
We have all become prisoners of climate change. How voluntary or involuntary this choice has been is often dependent on species but there is a constantly decreasing margin of doubt that all life forms are susceptible in varying degrees to global climate destabilization. The project leverages against various local consequences of climate change in order to project a radically reconfigured metropolitan condition – **the URBAN CANOPY.**

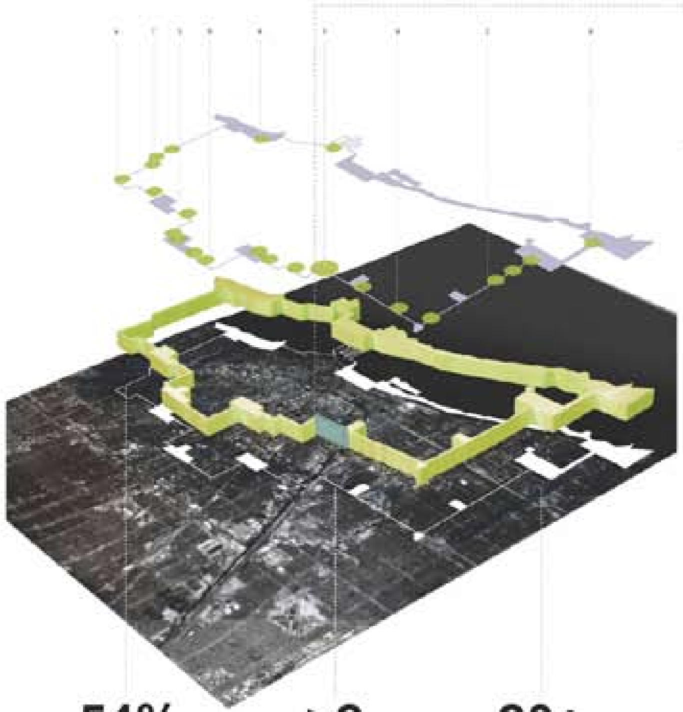
The project proposes the re-FIGURATION of Chicago's once great boulevard system to increase the city's resilience to climate change while restoring the formal legibility of this infrastructural system. The strategy is two-fold: 1. Reorganization of the existing ground plane to increase its spatial, ecological, and programmatic performance and 2. Creation of an urban canopy, which detains and cleanses storm-water runoff, provides critical habitat to displaced species, and offers programmatic and experiential qualities of public space to residents.

The strategy is a convergence of three primary conditions specific to Chicago - 1. The Urban Forest 2. Climatic Change and 3. An Infrastructural Network. The first is a boulevard system that lost its identity due to the evolution of a ubiquitous urban forest. While environmentally beneficial, the urban forest diluted the bold FIGURE of the boulevards once important to the city's image. Through the pragmatic elimination of disease infected tree species, the boulevards are retooled for new environmental performance.

Second, major increases in precipitation are a result of **climate change**. Currently, Chicago's storm events of greater than 2 inches per day cause the aging storm-water infrastructure to merge with sanitary sewers. Subsequently, raw sewage flows into Lake Michigan. The expected increase of storm events suggests a need for a new approach to storm-water management in the city. The strategy combines tactics such as bio-swales and detention basins in addition to an above ground filter and retention system. This method retains rainwater from above and provides extra storage for the existing storm-water system below.

This **infrastructural network** provides a synthetic landscape of ecologies and substrates for needed habitats. This hovering landscape is ecologically and experientially performative. It provides micro habitats for species most at risk from the processes of urbanization, industrial agriculture, and climate change. The **URBAN CANOPY** evolves beyond a predetermined aesthetic and reestablishes Olmsted's Emerald Necklace to today's infrastructural and ecological realities.





54%

trees at risk to Asian Longhorn Beetle | 19.5% trees at risk to Gypsy Moth | 11.9% trees at risk to Emerald Ash Borer | 5.5% trees at risk to Dutch Elm Disease.

Source: Assessing Urban Forest Effects and Values

>2

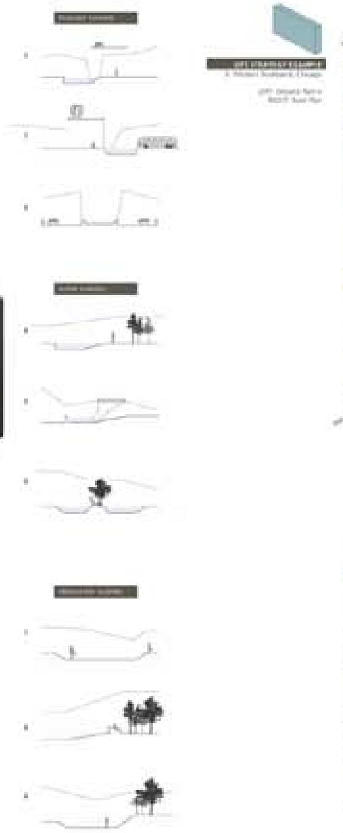
inches of rainfall in one day that results in untreated sewage flowing into Lake Michigan.

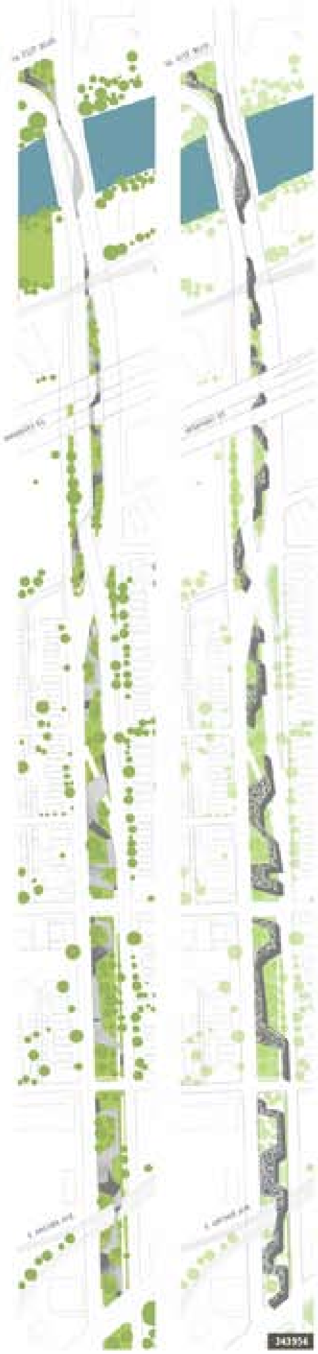
Source: Union of Concerned Scientists, July 2009

20+

potential increase in heavy rainfalls in Chicago (more than 2" in one day) over next four decades.

Source: Union of Concerned Scientists, July 2009





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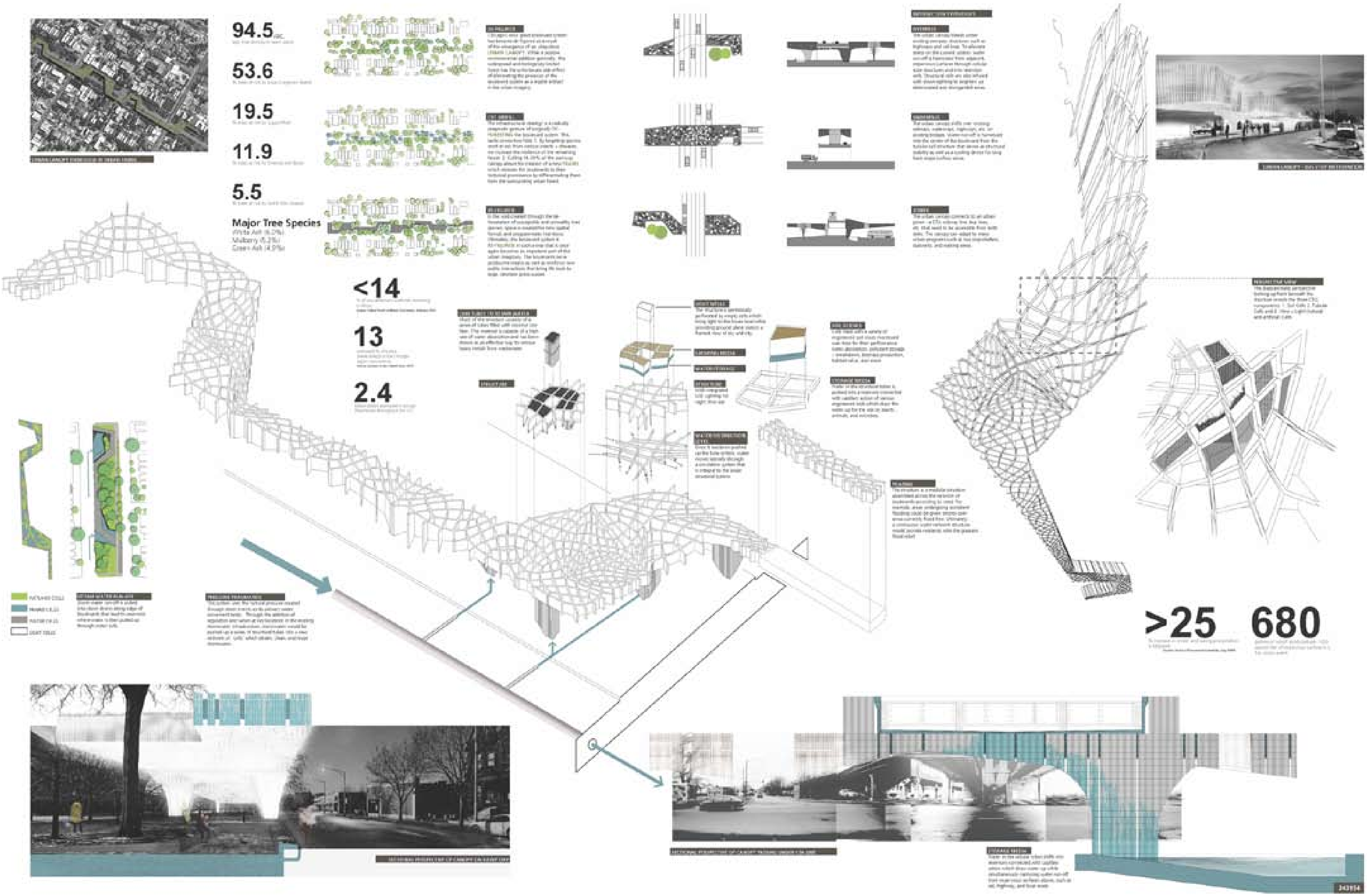
SECOND PRIZE | [in] voluntary prisoners of climate change

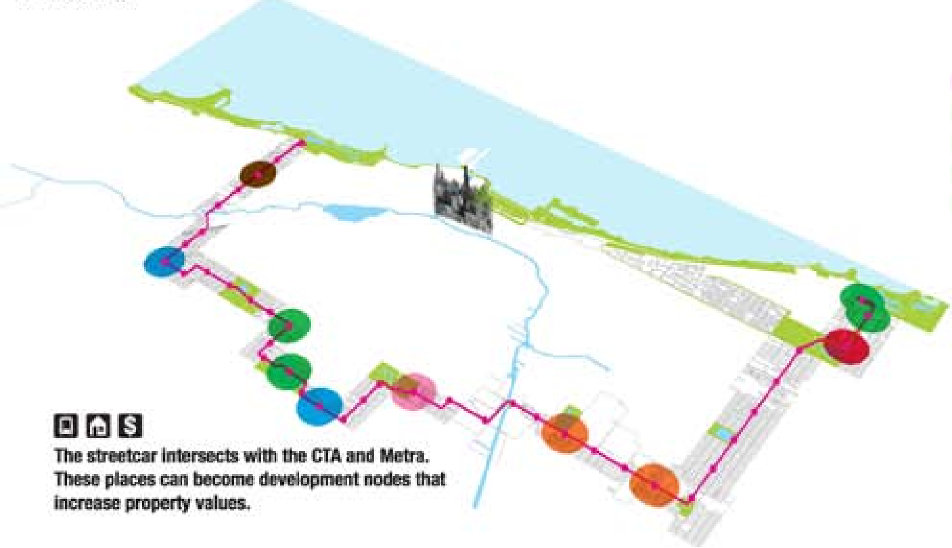

94.5
53.6
19.5
11.9
5.5
Major Tree Species
White Ash (6.2%)
Mulberry (5.2%)
Green Ash (4.9%)
<14
13
2.4
>25
680

THIRD PRIZE | The Ring Line

Plaza typology

THE RING LINE

Prairie typology



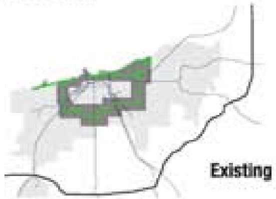
The streetcar intersects with the CTA and Metra. These places can become development nodes that increase property values.

PHASE 1 Unified System

- Streetcar connection to CTA & Metra
- Park use reinforced
- Parks authority regains control of boulevards
- Community pride re-established
- Recycling program
- More activities supported

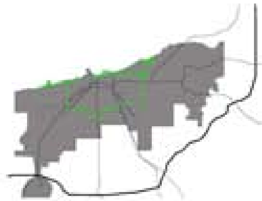
PHASE 2 Connection

- Development and preservation corridor plan initiated
- Property values increase
- Infill increases
- Community education programs
- Boulevards become a destination for the entire city
- Retail returns to the boulevards
- Adaptive reuse of existing park infrastructure
- New activities introduced into parks - community gardens, festivals
- Landscaping grows
- More activities supported

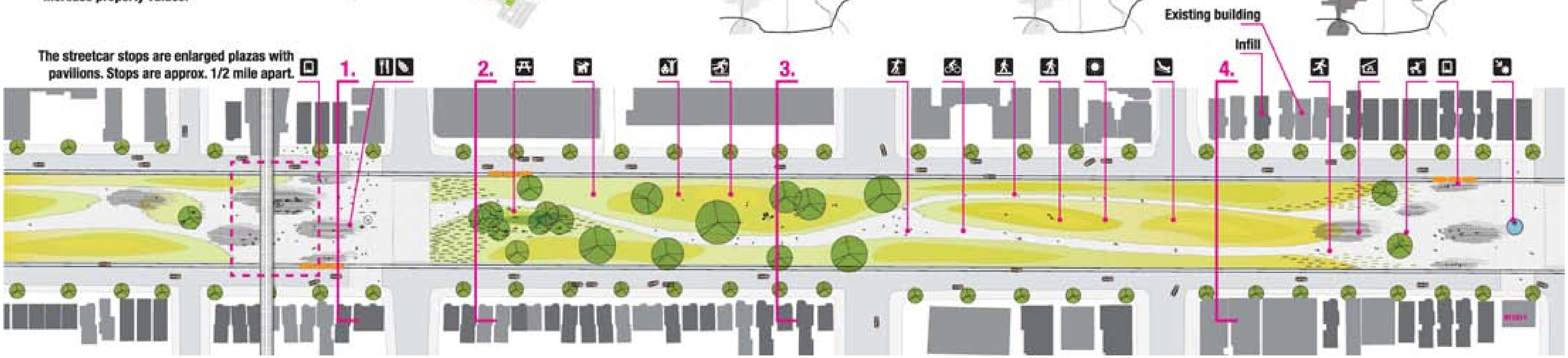


PHASE 3 Growth

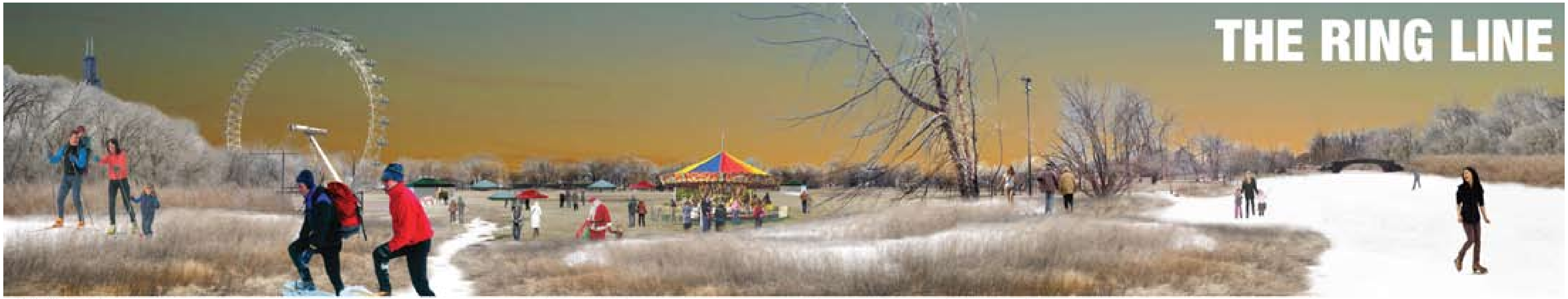
- Rather than the focus being on the Loop and lakeshore, it is on the entire city
- More streetcar stops added
- Reputation of boulevards established
- New park infrastructure - bandshell, greenhouses
- Landscaping matures
- More activities supported



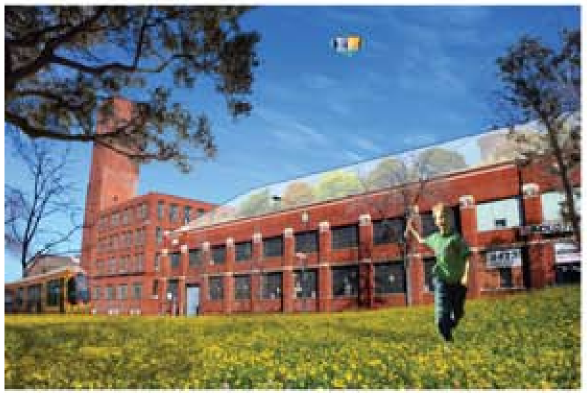
The streetcar stops are enlarged plazas with pavilions. Stops are approx. 1/2 mile apart.



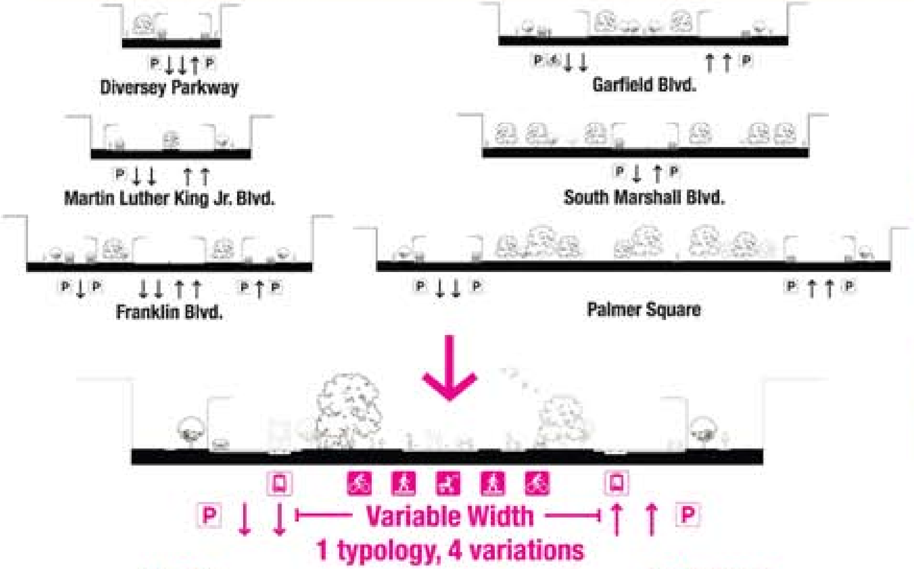
THIRD PRIZE | The Ring Line


THE RING LINE

Sherman Park



Adaptive re-use of vacant building on Western Boulevard into a community greenhouse.


P ↓ ↓ ↑ P
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Palmer Square
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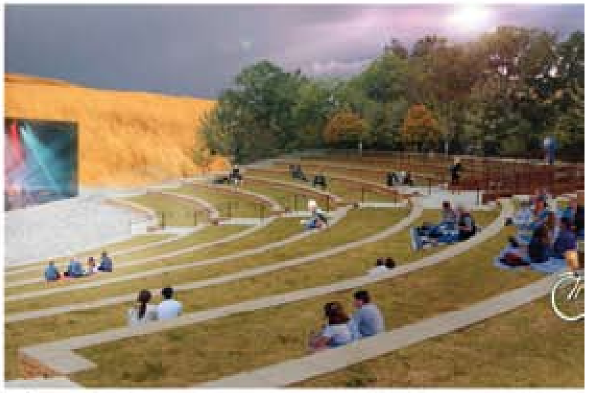
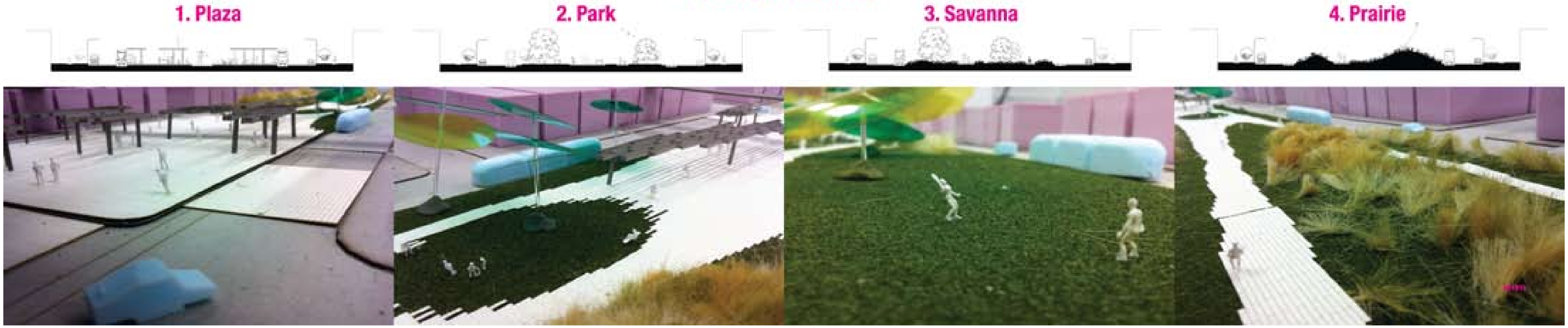
1 typology, 4 variations



Savanna typology


1. Plaza
2. Park
3. Savanna
4. Prairie

Intertwinements

Essay by architect and writer **Ioanna Angelidou**

Yoyogi National Olympic Gymnasium (Kenzo Tange)
© Ioanna Angelidou

Points, Lines, Thresholds

As curator of the 2010 Venice Biennale, Kazuyo Sejima honored Kazuo Shinohara, recognizing him as a figure of great influence both to her and the entirety of the contemporary architecture scene in Japan. Sejima neither studied nor practiced under him, yet Shinohara - a prominent figure in Japanese architecture since the mid-1960s - largely defined the approach of a generation, including the work of Toyo Ito, with whom Sejima apprenticed.

On the other hand, when describing the selection process for the series of young architects invited to exhibit at the Arsenale, she noted that she considered her choices to be cutting-edge upcoming professionals, only to realize that most were already established since their work - mostly comprised of unrealized projects - had now been widely communicated through architectural media and the internet. [1] Indeed, the latter over the past decade has increasingly become a substantial mediating platform for architecture, alongside more traditional mediums such as exhibitions and print publications. From Le Corbusier, man of books and manifesti, to collaborative polemic magazines such as *Archigram* and from Mies' exhibition designs to the micro-curatorial scene of Tokyo's architecture galleries, with each generation of architects come platforms that enable communication of ideas.

The concept of both formal and informal intertwinement is made particularly evident in two key conditions of contemporary Japanese architecture: genealogy and mediation. The first is relevant to Japan's long tradition of professional hierarchy and apprenticeship. The second reflects its contact with Western culture through Modernism. Respectively, they essentially constitute aspects of network and networking.

Branching Out

The way influences from Western architecture and modernity have taken root in the country is two-fold. Initially, during the Meiji restoration period, foreign architects such as Josiah Conder and later Frank Lloyd Wright with Antonin Raymond built in orthodox European styles. This kind of architecture had a symbolic nature during this period, as it involved new construction methods unfamiliar to Japan, methods that local architects desired to master in order to embrace their beauty. In this way, Western architecture was perceived simultaneously as a representation of progress and authority. However, from as early as the 1870s, a mixture of traditional Japanese elements was incorporated

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1. Kazuyo Sejima Interview in Architecture on Display: on the History of the Venice Biennale of Architecture, eds Aaron Levy and William Menking (London: Architectural Association Publications, 2010), 169. See also: Kazuyo Sejima, Introduction in People Meet in Architecture, ed. Kazuyo Sejima (Venezia: Marsilio Editori, 2010), 14-15

to create a pseudo-Western style which still celebrated technological advancement and aesthetics. Both approaches are rendered naked from a political context, as architecture in Japan traditionally adheres more to craftsmanship than ideology. Indeed, the acceptance of modern architecture was immediate and wide as it bore significant formal affinities with traditional Japanese principles and was introduced as an already neutralized version of the stance in Europe that initially represented the rejection of historicism.

Fumihiko Maki describes the confluence of modernism and architecture in Japan using the term "the Le Corbusier Syndrome," which he parallels with three discernible periods in Le Corbusier's work: from the country's pre-war modernization to the reconstruction followed by the utopian schemes of the Metabolists. Maki very aptly likens Le Corbusier's effect in Europe, Asia and the Americas to a stone in a pond, water ripples diminishing with time and distance. In Japan it seems more like multiple stones creating systems of ripples, interfering with one another to create a complex pattern, [2] an expanding architectural genealogy with a family tree continuously branching out. The first period is roughly detected between the end of the 1920s and the early 1930s and throughout the years until World War II. During this time, Japanese architects such as Kunio Maekawa and later Junzo Sakakura traveled to Europe to visit modernist buildings and apprentice with Le Corbusier. At the same time, back in Japan, magazines circulated images of modernity within the local architectural community, which at the time was just starting to discover itself anew and discuss its future. The second period is situated during the first post-war years through the 1960s, when the need for reconstruction was immediate and accompanied by the optimism regarding revitalization of the city with urbanism and mega-plans, hence the Metabolists who perceived the city as a living organism. The Metabolism movement was an extended team of practitioners from several fields, though mainly consisting of the then-young architects Kiyonori Kikutake, Takashi Asada, Kisho Kurokawa, Fumihiko Maki, Otaka Masato and. to an extend, Arata Isozaki. Kurokawa, Maki and Isozaki were all students of Kenzo Tange, an established figure in Japanese architecture by that time, who in turn was a disciple of Kunio Maekawa. Tange was sympathetic to Metabolism and the idea of an organically expanding city, as his 1960 project for Tokyo Bay reveals. However, he remained very interested in the union of technology with humanity as well as the re-interpretation of architecture in Japan.

[2] Fumihiko Maki, Nurturing Dreams: Collected Writings on Architecture and the City (Cambridge, MA: MIT Press, 2008), 180-189

1. Tokyo Metropolitan Foundation for History and Culture (Kunio Maekawa) © Ioanna Angelidou

After 1965, the year Le Corbusier died, his work began to be approached in a more critical manner. Until then, both in Japan and abroad, Le Corbusier was perceived as a hero or idealist who completely reformed architecture and his expanded activity, ranging from design to writing, allowed him extended influence that almost elevated him to god-like status. In Japan this critical discussion could be traced to much earlier, with the so-called Tradition Debate towards the mid-1950s. Yoshiro Taniguchi, initially in high regard of Le Corbusier, during this period expressed the need to assert distinctive identity through adaptation and hinder large-scale assimilation of foreign architectural (and not only) elements. Indeed, Taniguchi and Maekawa each embody two distinct perceptions of modern architecture and views of its adaptation in Japanese context. Consequently, they were also the two key figures around which the future architectural genealogy would develop, two schools that occasionally adopted and lent principles and members to each other.

As much as architecture in Japan was considered the confluence of beauty and technology, Kunio Maekawa, having collaborated with Le Corbusier directly, kept a focus on building performance whereas his students Togo Murano and Kenzo Tange maintained a rigorous interest in aesthetic performance. Through Tange's practice and laboratory at Tokyo University emerged the majority of the Metabolists who envisioned a dynamic city rather than a radical yet static urban condition as

Top: Tokyo National Museum of Western Art (Le Corbusier) © Ioanna Angelidou
Bottom: Tokyo National Museum: Asian Gallery (Yoshiro Taniguchi) © Ioanna Angelidou

that illustrated in Le Corbusier's schemes. Then, after the Tokyo Olympics in 1964 and the Osaka Expo of 1970, world architecture entered a period of intellectual change. Many members of the Metabolist movement had already started to be skeptical about the flexibility of the megastructure and the way it embraces human scale. This is precisely the differentiation Fumihiko Maki makes between mega-form, compositional form and group form, the latter described as a condition within which elements stay connected yet independent. Maki has also been associated with Team X and worked in America for SOM and Josep Lluis Sert, another disciple of Le Corbusier. This blend of diverse artistic influences he likened to the shadow of a cloud, both unpredictable and elusive. [3] In Arata Isozaki's architecture, the multiplicity lies in the several periods and modification of approaches it underwent. Besides Isozaki, Kurokawa and Kikutake have employed several styles and aesthetic systems in a semantic way. Charles Jencks perceives this adaptive mixture with previous modes as a tentative way to move away from modernism, an evolutionary rather than a radical departure. He traces the reason this is so evident in Japan to the flexibility of Japanese culture in assimilating and adapting external fragments and the absence of an in-grown avant-garde that would gain validity by inverting precedent principles. [4] Indeed, Isozaki declared the autonomy of architecture and as such is entirely representative of this condition. Interestingly enough, each of his prominent disciples embodies and continues a period of Isozaki's work: Makoto Sei Watanabe the technological by using mathematical algorithms and computers to generate form; Jun Aoki a purer modernist approach which combines formal reduction with playful elements rather than minimalist austerity; and Shigeru Ban re-evaluates and re-interprets traditional building methods with ecology and the use of subtle materials.

Coincidentally, it is precisely the effects of uncontrolled Japanese urbanization and the rapid worsening of environmental and urban conditions that led to skepticism over the Metabolist schemes. Again, this can be roughly divided into two approaches, pro-urban and anti-urban. This critical perspective led to two distinct directions that were to influence the generations that followed. Kazuo Shinohara shifted focus on the domestic everyday with his book A Theory of Residential Architecture of 1967, while Hiroshi Hara, notably also a Tange student, expressed doubts on the megastructure and its disregard of physical elements. According to Hara's theory of the Porous Body (yukatai)

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3. ibid, 186

4. Charles Jencks, The Language of Post-modern Architecture (London: Academy Editions, 1977), 40

Top: Nakagin Capsule Tower (Kisho Kurokawa) © Ioanna Angelidou
Bottom: Aoyama Tepia Building (Fumihiko Maki) © Ioanna Angelidou

the latter infiltrate the architectural process. [5] Hara believed that the part is greater than the whole and conducted extensive research on vernacular non-urban settlements that included trips to African villages. His students each express an aspect of his research: Riken Yamamoto's practice is based on re-analysis of every building's purpose and role; Kengo Kuma's on subtlety or what he calls "erasing architecture," through which his work is divided into three periods deploying equal design tactics, that of fragmentation, transparency and filtering with patterning; and Kazuhiro Kojima (with his partner Kazuko Akamatsu and their office CAt) takes an interest in functional and design fluidity, a flexibility that incorporates the effect of physical phenomena.

Shinohara belongs to the Taniguchi line as he studied under Kiyoshi Seike, Dean and professor of architecture at Tokyo Institute of Technology. Seike was very conscious of domesticity and in his architecture used a methodical approach to adaptation and development ("I think while making" - 1954), combining the modernist open plan to celebrate spatial continuity with elements from Japanese building culture to validate the latter. Shinohara's primary interest, however, lay neither in functional efficiency nor beauty per se, but the capture of a spiritual aspect in architecture and urban chaos. Indeed, Shinohara saw the beauty of the city precisely in the fact that it was a manifestation of confusion. Toyo Ito, Itsuko Hasegawa and Kazunari Sakamoto were all students of Shinohara and, in an interesting twist, both Ito and Hasegawa eventually went on to work in the office of Kikutake. Thus the first generation hailing directly from the so-called "Shinohara School" branches out in two distinct directions, one more relevant to practice and the other to research. Hasegawa's spatial layering comes across as un-modernizing collage whereas Ito's transition from his early period of devotion to the electronic city and its wandering urban nomads appropriates perceptional space, often by touching upon the singular and atomized experience. Kazuyo Sejima - thus also Ryue Nishizawa and SANAA - borrows this desire for experiential affect from Ito, but translates it through a spectrum of collectivity and a sense of urban assembly. On the other hand, Kazunari Sakamoto continues Shinohara's focus on research and the domestic scale with formal and functional analysis plus an added interest in structure and materials. Both Yoshiharu Tsukamoto and Momoyo Kaijima of Atelier Bow Wow were Sakamoto's students, thus their empirical research on Tokyo's hybrid urban buildings, typology of domesticated environments, scale and micro-events.

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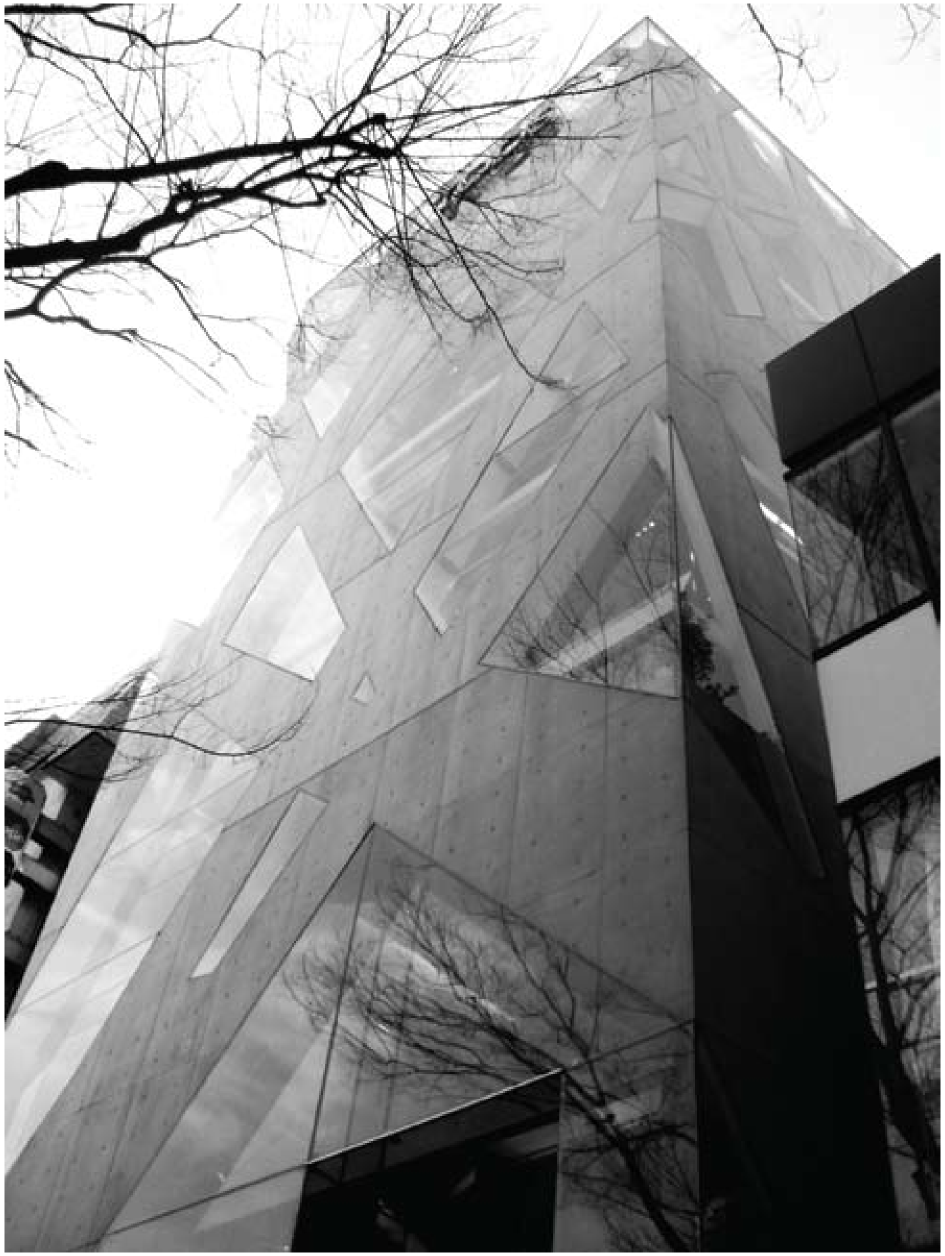
5. Hiroshi Hara, "La Théorie des Corps Troués" in Anthologie Critique de la Théorie Architecturale Japonais: Le Regard de Millieu, ed. Yann Nussaume (Brussels: OUSIA, 2004) 332-334

One Omotesando (Kengo Kuma & Associates)
© Ioanna Angelidou



Tod's Omotesando (Toyo Ito & Associates)
© Ioanna Angelidou

Joining In

In a way, genealogy and the discussion over Japanese modernization, beyond ground for a critical interpretation of the evolution contemporary Japanese architecture underwent, offer a paradigm of intertwinement themselves. The relation of master and disciple fostered the acceptance of modernist principles as representative of progress and subsequent idealization of modern architecture. In turn, the discussion over tradition and adaptation nurtured an architectural culture of dialogical manifestation through a combination of practice and representation. However, in the second part of the period that followed, the catapult of Japan to an aggressively growing economic super-power was substituted by the restricting conditions induced by economic recession in the post-bubble era. This prescribed a shift in direction from an industrial to an information-based economy, a change which left its mark on architecture's exchange platforms in the media-infested metropolis.

Periodicals, being ephemeral and easily reproducible, have early on acted as connecting matter between the vernacular and international tendencies and discourses. This comes as no surprise given that architecture is not only spaces and the design thereof, but a product of culture responding to concurrent needs and conditions, destined to fall in line with the milieu while entailing the potential of instant documentation. Shinkenchiku (New Architecture) is the oldest surviving architecture magazine in Japan, circulated from as early as the 1920s. Its bilingual edition, JA: Japan Architect, was first published in 1959 and acted as an international forum for local architects and young hopefuls, such as the Metabolists, to communicate their work and visions of a rapidly shifting Japan. JA's editorial approach is not based upon text, apart from an editorial note describing the theme of choice and a conversation between two architectural figures (often a critic and a practitioner) that frame a relevant discussion and act as introduction to a series of case study projects that support the arguments posed. On the other hand, *SD: Space Design* was largely focused on critical debate. It is in the pages of this magazine that terms such as "Shinohara School" first appeared in 1979, interestingly enough in an article written by Kengo Kuma and Kioyshi Sey Takeyama who were at the time students of Hiroshi Hara at Tokyo University and embodied a perhaps not opposing but considerably different approach. *SD*, which was launched in 1963 by Kajima Institute as a social service of the large construction corporation Kajima, ceased publication in 2000.

Space Design was not the only publication affected by the deterioration of the Japanese economy during the last 25 years. Older magazines such as *Kenchiku Bunka* (Architecture Culture), established in 1946 and also the publication that first featured Maki's text on the distinction between group, compositional and mega-form ("Collective Form" - 1967), stopped in 2004 after 674 issues. Smaller or newer journals like *Telescope* and *TenPlusOne* (10+1) were met with similar fates. They both focused on the city, which they explored through quite different aspects. *Telescope* was published between 1987 and 1996 by professor, curator and critic Akira Suzuki, and was the realization of a series of wandering issues. Indeed, self-described as a print city, this small independent publication's contribution to the informal validation of the concurrent and constantly shifting urban condition was vital. On the contrary, *10+1* was published in print by giant sanitary corporation INAX from 1994 until 2008, at which point it took the form of a monthly online magazine incorporating critical texts, photographic documentation, speculative presentations of emergent tendencies revisiting historical dissections of the city (10+1 University) as well as broadcasts of archived relevant lectures (10+1 Radio). Each issue was thematic, drawing inspiration from the observation of the urbanscape with case studies and guest-edited issues by critics and practitioners alike. INAX continues its publishing activity with several series books and replaced its periodicals with a bi-annual publication of mini-monographs by young architects such as Atelier Bow Wow, Kumiko Inui and Sou Fujimoto. These booklets, entitled *Young Architects Concept Series*, are self-edited by the architects themselves and each time adopt a different concept to represent their work. In this token, the book is no longer a mere mediating device, but essentially a project in its own right.

Surprisingly enough, in this same era of financial halt a dynamic curatorial scene emerged. The public sector inevitably underwent a period of significant scarcity of funding and the crisis dictated a reconsideration of priorities. As a consequence, public museums in Japan entered a phase of introspection. The shift from exploring larger social issues to drawing on experience from everyday life and immediate personal concerns triggered the expression of individual diversity and a subsequent boom of private exhibition initiatives. [6] Architecture seemed to gain from this, thanks to its functional aspect and many curatorial experiments undertaken in Tokyo from the mid-1980s combining architecture with art and/or taking interest in its interaction with the new media often utilizing critical narratives.

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6. As described by the senior curator of Tokyo Museum of Contemporary Art (MOT), Fumihiko Sumitomo - See Fumihiko Sumitomo, "Changes in Tokyo's Contemporary Art Scene Since the 1990s" in Art Space Tokyo, eds. Craig Mod and Ashley Rawlings (Tokyo: Pre/Post, 2010), 28-33

Those can be divided into corporate and private arenas. The former were developed by large corporations such as ICC by NTT, Artlab by Canon, INAX:Gallery by INAX, A^4 by Takenaka Corporation and Gallery MA by TOTO. Private initiatives are large collector museums with an international network like Hara Museum, mid-sized themed institutions like the Watarium and small family-run ones like GA Gallery, an exhibition space and publishing house (ADA Edita). The last one from each category is of particular interest, as they focus on architecture exclusively. GA was established in 1970, its distinctive building designed and built by its owners in 1974, with exhibitions started in 1983. Its activities are reciprocal, based on the circulation of the publications that concentrate on built work. Gallery MA, on the other hand, was founded in 1985 as part of a larger cultural project of TOTO Ltd. aiming to increase public awareness on modern urban life. Self-described as a place for stimulation, exchange and interaction, MA equally embraces realized projects and the unbuilt and, since the mid-1990s, has started TOTO Publishing to accompany its activities. Such curatorial initiatives and small galleries obtained the role of informal education and source of associations in a position to elevate work and processes exhibited to unquestionable acceptance of validity. As such, they permitted fragments of potentiality to flourish operating as a testing platform during the post-bubble period.

Zoom In/Out

One might wonder what comes after that, how has this architectural family tree developed, how this new generation perceives its position within the archi-genealogy as well as their view on the effect of architectural mediation and exchange. Approaching a group of young professionals under 40 to pose such questions, I had the chance to take a glimpse into the concurrent architectural kitchen in Japan. The selection was based on a body of substantial realized projects of varied scale within the Tokyo metropolitan area, in order to reflect the understanding of the urban informé.

As the relevant visual material might reveal, their work comprises equal amounts of - either realized or in progress - residential and retail projects. Both are urban commissions par excellence in Japan, especially Tokyo. But contrary to the group of Tokyoite architects preceding this generation, whose work almost entirely focuses on small urban houses, these younger architects seem to have been engaged considerably early

Nanyodo bookstore facade in Jimbocho, Tokyo
© Ioanna Angelidou

GA Gallery venue (exhibition: Contemporary International Architects 2010)
© Diego Lopez Arahuetes

in small yet public commissions, such as small shops, interiors, and sometimes even just facades. This detachment of architectural elements is not rare to Tokyo; one third of the city's built structures are one way or another modified or replaced altogether over the course of a single year. Still, it marks a significant difference and evolution in the sense that Tokyo's architects, after having observed the urbanscape and attempted to blur the boundary between inside and outside through their residential designs, have slowly started 'domesticating' the urban. On the other hand, the term 'small' becomes relative when concentrating on inhabited natures. This generation shows a particular affinity to playful representation of themselves and their work through display projects and installations, which can be perceived as a tactic both modern and non-modern. It could also be described as elasticizing the Western notion of modernity by simultaneously employing concepts of total living and micro-landscaping, essentially creating a personalized environment. Positioning chairs and flower pots, arranging teacups and cake cases on tables, and immaculately crafted physical models are all indications of a sort of kawaii (cute) mini-urbanism that draws from the seminal modern notion of total design.

In regards to network opportunism and mediation, I was surprised to receive responses often critical of their sometimes superficial nature and skeptical of their constraints. Indeed, communicative projects like publications and exhibitions are perceived more as singular projects and are welcome as such. As for references in work and design approach, though all seemed very conscious of this reality and were overly respectful to their former sensei (masters), they strongly asserted the independence of their work. Could that be perceived as yet another kind of assimilation, a Japanese pattern of practice, or should it perhaps be recognized as a new occurrence? As one of them - incidentally the younger one from the group - pointed out in her interview, the architecture schools and lines seem to emerge and become more obvious nowadays. Indeed, it seems to be the case, as the constant branching out family tree growing from the older masters indicates. The artist Takashi Murakami has coined the term "superflat" to describe a similar condition, which he characterizes as devoid of perspective and hierarchy [7], one where all references exist equally and simultaneously. Instead, I understand it as a self-referential and thus customizable hierarchy, one that allows individualized events and design tactics to become immersive, if not subconscious.

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[7] Takashi Murakami, Superflat (Tokyo: Madora Shuppan, 2000)

The Questions

Architectural genealogy: discussion over modernism and its adaptation to the local context has eventually led to at least two distinct architectural groups that are continuously renewed and evolving also based on the Japanese tradition of acquiring knowledge and experience through the transition within an office hierarchy. How do you position yourself in this modern architectural genealogy and to what degree has it affected your personal approach to design?

Mediating platforms: in Japan, architecture often becomes a field of popular experimentation on both spatial and graphic levels. Numerous publications of ranging approaches offer young architects the opportunity to communicate their work. Furthermore, though Tokyo lacks a large institution to host architectural exhibitions for a wider audience, it is equipped with numerous smaller curatorial initiatives specializing in architecture. This exposure has acted as a catalyst in constructing individual approaches for young architects. How do you find it to be of effect to the broader architectural scene by means of cross-contamination and quality-management?

Acknowledgements
Special thanks to all the architects who have kindly agreed to participate in the ongoing research project MicroTactics: Four Platforms for an Elastic Modernity, first conceived in March 2009 during an academic trip in Japan, initiated in New York and eventually continued in Tokyo throughout 2009-10. Thanks, also, to the staff members from all the offices for their effective overall assistance in scheduling and conducting the interviews as well as the preparation of relevant visual material.
Translations from Japanese by Yukihiro Nagata.

Akihisa Hirata | www.hao.nu

On architectural genealogy

When I was a graduate student, I was very impressed by Toyo Ito's design for the Sendai Mediatheque, which was still a winning competition entry at that time. I was very surprised by the photos of the model, it was really interesting, really beautiful, so I went to his office and well, I actually worked there for eight years! So a lot of things must have happened there. I started by being a kohai*, which was really hard work. But still, I gained great experience this way, especially in international projects like the Bruges Pavilion in Belgium and then Tod's Omotesando, so I was very happy at Ito's. Of course I was very interested in Ito's thinking, but at the same time was working very hard to make some sort of difference in his approach through the projects themselves. We came up with many new ideas during that period. The office was very creative. This generation of Japanese architects, like Ito or Tadao Ando, have a very clear approach and methodology. They speak of their concept in very clear terms. But I think the generations that follow tend more towards considering the conditions and surroundings, as well as explaining their architecture. This is already a new approach, but I believe I belong to the generation coming after the latter; I do not just want to describe a condition or explain the situation, but come up with a strong principle, make a sort of contribution of architecture which perhaps is a little bit like Ito-san's generation. This sort of "animal instinct" in design which Ito refers to is shared by many Japanese architects, like Sejima. Of course, Sejima also worked in Toyo Ito's office, but her instinct is quite different from his, even as she has been very much influenced by him. We might all share this sort of instinct, but I feel the differences are more important.

On mediating platforms

Well, yes, it is kind of positive, isn't it? Actually, this really impresses me and I am very happy to discuss ideas with other architects from a different background. So I think in a way we are in a fortunate situation. Yet, at the same time, I hope that architecture will eventually gain more social power and effect, because people perceive architecture as a limited part within the field of design and disregard its social aspect. Architecture in Japan is not really social. For instance, it is very rare to see architects' comments in newspapers or other everyday media outside the profession, the one that common people have access to. Scientists reach out to a broader audience and make public appearances in Japan and I very much hope that eventually architecture will also gain such an audience and influence by its own means. I believe architecture is very much related to social issues and people's everyday, so why not have access to the media that refer to them?

Sarugaku retail complex, Tokyo
© Nacasa & Partners Inc.

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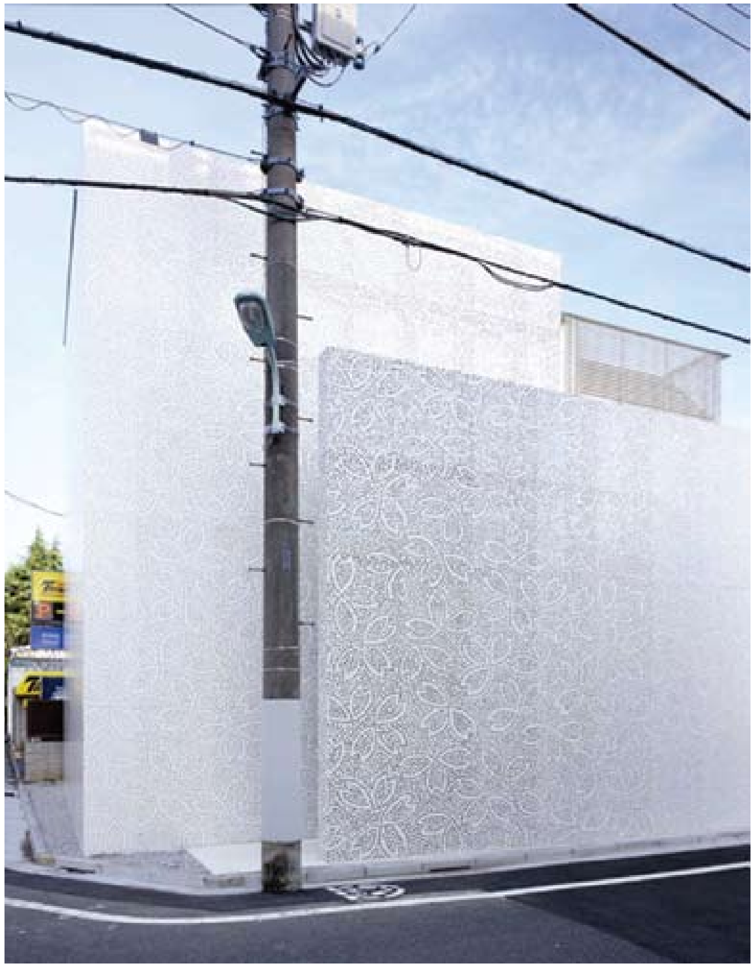
* The lower position in the Japanese apprentice hierarchy, equal to intern or junior, gradually moving up to sempai (a tutor or intermediate) and eventually sensei (the master).

Masahiro Harada | www14.plala.or.jp/mfas/fuji.htm

On architectural genealogy

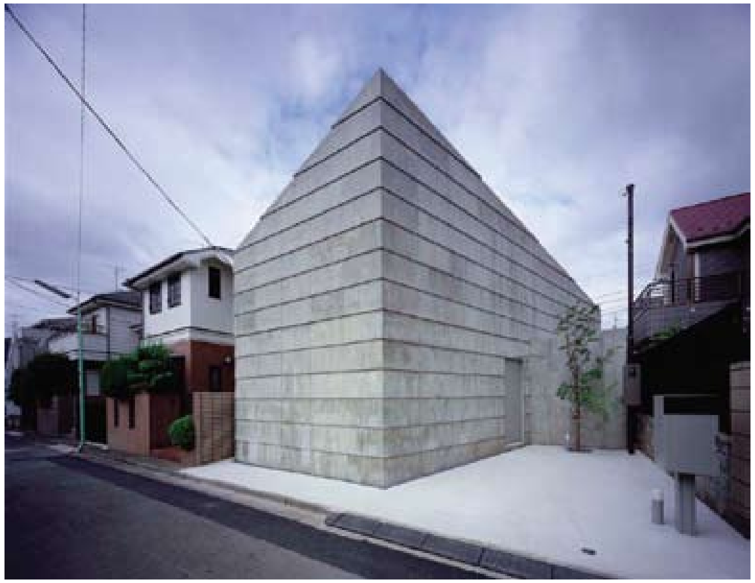
Be it traditional or contemporary, as far as architecture is bound to a specific style, it has no value for me. I perceive architecture as an embodiment of the most rational relationship between human and location, climate included. Architecture taking these elements into considerations is essentialy vernacular and still entirely contemporary. For me, modernity is the intention or tendency to pursue rationalism and I do not place any value on modernism bound to a stylistic approach.



Sakura, Tokyo
© Ryota Atarashi

On mediating platforms

The media is a site in its own right and many Japanese architects seem to approach that field as of equal importance to actual built sites. Some (especially in my generation) may feel media have a deeper sense of reality than actual sites. I attribute this to the tradition of "Uki-yo", a sort of floating world with unreal, idealized attributes. I adapt myself to the abstract sites of media while positioning the center of gravity on actual sites. Architectural media and their mediation are fleeting and ambivalent, thus it may be important for architects to avoid shortening their lives. That said, I do not mind people criticizing my work. I believe it is very important for the sake of cultural discussion that architecture stirs up criticism. However, it is better to be spoken or written about by critics than architects. The artistic aspect of architecture is to be determined by critics and not the architects themselves.



Rainy/Sunny House, Tokyo
© Ryota Atarashi

Yuko Nagayama | www.yukonagayama.co.jp

On architectural genealogy

Judging from the context and since I practiced in Jun Aoki's office, I belong to the Tange School. However, I have not really been aware of these genealogies. Aoki has a very distinct approach, influenced by his presence in Arata Isozaki's office, but I do not think that he was conscious about this, either. Rather, I believe these two groups are emerging now. More importantly, the generation gaps are becoming more and more apparent these days.

UrbanPrem (MinamiAoyama 385), Tokyo
© Daici Ano

On mediating platforms

I feel that the whole publishing industry has decreased in strength and architectural publications are also losing vigor along with it. Lifestyle magazines are relatively active due to their nature; their editorial approach is more liberal. On the other hand, I am under the impression that specialized architectural publications have a somewhat outdated character. Time goes by fast and the world beyond architecture is also changing rapidly. However, the definitions in the architecture publishing domain remain very limited. Small and specialized galleries do function very well as hubs for the architects. Nevertheless, not necessarily referring to the architectural galleries, I somehow wish that there were more opportunities to hold an exhibition in a larger venue, where people can realize their installations liberated from size constraints.

"A House is Not a Home" exhibition installation, SCAI*The Bathhouse gallery Tokyo
© Yuko Nagayama

Hiroshi Nakamura | www.nakam.info

On architectural genealogy

I like reflecting the vernacular nature of architecture in my projects. In that way, I can build something different and feed my curiosity and interests. I feel a sense of incongruity with the work of Le Corbusier or Mies van der Rohe, as several other architects do. Le Corbusier created this sort of architecture that can be built in any context and commercialize it. After WW II, such designs and schemes materialized within a period when the veterans returning from the war and their families were in immediate need of housing. I am skeptical of the evaluation of architecture concentrating on design per se, without consideration for the social of financial background. When I was an architecture student, Rem Koolhaas held up the keyword "shopping" and insisted that architects had to design recognizing the flow of capitalism and commercial principle. Upon graduation, I started working at the office of Kengo Kuma, who I considered to be one of the very few architects able to see architecture from the standpoint of economy. Three years after I left Kuma's office, I started my own studio in a small deserted private house. I had no projects whatsoever and was at a loss when I suddenly received a commission to design the Lanvin Boutique in Ginza. A client of Kengo Kuma introduced me as an architect. Through this project, I met Mr. Alber Elbaz, Lanvin's designer, who changed my life as an architect. He told me, "Clothes have emotional existence, why is it not so with architecture?" Indeed, we feel relaxed when we wear clothes made of organic cotton or luxurious when we wear clothes with embroidery and so forth. Fashion designers always consider the feelings of the people who wear the clothes they design. Yet, modernist architecture excludes feelings and decoration by dealing only with issues than can be logically explained and resolved. Design with emotion is a principle for Alber Elbaz and I was influenced by these words of his very much.

On mediating platforms

There is a tendency for Japanese architects to rely upon and barricade themselves in architectural academism or journalism. I am rather avoiding it. I just want to discuss with respectable people in a place away from such an environment. My second project when I started my own office was House SH, and it was then that I started considering that the ultimate purpose of architecture is to become something like an attachment. I wanted the resident to love the architecture itself. House SH also acted as a model for my book *Architecture with Love*. I gave this title to the book because I wanted to discuss architecture with common words and everyday language, not incomprehensible philosophies. Feelings are also triggered in people through the ambience of the space or the touch of its materials - and architecture can do that. When the owners of House SH smiled in their new living room, I was convinced that this was an idea all the most relevant. I could feel my goal - the design that can potentially sympathize with the person - take shape.

Roku Museum, Tochigi
© Hiroshi Nakamura+NAP

Yasutaka Yoshimura | www.ysmr.com

On architectural genealogy

Within the family tree of Japanese architecture, I think I belong to the generation coming after Bow Wow*. In this generation, there are so many architects and each of us has a different background and approach. However, we may actually seem quite similar through a Western perspective. For instance, many architects - including myself - employ such elements as the gabled roof in their work. This is not some sort of post-modern symbolism, but rather due to the specific spatial character of the gabled roof as a shape. We use the angle of the roof in a rationalist context. By this token, we could perhaps identify ourselves as the generation bleaching out the color of post-modernism.

Top: Nowhere But Sajima apartments, Kanagawa
Bottom: Bayside Marina Hotel, Yokohama
© Yasutaka Yoshimura

On mediating platforms

In Japan, there is this misconception that overseas architects enjoy fame and wide respect for their work. From my experience living in foreign countries, I do not see so much difference between Japan and abroad in this aspect. Indeed, many small publishing houses and exhibitions fostered by private companies have been cultivating unique approaches in Japan, which means that Japanese architects are not necessarily depending on a particular kind of media reference. However, this is a thing of the last decade and, more and more, it seems like the internet has become a medium of significant control for architecture. As for exhibitions, particularly those held in specialized curatorial hubs, I am afraid they are hardly visited by people outside the profession. In that sense, cross-contamination cannot be entirely effective. Moreover, the medium itself has been diversified, so we have exhibitions of architecture held in art galleries. Nevertheless, this sort of specialized media exposure has acted as a catalyst in constructing individual approaches, and of course it is a form of quality management. Architecture does not draw reference only from a singular context. Dialogue with fellow architects, even from a distance, always provides a stimulus for my work; sharing the same ideals means we are heading forward, it is a type of progress. On the other hand, our generation is often regarded as one not so motivated to share information through the traditional platforms like publications and exhibits. Compared with the generation preceding the one I belong in - that has indeed established its network through such media - we have a much easier way to share and circulate our work, and that is none other than the internet.

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* the Bow Wow Generation, a term coined by architect and critic Akira Suzuki, refers to Japanese architects currently in their mid-40s who were most affected by the shaken construction industry during the period following the burst of the speculative bubble in Japan. As such, much like Tsukamoto and Kaijima of Atelier Bow Wow, had to revert to alternative modes of architecture as research, publications and exhibitions of speculative projects.

Architect's Biographies

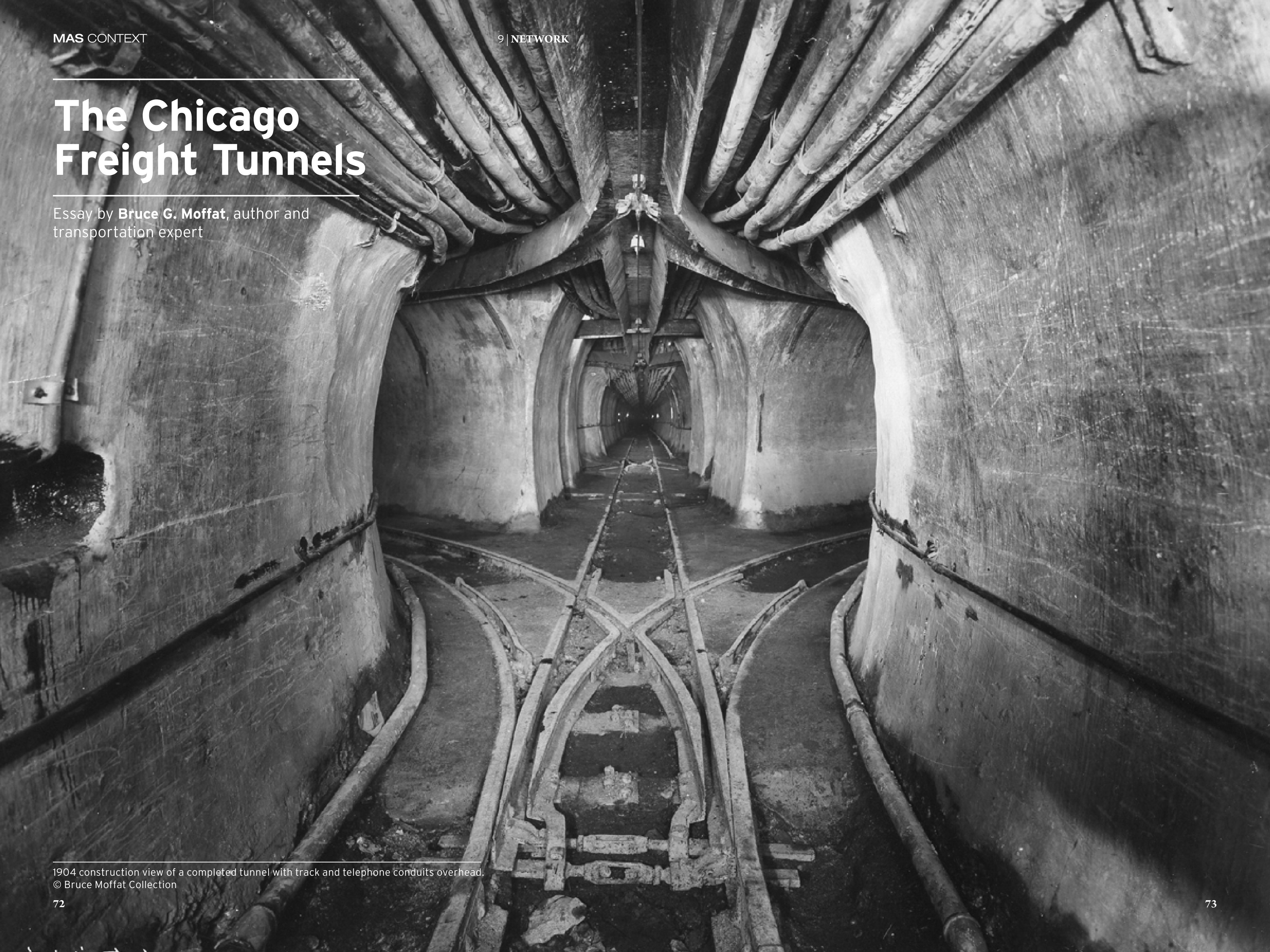
Akihisa Hirata was born in Osaka (1971) and studied architecture in Kyoto University. He worked at Toyo Ito & Associates from 1997, where he was involved in projects including Tod's Omotesando and Ghent Forum for Music, Dance and Visual Culture (with Andrea Branzi), before establishing his own office in 2005. He received the 2007 JIA (Japan Institute of Architects) New Architect Award and published two books, *Animated* (Graphic-sha Publishing) and *Young Architects Concept Series 8: Tangling* (INAX). Recent projects include Tree-ness House in Tokyo and 2nd Prize in the Kaohsiung Maritime Culture and Pop Music Center Competition in Taiwan.
www.hao.nu

Masahiro Harada was born in Shizuoka (1973) and studied at the Shibaura Institute of Technology. He worked with Kengo Kuma and Associates (1997-2000), in Spain with Lapeña & Torres as a National Art Fellow (2001-2002) and upon his return in Japan at the office of Arata Isozaki, until establishing his own office Mount Fuji Architects Studio with his partner Mao Harada. Their projects have received numerous distinctions and current projects include several residential commissions in Tokyo and an art/street furniture installation in Arts Towada. He serves as an Associate Professor at Shibaura Institute of Technology.
www14.plala.or.jp/mfas/fuji.htm

Yuko Nagayama was born in Tokyo (1975) and studied at Showa Women's University, practicing under Jun Aoki from 1998. In 2003, she established her own office and has since undertaken a significant number of residential and retail commissions, such as the Louis Vuitton flagship store in Kyoto and the renovation of Kabaya Coffee Shop in Tokyo. The recipient of Best New Female Architect Award (2007) as well as 2nd Prize in the Tsukuba Garden City House Design Competition, she also lectures at Tokyo University of Science and Showa Women's University.
www.yukonagayama.co.jp

Hiroshi Nakamura was born in Tokyo (1974) and grew up in Kanagawa Prefecture. He studied at Meiji University of Arts and Sciences and worked at Kengo Kuma and Associates (1999-2002). Major works with his own office, NAP, include the Lanvin Store in Ginza, House SH in Tokyo, Roku Museum in Tochigi and the renovation of Tokyo International Airport Terminal 2. He has published two concept books, *Architecture with Love* (ASCII) and *Young Architects Concept Series 6: Microscopic Designing Methodology* (INAX).
www.nakam.info

Yasutaka Yoshimura was born in Toyota City (1972) and studied at Waseda University. He has worked with MVRDV in Rotterdam under a National Art Fellowship and set up his own office in 2005. He has taught at numerous institutions, including Tokyo University of Science, Kanto Gakuin and Waseda University. With students from the latter he prepared the research project *Tokyo Super-legal Buildings*, which was published as a book in 2006 (Shokoku-sha). Other publications include *Ex-container* (Graphic-sha) and *Architecture and Cloud* (Millegraph).
www.ysmr.com



The Chicago Freight Tunnels

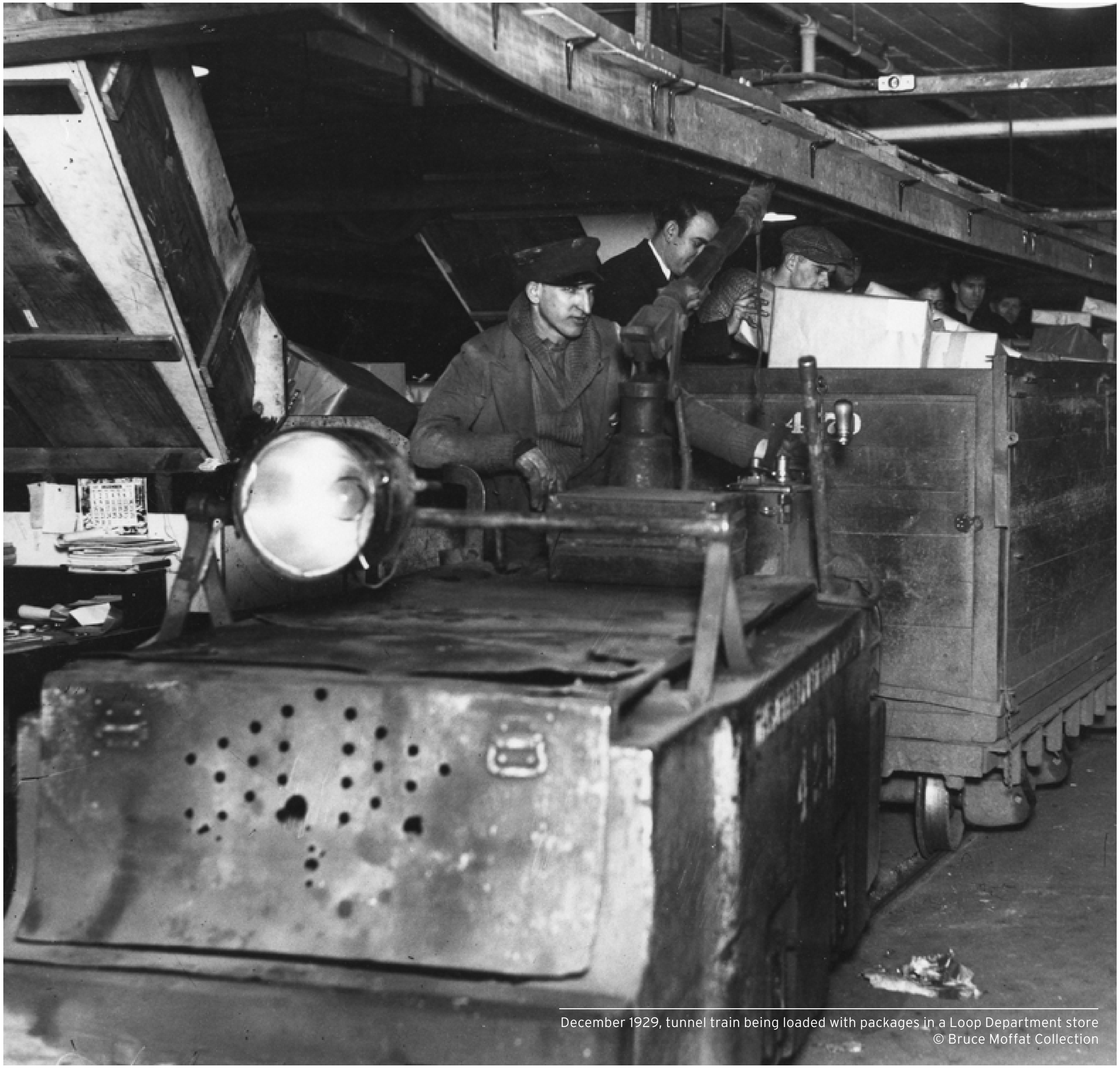
Essay by **Bruce G. Moffat**, author and transportation expert

1904 construction view of a completed tunnel with track and telephone conduits overhead.
© Bruce Moffat Collection

At the turn of the 20th century, the streets of Chicago's relatively concentrated Central Business District (known as the Loop) were already at or beyond capacity, with streetcars, horse-drawn delivery wagons, and pedestrians vying for space. Were it not for the fact that horse-drawn buggies were few and the debut of the mass produced private automobile was still in the future, the situation would have been worse. The Loop and its adjoining areas were home not only to large department stores and office buildings, but also six major railroad railroad terminals, the seemingly innumerable warehouses and freight terminals maintained by railroads and steamship lines, numerous wholesale and warehousing operations, and even light manufacturing firms who contributed to the congestion – all in the name of commerce. The crush of supporting vehicles made the streets nearly impassible at times.

It was this situation that caused the promoters of a new telephone system to add the construction of a subterranean freight railway to their plans. The Illinois Telephone and Telegraph Company had been organized in 1898 to construct a telephone system that would compete with the well-established Chicago Telephone Company. The City of Chicago required the IT&T to place their wires underground in conduits. Construction of the conduits began in late 1899; however. these were crafted to a size much larger than needed to hold mere wires. Built to a dimension of 7 1/2 feet high and 6 feet 9 inches wide, they happened to be just large enough to also accommodate a narrow gauge railway.

Although it is unclear if the railway was a part of the company's plans from the start, they failed to tell the city they were building a railroad until construction was fairly well along, apparently fearing municipal meddling. What is clear is that the subterranean railway was envisioned not to handle passengers but freight. By diverting freight from slow moving wagons



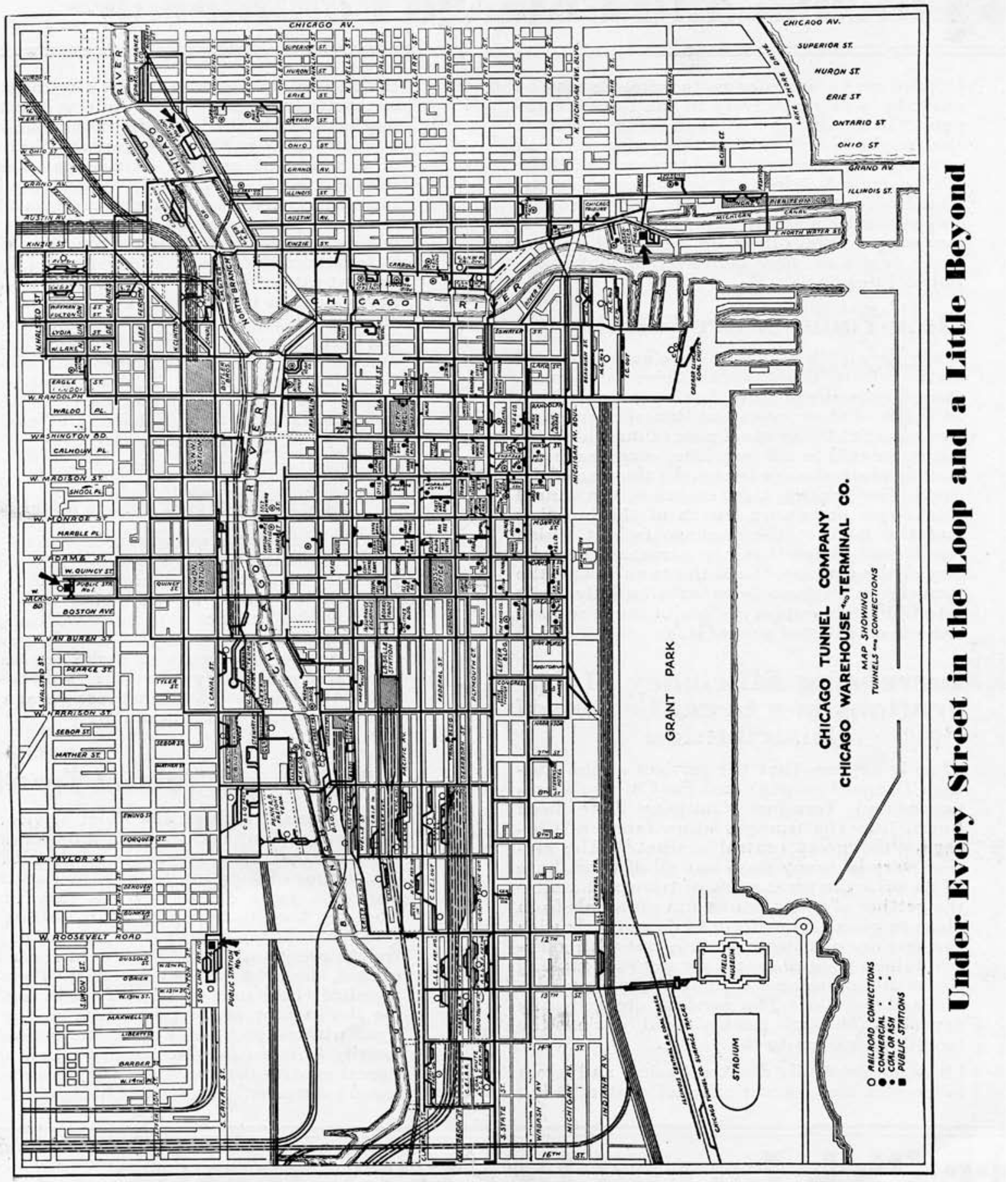
December 1929, tunnel train being loaded with packages in a Loop Department store
© Bruce Moffat Collection

on congested streets to electric trains running beneath them, it would be possible to move goods of almost every description quickly between railroad stations, boat docks, department stores and factories. The building of a 'subway' for freight, rather than for passengers, was, to say the least, unusual. And excepting a specialized mail handling railway that would later open in London, it was unique among the world's railways.

Following the company's admission in 1902 that they were building a railroad in their telephone 'conduits,' the City Council began a contentious round of negotiations with the company that resulted in the passage the following year of an ordinance authorizing the operation of the railway with hefty franchise payments going into the municipal coffers. Construction crews dug tunnels under nearly every downtown street at a depth of forty feet. This depth ensured that most tunnels would run through clay, which simplified tunneling. The relatively small size of the tunnels meant that standard railroad cars could not be used. Instead, specially built freight cars measuring about ten feet in length and five feet in width had to be used. This meant their cargo had to be manually transferred to/from "full size" railroad cars for delivery to distant points.

In 1906, the freight tunnel railway opened under the name of the successor Illinois Tunnel Company (a subsequent reorganization resulted in the name being changed to the Chicago Tunnel Company). Freight loads typically consisted of small packages (parcels) from department stores destined to mail order customers located outside of the downtown area, non-liquid commodities of all types destined to wholesale and large retail customers, coal for building heating, and removal of heating ash.

In 1910, the company reported to the state and federal regulatory commissions that they had nearly 60 miles of track and 22 connections with railroad freight houses and 45 commercial buildings. It was estimated that the company's little trains had diverted the equiv-


Under Every Street in the Loop and a Little Beyond
CHICAGO TUNNEL COMPANY
CHICAGO WAREHOUSE & TERMINAL CO.
MAP SHOWING TUNNELS AND CONNECTIONS
○ RAILROAD CONNECTIONS
● COMMERCIAL
● COAL OR ASH
■ PUBLIC STATIONS
GRANT PARK
STADIUM
FIELD MUSEUM
CHICAGO RIVER
NORTH BRANCH
SOUTH BRANCH

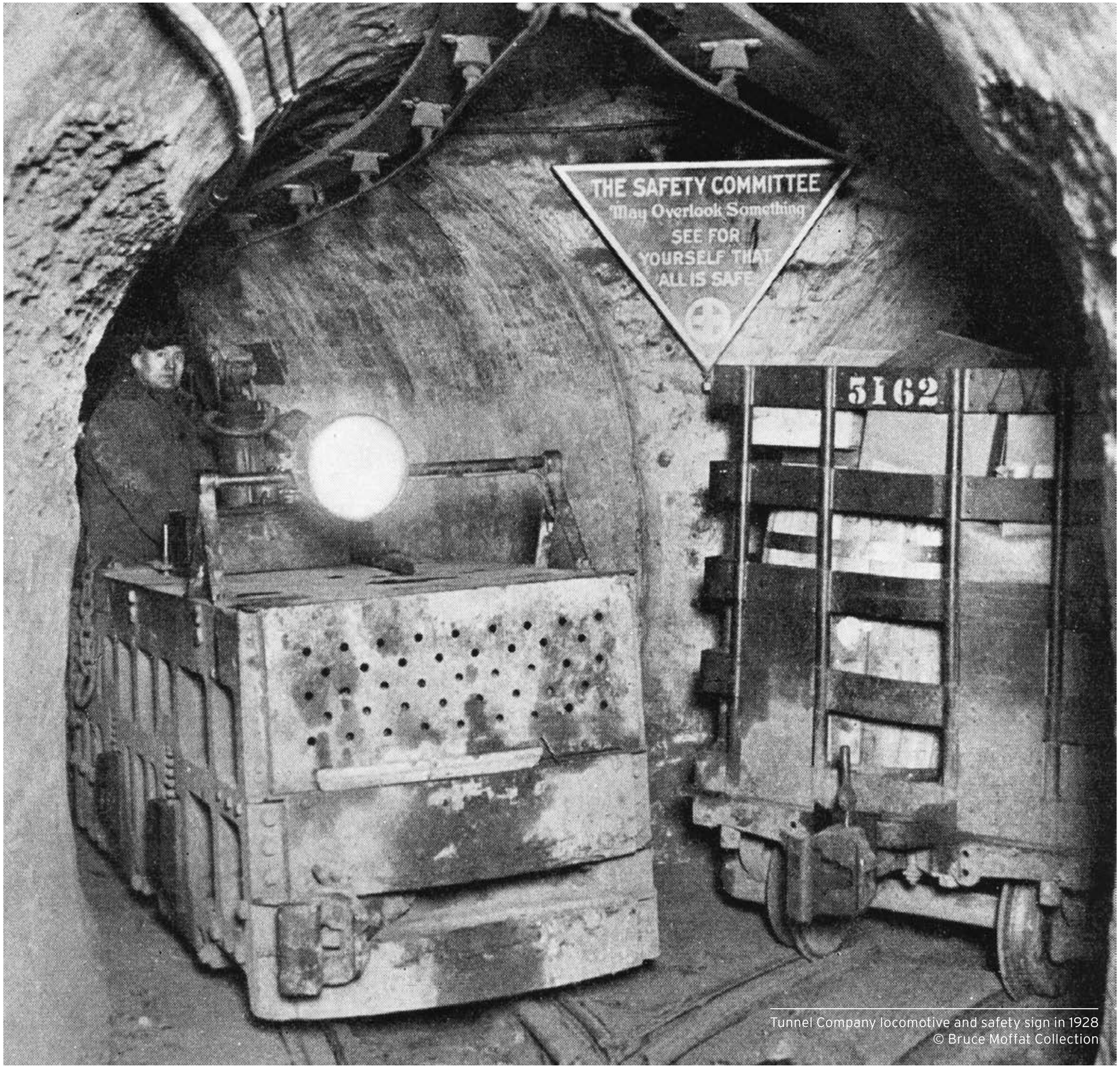
Chicago Tunnel Co. 1920s system map
© Bruce Moffat Collection

alent of 1.3 million vehicle trips from the streets. By 1924, traffic had declined slightly, even though the number of commercial buildings served had risen to 60. (The telephone side of the business had been discontinued in 1916 due to excessive losses.)

In the succeeding decades, results were largely no better, resulting in the company being at best marginally profitable. Reasons for the company's rather lackluster results was due to a number of factors, not the least of which was the relatively low number of connections to on-line buildings. The cost of tunneling into those buildings frequently had to be borne by their owners and, in many cases, this did not make economic sense. For many potential users it was simply cheaper to have a wagon (or later motor truck) pull up to the curb.

The enterprise's original concept – to divert freight from the streets and put it underground – was novel and certainly a century or more ahead of its time. Unfortunately, the system's physical constraints, and indeed the changing nature of central area land uses, made its business model impossible to sustain. The list of adverse "environmental" changes that buffeted the company during the 1940's and 1950's was a long one: connecting railroads had largely discontinued the handling of small packages and had closed or relocated their freight handling operations to outlying areas; the construction of the passenger subways now used by the Chicago Transit Authority had forever severed connections to some of the Loop department stores; motor trucks siphoned away most of their freight business; light manufacturing was rapidly disappearing from the Loop; and finally, buildings were converting from coal to gas for heating. The end of operations came in 1959.

To help pay creditors, most of the locomotives and freight cars were sold for scrap. as was the electrical distribution system that had powered the trains. The



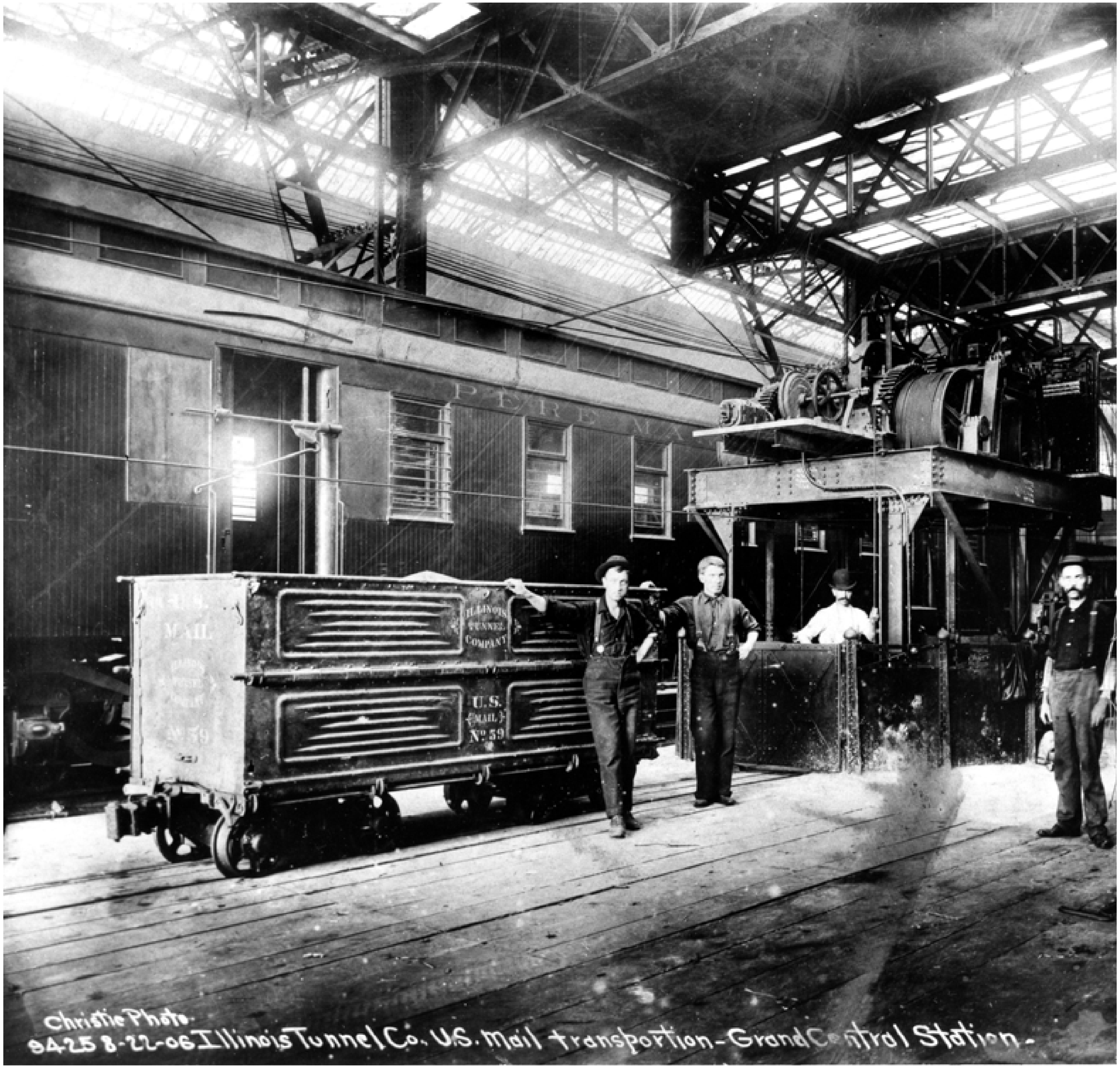
Tunnel Company locomotive and safety sign in 1928
© Bruce Moffat Collection

track remained, however, as it was too difficult and expensive to remove from the concrete floor.

Now entirely controlled by the city, the tunnels entered a period of dormancy, broken only in the mid-1970's when the city began leasing out limited portions to house electrical and communication conduits. Maintenance and inspection of the tunnels was at best minimal.

Largely forgotten, the 40-plus miles of tunnels that remained surged back into the public's consciousness on April 13, 1992, when a section of the Kinzie Street tunnel that passed beneath the Chicago River gave way. During 1991, the city had directed a contractor to drive a series of wood pilings into the bed of the river to protect the Kinzie Street Bridge from being struck by passing vessels. In doing so, the contractor had driven one of these into the wall of the freight tunnel that ran beneath the river at this point. The placement error and harm to the tunnel wall was not found until January 1992, when a surveying crew for a communications company stumbled on the damage.

The city's efforts to follow up on the survey crew's report and initiate repairs turned out to be too little too late. Early on the morning of April 13, 1992, the wall gave way and the sub-basements of many of downtown Chicago's largest and most iconic buildings quickly filled with water as the river literally surged into the largely forgotten network of tunnels. Other buildings and the CTA's passenger subways sprang leaks where they were built up against the nearly century-old freight tunnels, but fortunately remained relatively largely dry. Quickly dubbed the "Loop Flood," this unusual calamity attracted worldwide attention. Large sections of the Loop were temporarily evacuated due to fears that power failures resulting from the flood would trap workers in their high rise office buildings.


ILLINOIS TUNNEL COMPANY
U.S. MAIL No. 59
Christie Photo.
9425 8-22-06 Illinois Tunnel Co. U.S. Mail transportion - Grand Central Station -

Efforts to stop ‘the leak’ were fruitless. Only after the tunnels had completely filled was it possible to seal-off the ruptured tunnel and begin the dewatering process, a task that took until over a month to complete. Business and physical losses were over $1 billion dollars by some estimates. Since that time, the city has made improvements that should prevent a reoccurrence of the flood.

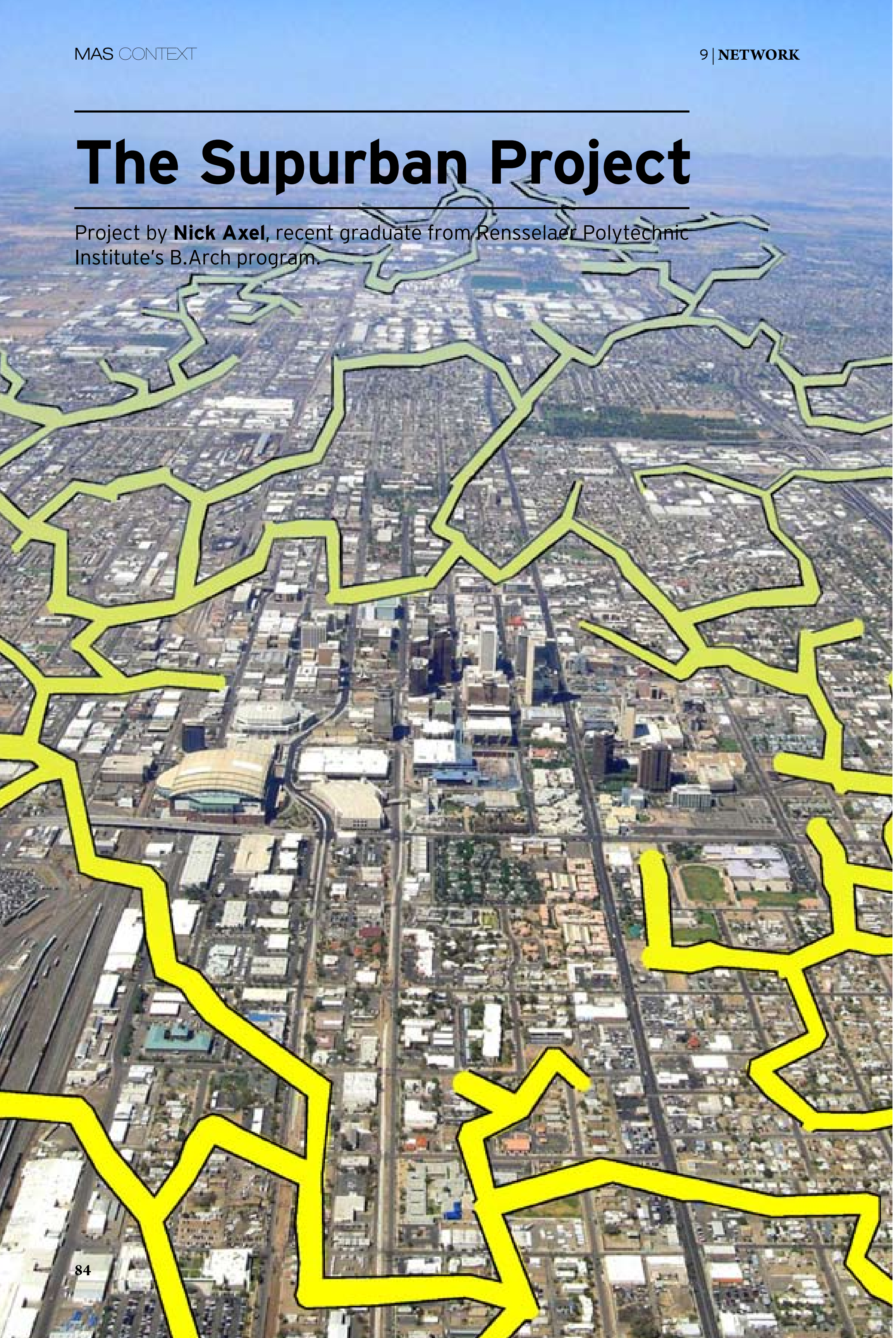
Today, some of the tunnels house communications and high voltage electrical conduits. Others remain empty and some sections have been filled in or obliterated due to construction of the CTA subways and large buildings.

It is complicated to speculate about the potential that the tunnels may have beyond the current utility galleries they are in some areas. The tunnels are too small and too deep for public transportation purposes. Their only non-utility use could be as a tourist curiosity, like the tunnels and caverns under other cities such as Paris. They could be understood as a form of cave exploration or "urban spelunking". However, the City of Chicago has been generally unfavorable towards the idea of having tours conducted through the network. But there is something intoxicating about searching the network and finding remains of a railroad that has been abandoned for more than 50 years.

View south on Wabash at connecting tunnel to Marshall Field's. 10-21-1992
© Bruce G. Moffat

The Supurban Project

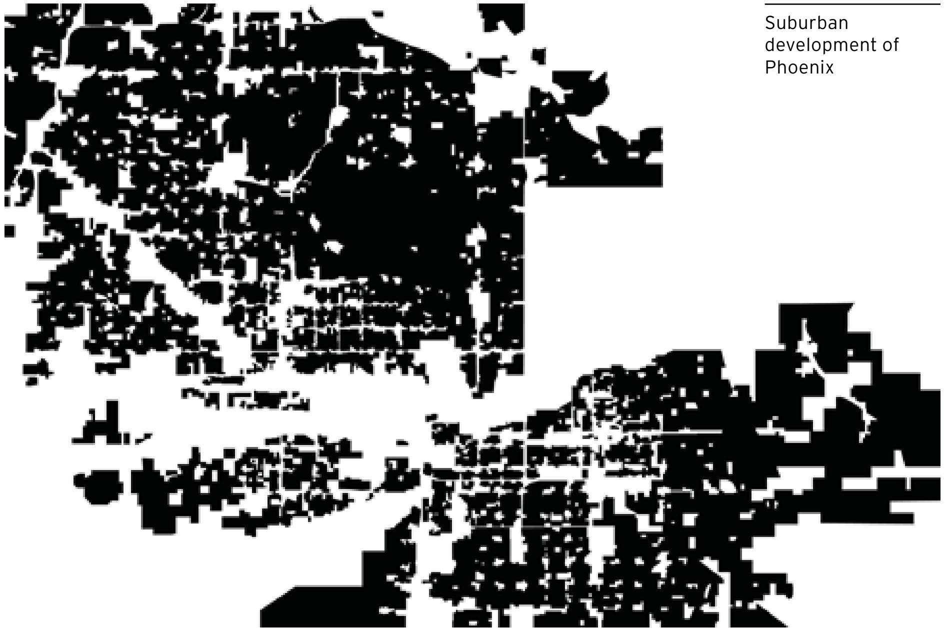
Project by **Nick Axel**, recent graduate from Rensselaer Polytechnic Institute's B.Arch program.



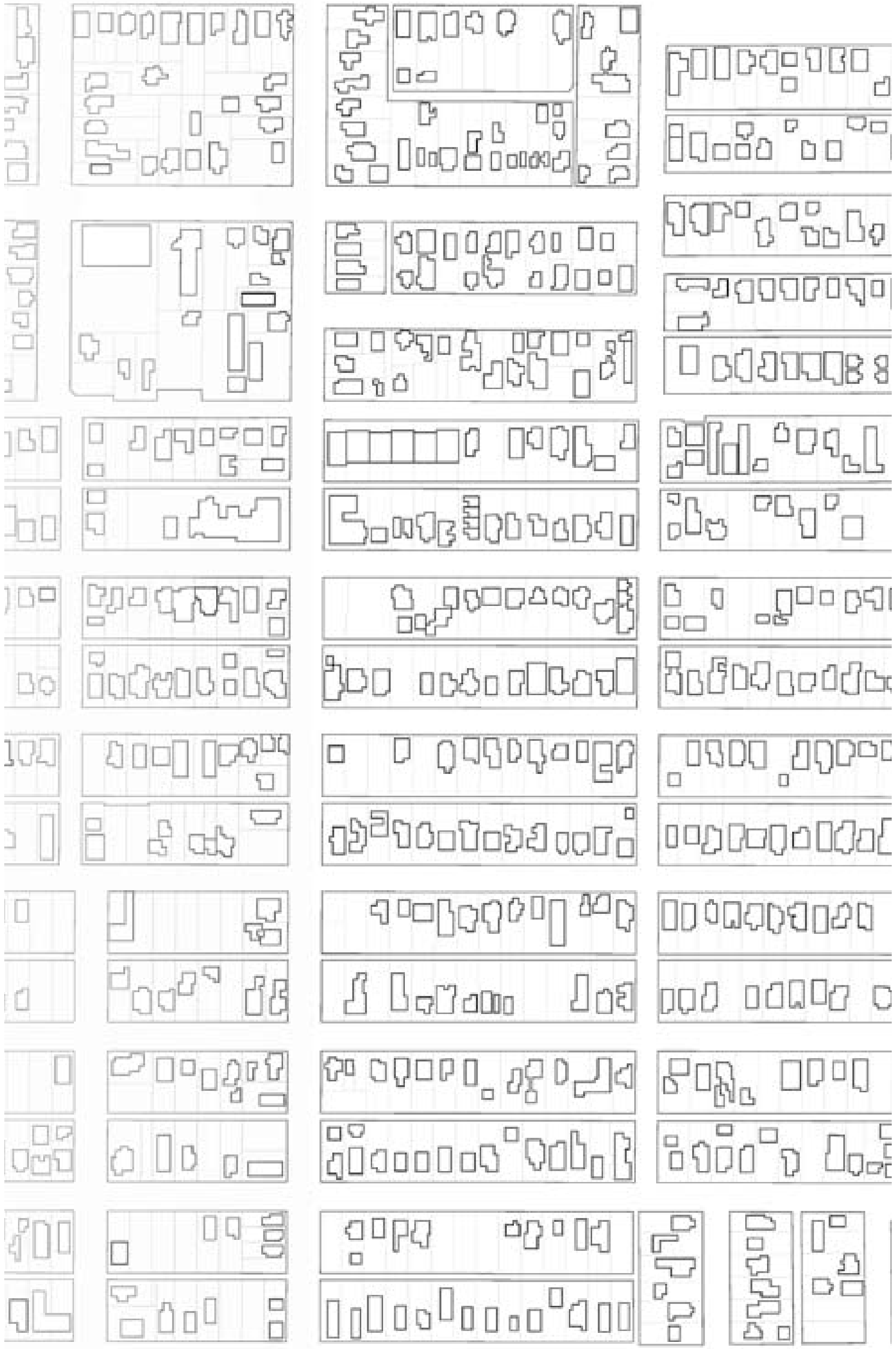
Our surroundings result from specific techniques to organize networks of people, goods, flows, and services. The urban plan attempts to orchestrate these systems into economically sustainable spatial practices. The American suburb, established as an alterity to the industrial city, was founded and marketed on existential conceptions of subjectivity. Acting as an ideological framework for the creation of identity, it represents the first explicit modeling of a social network. Working dialectically, the suburb's efficacy was consequentially negated as it propagated the American landscape; its difference dissipated. As a typical 20th century city, Phoenix, Arizona developed largely on standardized suburban prototypes that are inevitably made obsolete by newer peripheral developments. Atrophy has become an affliction, with vacant land and degenerating fabric. The network is crumbling from the inside out.

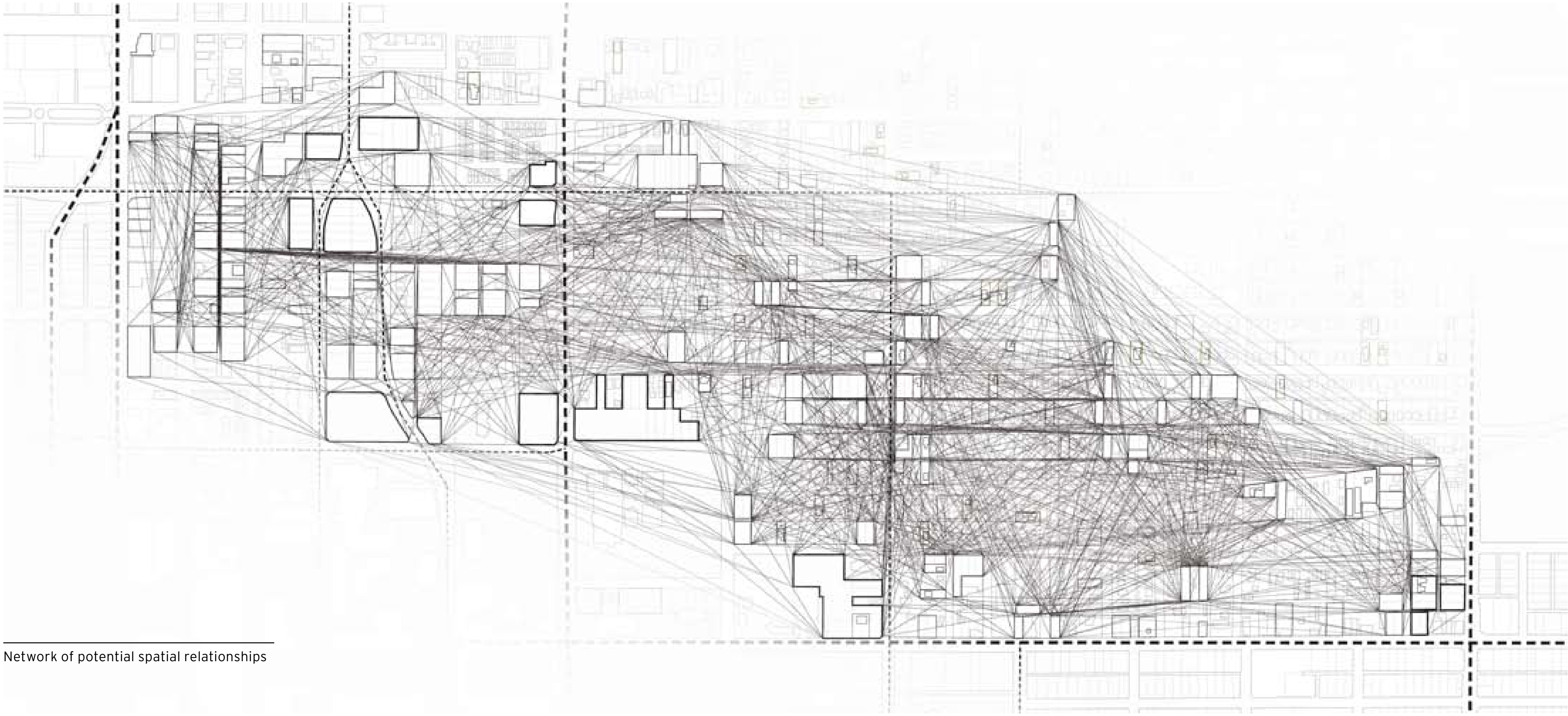
This thesis revolutionizes the aberrant form of the contemporary city to reinstate the existential potential of the (sub)urban realm now lost. Patterns inherent to the suburb are polemically redeployed in the prototypical first-ring suburb of Garfield using a radical strategy of "**homogeneity + homogeneity = heterogeneity**". Subverting the suburban morphologies' logics, a sprawling form is superimposed over the landscape; a continuous infrastructural and programmatic network reifies their symbiotic relationship. Juxtaposing these distinct spatial ecologies engenders a dynamic landscape of differentiation and localization, producing a context to reterritorialize the urban subject.

The suburb has developed into a highly idiomatic form; Phoenix provides a literal historical narrative if one was to take an entire cross section of the city. Developed almost solely on the principles of homogenous zoning and sprawl, Phoenix is the least dense city in the world with a population of over 1 million people. The first ring suburb of Garfield, located to the northwest of downtown, has had a complex local evolution over the past 80 years; the premier luxury commuter suburb once connected to downtown via railcar now is predominantly populated by a low-income immigrant demographic that is currently undergoing gentrification by scientific research, technology and higher education. Organized within the notorious 1 mile square grid of Phoenix, it is rigidly subdivided into a serial pattern of 50 feet x 150 feet individual properties zoned for single family residences. This grid lays the framework which every other system such as power, water, circulation, zoning, community, and family operates on. This complex amalgamation of history, urbanism, and culture has produced a downright freakology and results in a highly varied treatment and use of the built landscape. By walking around the neighborhood, one gets the almost-haunting sensation that the territory feels empty.



Suburban development of Phoenix





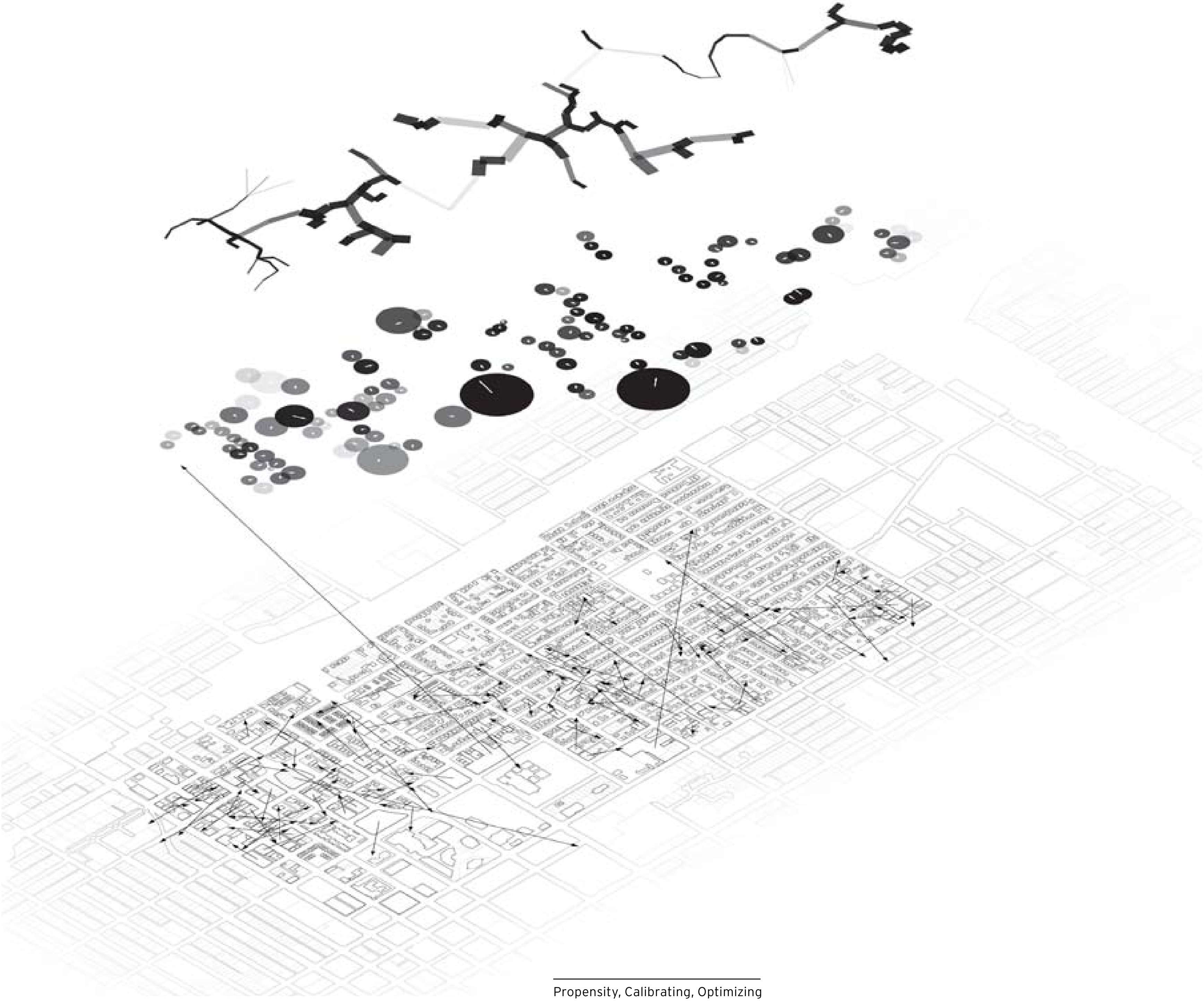
Network of potential spatial relationships

Aside from the fact that Phoenix is a city built in the middle of a desert, this feeling of emptiness is further confirmed by the fact that approximately 10% of all lots sit either vacant or foreclosed. Here, one can watch the desert start to take back its land. Lawns and fences often stand neglected, and in rare cases there are sparse patches of grass. Often times, what happens in one lot is either ignored or disregarded by its neighbors. As they seemingly turn their eye to the visible signs and spaces of degeneration, these locations act as a starting point; a node within the network; a place of entry into another suburb. By prescribing all propositions to be located on vacant land within the existing context, a synthetic symbiosis can emerge with dynamic interrelationships and consequences. Atrophy as a condition is an inevitable result, symptomatic to fundamental suburban characteristics of development and habitation.

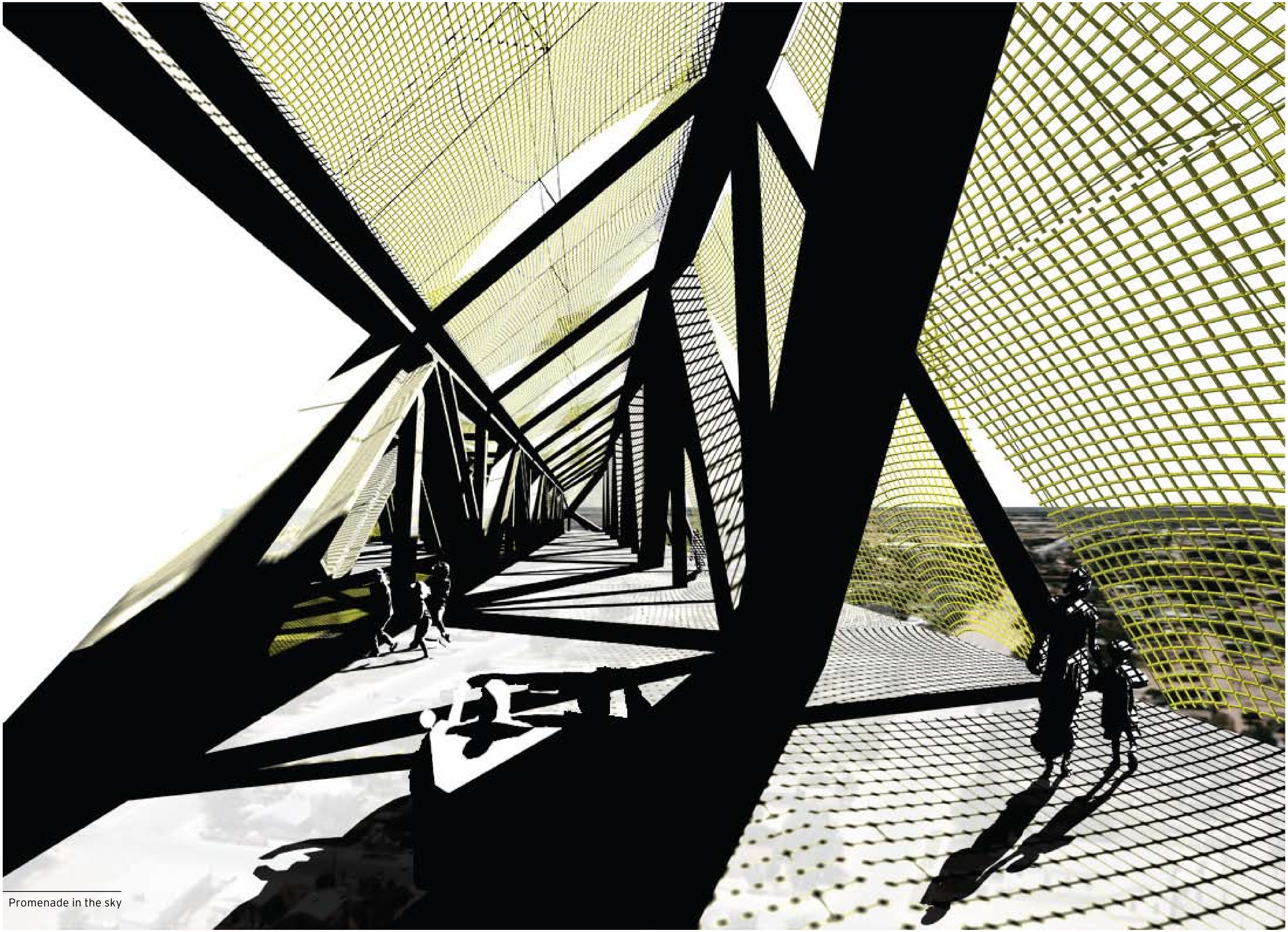
Through a gesture of abstraction, vacant and abandoned lots are isolated from their urban structure in order to negate its form, an act of liberation that provides the opportunity to create something truly different, and maybe even new. Continuing this dialectic, the relationship between each of the sites is mapped, revealing a network of potential spatial relations. Proximity between nodes is emphasized as a fundamental element for creating a new community established on the social propensity of the built environment.

Once the preliminary network is established, additional performative metrics are incorporated that inform the methods of structuring it and creating an architecture. Nodes are analyzed for their intensity and their relative direction towards each other, resulting in a single vector for each site. Less distance between two locations provides an opportunity for greater density, as well as the potential for structural optimization. Each is then evaluated for their adjacent infrastructures, such as sewers and high-traffic roads. Areas are catalogued and calibrated ultimately for their size in order to determine which locations have a stronger inclination towards greater development.

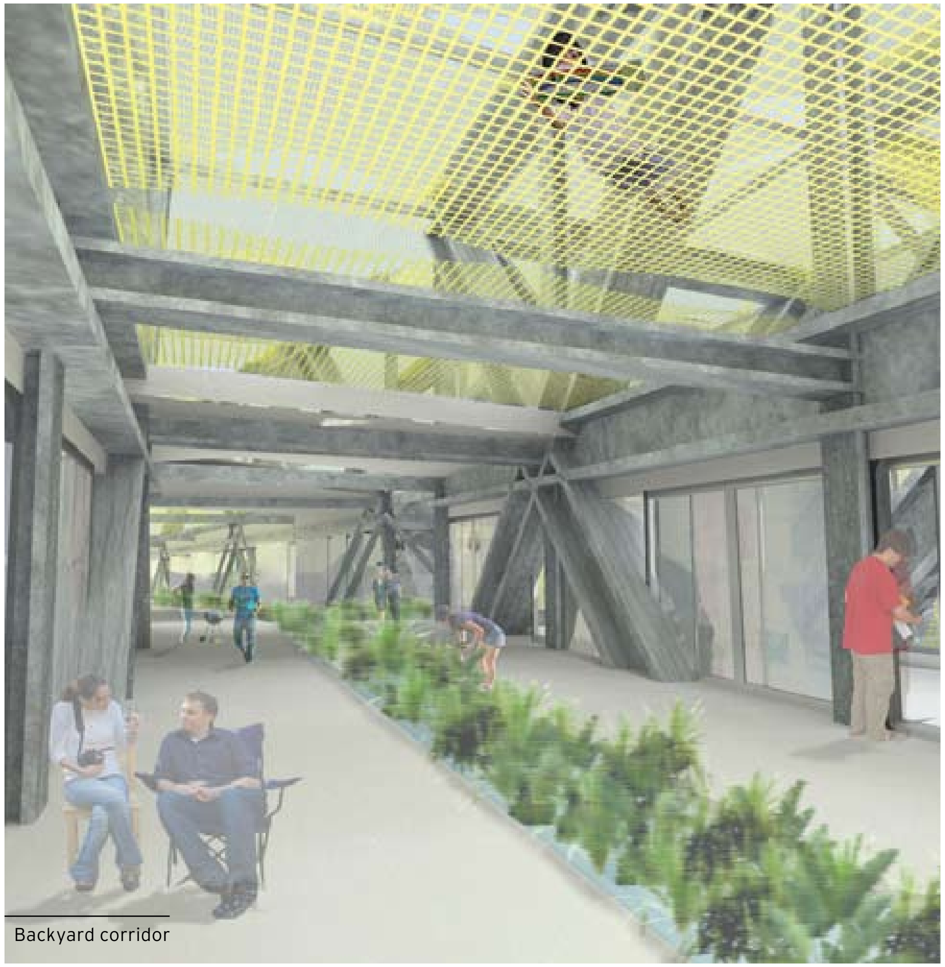
The concept of a bridge spanning between two sites preliminarily establishes the gestural condition for a symbiotic relationship between the two ecologies. Bringing vehicular traffic into the air synthetically extends the existing context while violating its rigid formal boundaries of circulation. This new spatial logic for traversing the landscape with familiar means drastically reorients the subject in the context.



Propensity, Calibrating, Optimizing

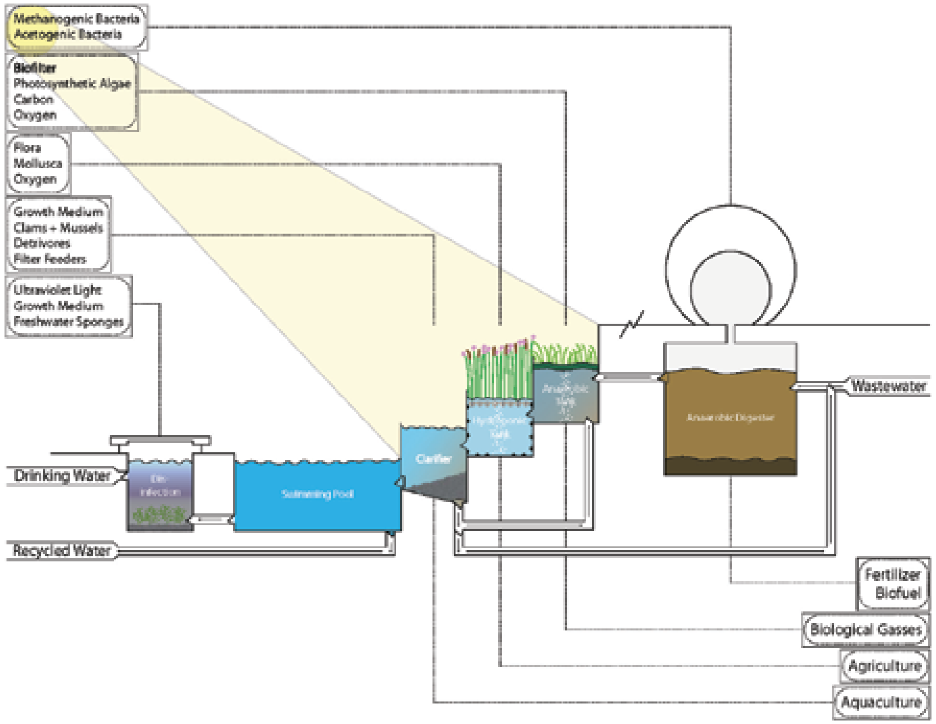


Promenade in the sky



Backyard corridor

The homogenous program of the suburb is extended into the structure. A new residential fabric is organized in a highly industrialized fashion with a modular double-loaded corridor placed underneath the road. The traditional functions of the sidewalks, such as pedestrian traffic and parking, are located along the perimeter of the structure. Oriented outwards, the interior is left for habitation and leisure. The middle area of the road is separated and surfaced with a net, viscerally augmenting the ground plane while allowing light to reach the corridor below.


Methanogenic Bacteria
Acetogenic Bacteria
Biofilter
Photosynthetic Algae
Carbon
Oxygen
Flora
Mollusca
Oxygen
Growth Medium
Clams + Mussels
Detrivores
Filter Feeders
Ultraviolet Light
Growth Medium
Freshwater Sponges
Drinking Water
Recycled Water
Dis-infection
Swimming Pool
Clarifier
Hydroponic Tank
Anaerobic Tank
Anaerobic Digester
Wastewater
Fertilizer
Biofuel
Biological Gasses
Agriculture
Aquaculture

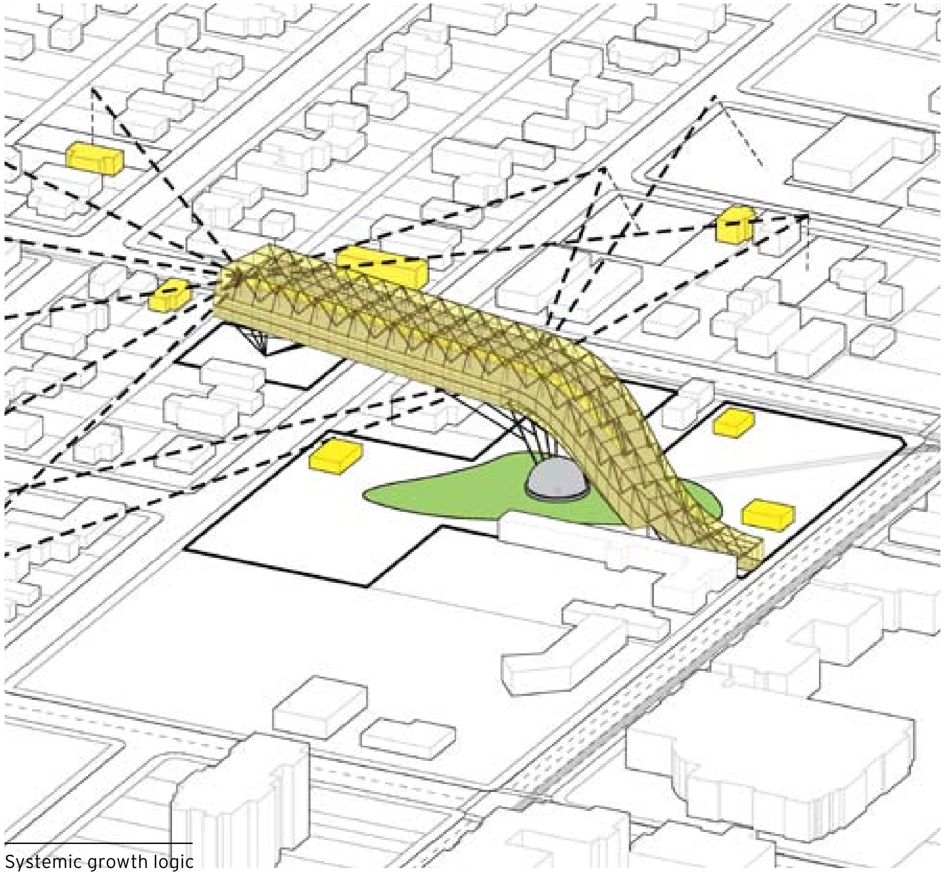
Living Machine diagram

The double-loaded corridor condition is typically defaulted to uncomfortable circulation, but is now liberated as an open and private backyard. Running down its spine is a water feature that is the result of an extensive phytoremediative system based off the concept of the Living Machine that runs throughout the structure. Sites adjacent to major sewer lines are starting points for building, where anaerobic digesters are established to process waste from the sewer. This produces rich fertilizer for local community gardens while creating a natural source of biofuel. After processing, the remaining water is transported into the structure to provide an aquatic plant environment, a rare local source of aquaculture and evapotranspirative cooling. In this way, the Living Machine concludes the reinterpretation of the lawn as a communal and productive device.

The suburb's traits of homogeneity and sprawl result in a multitude of singular conditions and conflict. As a network, the suburb is highly resilient. It is adaptable and evolves from a complex confluence of will, people, culture, capital, and everything else spontaneous and unforseen. This is what we seek to provoke.

The Supurban Project responds to the infrastructural and latent presence of the suburb as a framework for inhabiting the built environment. It is explicitly homogenous and is instilled with the propensity and volition for sprawl. It is explicitly foreign; foreign enough to produce a truly symbiotic relationship. It is armed with the potential to stand up to the suburb, beyond what is inside it.

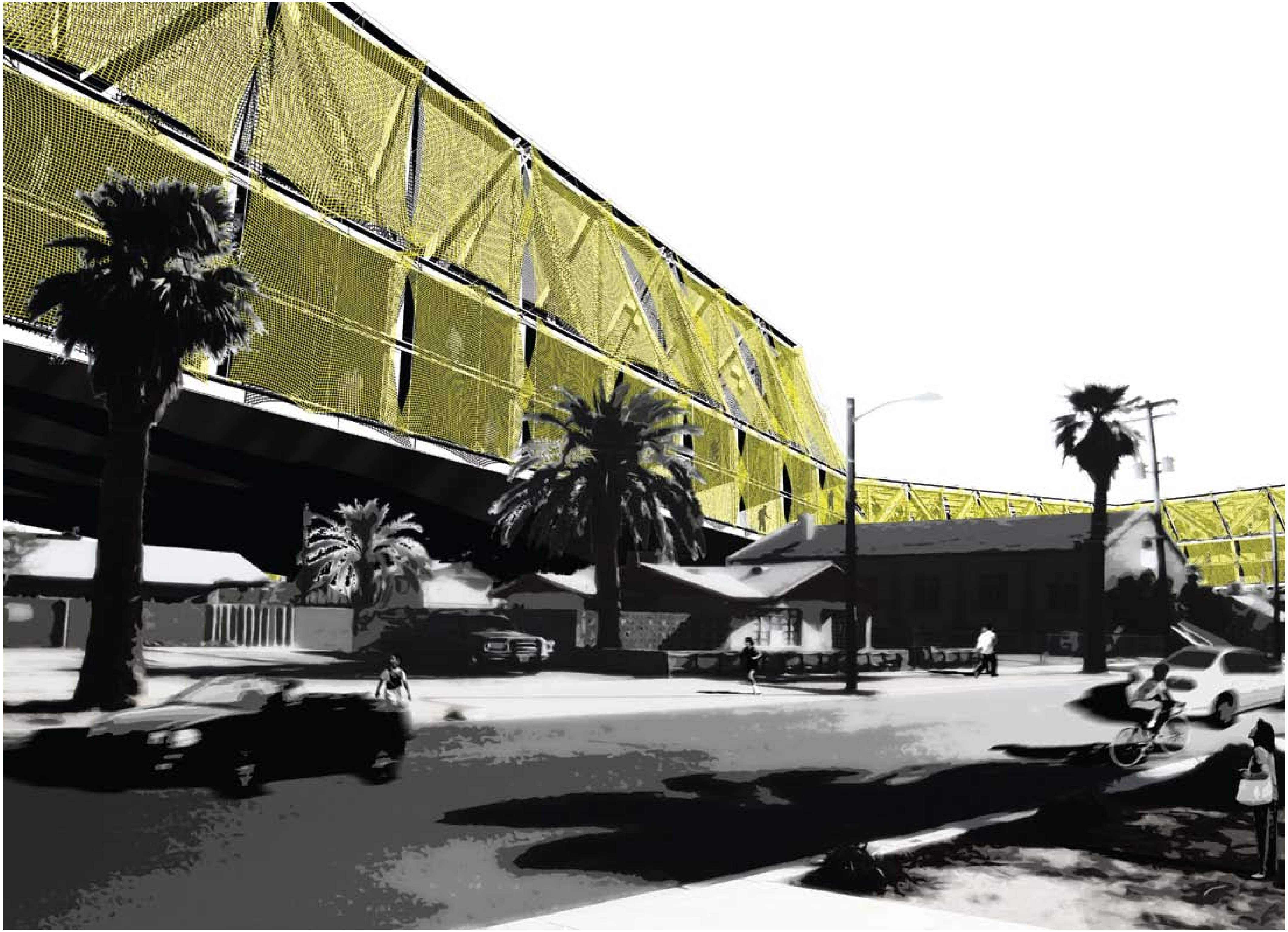
Based on a subordinate spatial logic to the grid it superimposes, a dynamic field of local intensities is produced. By engendering the situation in which one has the potential to appropriate the charged intersection of two distinct spatial ecologies, heterogeneity emerges as the product of the dialectical relationship itself.



Systemic growth logic

Entry points of intensity

Provoked reappropiation of the existing environment



Through the lens of food

Iker Gil interviews **Sarah Rich** and **Nicola Twilley,** founders of the Foodprint Project

老北京
卤煮火烧
老北京
炒肝

Dong Hua Men Night Market in Beijing
© Iker Gil

IG: Founded by both of you, Foodprint Project is "an exploration of the ways food and cities give shape to one another." You have already held events in NYC, Toronto, and Denver, and Los Angeles will be your next stop. Can you talk about how the project was generated and why you chose those cities as the initial places for the events? Do you approach each one uniquely when planning each event?

SR: We came up with the idea on January 1, 2010, after talking about wanting to collaborate on something that would marry our mutual interests in food and design/cities. We chose New York initially because it's a very fertile ground for both subject areas on their own, as well as for the intersection of the two. Also, Nicola was living in New York at the time and we have a lot of connections in the city that made it a bit easier to lock down venues (Columbia School of Architecture's Studio-X) and other basic needs without a tremendous cost. We found fantastic panelists and the event proved to be a much greater success than either of us could even have imagined, with a turnout about three or four times greater than we'd anticipated. So that fueled our courage to keep going, and our belief that there is interest for this kind of approach to thinking/talking about food (which is to say cross-disciplinary, somewhat unexpected). Toronto happened on the encouragement of some friends there who said there'd be a lot of interest in that community. Denver happened on the invitation of Adam Lerner, the director of the Museum of Contemporary Art, who asked us to do a Foodprint program as part of a larger event exploring food and art. For New York and Toronto (and probably for Los Angeles), we had a sort of programmatic/thematic template for the events, which was to have 4 panels with the same basic topics in each city. However, the people and the cities definitely made for a lot of variation within that template. In Denver we did a shorter program, with a series of brief one-on-one interviews followed by a Q&A with all of the interviewees at once.

NT: For me, Foodprint Project grew out of the interests that inform my own blog, Edible Geography. The insight that inspires me (which originally crystalized through a reading of Carolyn Steel's book, Hungry City) is that you can use food as a lens to understand the way the city works, and vice versa — and then you can use that understanding to design a better food system and a more resilient and sustainable city. At Foodprint Project events, we try to bring together people who work with food and the city from completely different perspectives and engage them in a conversation that explores the relationship between a city and its food, and — we hope — opens up some new ideas or possibilities for improving that relationship in the future.

While the format was similar in both Toronto and New York, the conversations and the kinds of participants were quite different, which is something that emerged from our research into the particular challenges and innovations already under way in either city. As Sarah mentions, in Denver we tried out a different structure, which was to look at a single theme — meat — at a variety of different spatial scales, from muscle mapping and the slaughterhouse to prairie landscape and the geopolitical structures shaping international commerce and regulation. For Foodprint LA, we're brainstorming other format changes (like adding workshops, or a tour) that will extend the project's impact.

IG: What are the common elements that you are beginning to find across those cities and what are the cultural, economic and social differences that are emerging?

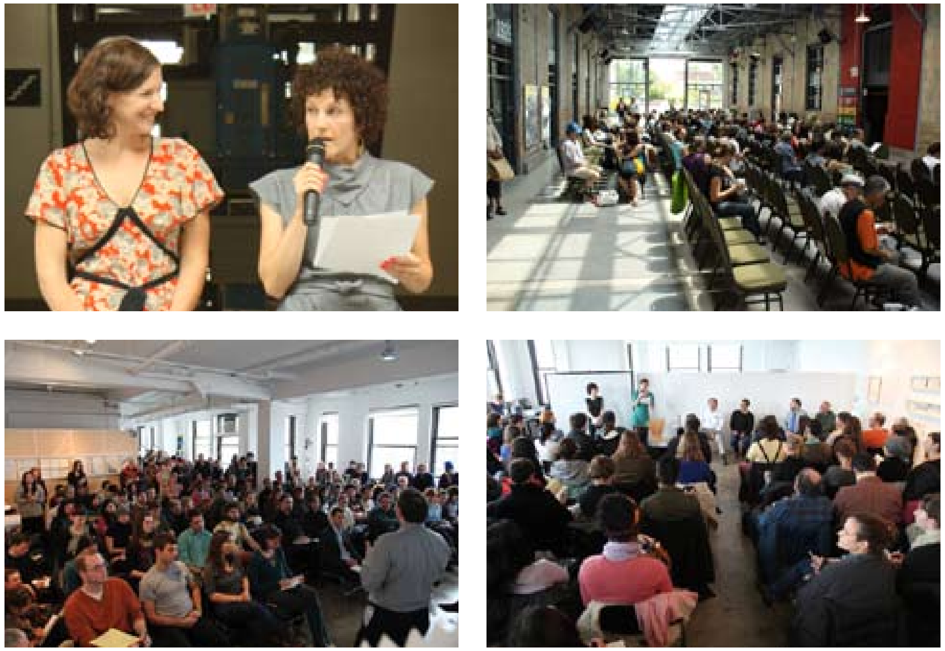
SR: There's definitely a lot of work being done around food access, facilitating systems to get healthier food to all residents of a city regardless of their socioeconomic status. There's also a lot of entrepreneurship, people earning livelihoods through small-scale farming or incubator kitchen businesses or food production. There's obviously a strong focus on the local in each place we go.

IG: Can our relationship with the built environment determine the way we relate to food? In other words, can physical spaces influence food behaviors?

SR: I think they definitely can. I mean, at the most basic level, the design of a restaurant has a tremendous impact on the overall dining experience, and that expands outward to the rest of the city. I think a lot of people choose what and how to eat based on physical and mental states they might not even be aware of on a conscious level, but those states are often created by the environment in which we

FOODPRINT
PROJECT

Top: Foodprint Project logo; Middle: Foodprint Toronto © Stacy Lewis; Bottom: Foodprint New York © Studio-X New York



are working, living, etc. A light-filled space, a noisy space, a cold space, a city without greenery, a public park, a traffic-jammed street corner — we are affected by any of those environments and the way we eat when we're in them is inevitably a part of that overall influence.

IG: Do you find that food networks are able to ignore boundaries (political, physical, etc) that other networks might not be able to? Or do you think that the production, processing or consumption of food is subject to the same forces? Are there any other boundaries affecting food that are not relevant to other networks?

SR: I think food systems are definitely related to and influenced by political and economic forces. A food desert, for example, is absolutely a result of the fact that big grocery stores do not trust the potential of a profit if they open in a low-income neighborhood (which is usually also a largely minority neighborhood), so they stay out of those areas, which means those residents can't get adequate nutritional variety, which leads to disease and so on. Likewise food processing/manufacturing, because it has a large footprint, doesn't generally happen in urban centers. Industrial agriculture lies outside of cities, but tremendous infrastructure is required to transport it in, and usually those veins of transport have bearing on the neighborhoods by which they pass. It goes on and on. As far as consumption, I think one of the major forces is marketing and advertising, which is also connected to physical space and geography, because ads are targeted. Alcohol ads written in Spanish pop up on billboards in San Francisco's Mission District — how does that relate to rates of alcoholism in that neighborhood, or underage drinking?

IG: In Nicola's article "Fatbergs" [1], we follow Rob Smith, head flusher at Thames Water, through the sewage system of London. Throughout the visit, it becomes evident how food and human behaviors are transmitted literally into the city systems. It goes on to explain that "one of the worst areas for Fatbergs, for example, is Leicester Square, where cheap restaurants illegally dump used cooking oil," while "in some exclusive areas of London, you can pick up the smells of some rather expensive bath oils." What are other interesting connections between food and our physical networks that we might not think about? Can food reveal something unexpected or new about the cities we live in?

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1. http://www.ediblegeography.com/fatbergs/

NT: I think these questions are getting at the same thing, which is this idea that looking at the city and its infrastructure through the lens of food can help us see things we might otherwise miss, or at least add a new layer to our understanding of the urban environment. At Foodprint NYC, for example, Naa Oyo A. Kwate talked about the correlation between fast food outlets and race, and between outdoor alcohol advertising and problem drinking. She's now using that research to propose a design intervention, in which she will buy her own billboards and use them to announce what kinds of messages they would normally hold—in other words, to sensitize people to their environment. [2]

There have been plenty of examples of that kind of insight, whether it be analyzing the complicated spatial legacy of meat-packing districts in Toronto and New York City, or the evolution of steakhouse design in Denver.

IG: Projects like the Mobile Food Collective in Chicago by Archeworks are proposed as a way to address the problem of food deserts and ease the situation in some communities. What could be the steps to reverse this trend and help establish a new network of healthy food in these communities?

SR: You have to create access, but you also have to create demand/desire, which means providing the information and education required to know how to prepare foods that may not be familiar, what the benefits of eating them might be, and of course, making them taste good. If someone's been eating fast food for twenty years and you want her to start eating carrots, you can't just hand her a carrot and expect everything to change. I also think this starts with reforming school lunch programs, so kids develop taste and understanding for healthy food at a young age.

IG: To improve the food system in the US, there are a series of aspects that need to taken into account in a comprehensive way as they are closely interrelated: education, policies, and economy, to name a few. Where can the design field start putting its effort in order to improve the food system?

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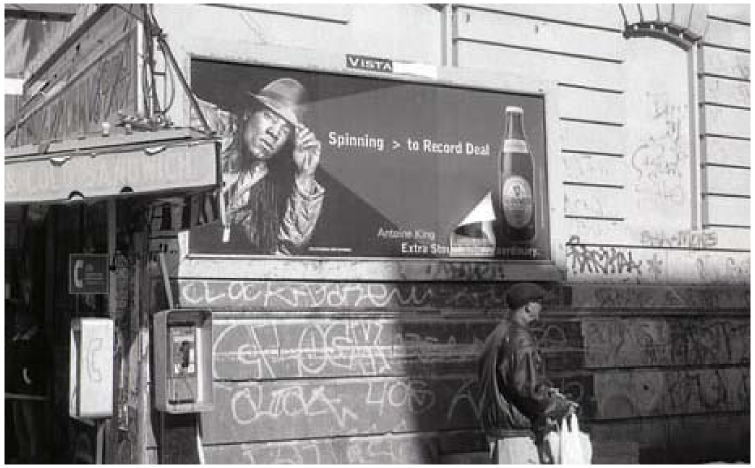
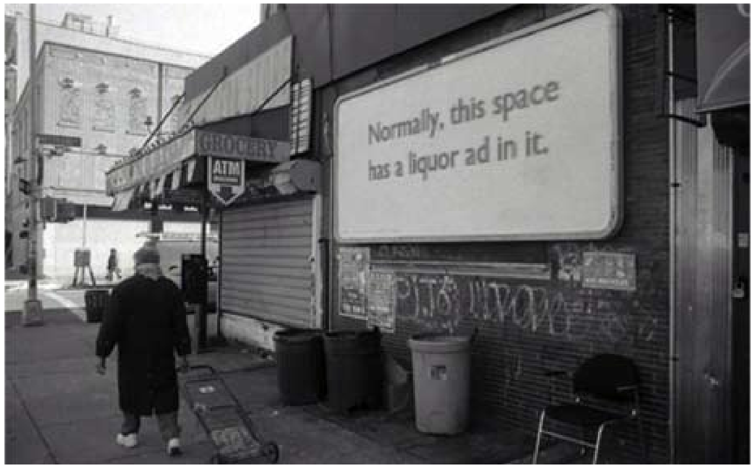
[2] http://www.ediblegeography.com/edible-geography/



Alcohol advertisement in Central Harlem © Naa Oyo A. Kwate

Alcohol advertisement in Central Harlem © Naa Oyo A. Kwate



Mock-up by Nicola Twilley; original photo by Naa Oyo A. Kwate

SR: At a small scale, I've seen some interesting examples of redesigns for nutrition labels and other informational material to help people make better sense of what they're consuming. I think designers can have an effect with communication of knowledge on that level. At a larger scale, urban design could accommodate more opportunities for growing food, and design could also be used to change people's relationship with food — many urbanites feel uncomfortable picking an apple off a tree in a public place and eating it, which is sort of amazing but true. How can design reunite us with the original source of food, making us feel more comfortable eating a whole apple from a tree than sliced apples from a cellophane-wrapped, gas-filled plastic carton?

IG: The industry of food has helped to shape cities, both physically and its economy for centuries. In Chicago, the Union Stock Yard, opened in the mid-19th century, became a major aspect of its economy, helped by the development of the railroad transportation. What are the new ways in which food can help reshape the new American city? What is the next food revolution that will significantly impact our cities?

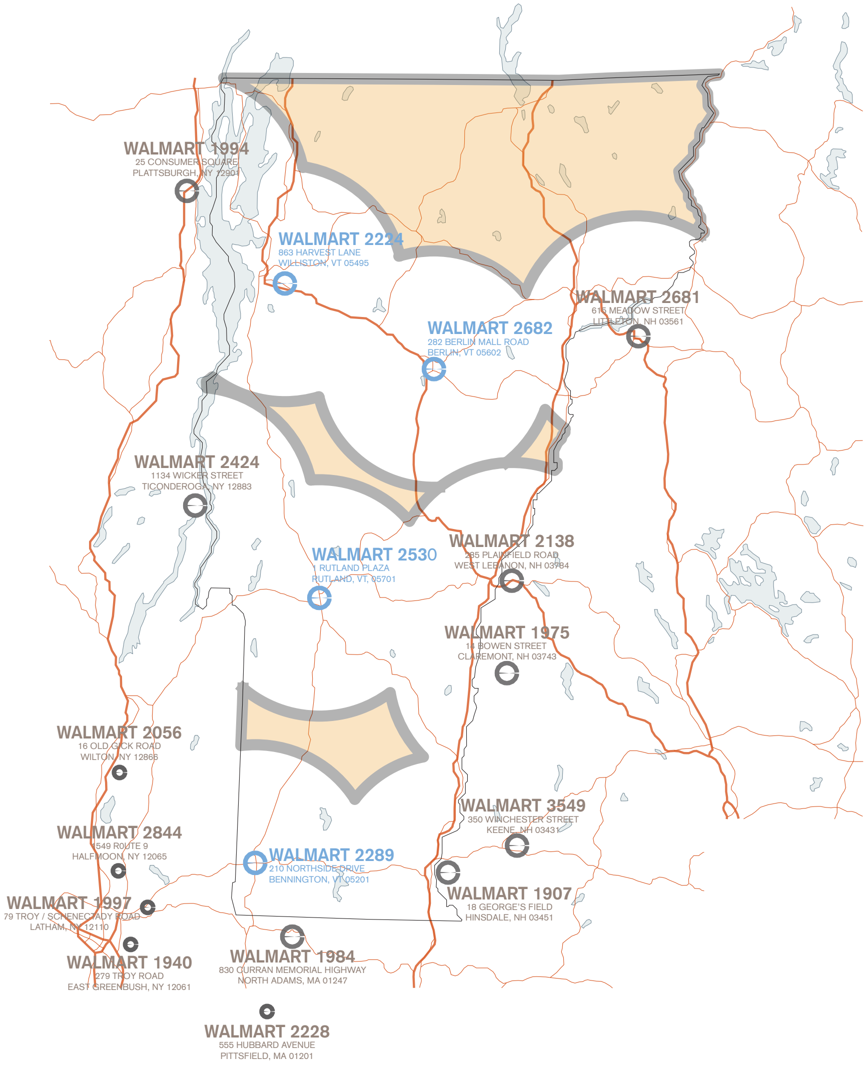
NT: We have spent the past one hundred years pushing food to the outskirts of our cities: I think we're going to spend the next decade or more bringing it back in. Several of our panelists talked about mobile infrastructure and questions of scale: flexible innovations that can make the most of limited urban space and tie producers to consumers much more closely despite the density of the city environment. In my optimistic moments, I think we'll also see a growing trend toward bio-regionalism, tying cities to their productive hinterlands to boost resilience and assume shared responsibility for watersheds, etc. One of our speakers in Toronto, Evan Fraser, spoke very interestingly about the need for storage. In the face of price spikes and key commodity shortages, cities will have to invest in food storage rather than the market-driven just-in-time logistics supply chain we rely on at the moment.

IG: During the last few years, designers have often proposed ideas and designs with food as a focus. Some of those proposals tie the production of food to existing transportation infrastructures of the city, overlapping activities to an existing network. Just to give two examples, "Loop Project" by Garofalo Architects, proposes a self-sufficient agricultural system over the entire system of the train track, or "Carbon T.A.P." by PORT, winner of the WPA 2.0 competition last year, uses a "system of industrial scale algal agriculture to sequester and consume greenhouse gas emissions while simultaneously creating a new economic resource through the production of oxygen, biofuels, bioplastics, nutraceuticals and/or agricultural feeds". What are the possibilities of overlapping food uses in existing networks?

NT: That's where I see the most potential. To return to your earlier question about food deserts, one of the most interesting solutions in Chicago involves tweaking Walgreens stores, which already have a solid inner city footprint, to sell fruit and vegetables, drawing on maps that show where the need is greatest. That's an initiative that marries detailed spatial information about a lack of access with an existing network of spaces that require minimal redesign to accommodate the new product. I see too many lovely architectural renderings of brand new single-use food markets or urban farms, when in fact I think architects should be operating as spatial detectives, finding existing, underutilized opportunities within the built environment, and reprogramming them accordingly.

Networks of Architecture: Keedoozle and Walmart

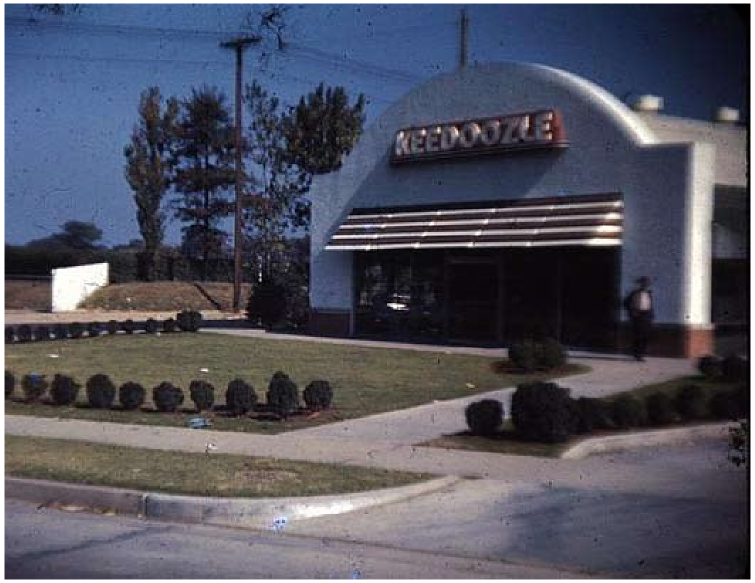
Essay by architect **Jesse LeCavalier**


WALMART 1994
25 CONSUMER SQUARE
PLATTSBURGH, NY 12901
WALMART 2224
863 HARVEST LANE
WILLISTON, VT 05495
WALMART 2681
615 MEADOW STREET
LITTLETON, NH 03561
WALMART 2682
282 BERLIN MALL ROAD
BERLIN, VT 05602
WALMART 2424
1134 WICKER STREET
TICONDEROGA, NY 12883
WALMART 2530
1 RUTLAND PLAZA
RUTLAND, VT, 05701
WALMART 2138
285 PLAINFIELD ROAD
WEST LEBANON, NH 03784
WALMART 1975
14 BOWEN STREET
CLAREMONT, NH 03743
WALMART 2056
16 OLD GICK ROAD
WILTON, NY 12866
WALMART 3549
350 WINCHESTER STREET
KEENE, NH 03431
WALMART 2844
1549 ROUTE 9
HALFMOON, NY 12065
WALMART 2289
210 NORTHSIDE DRIVE
BENNINGTON, VT 05201
WALMART 1907
18 GEORGE'S FIELD
HINSDALE, NH 03451
WALMART 1997
79 TROY / SCHENECTADY ROAD
LATHAM, NY 12110
WALMART 1940
279 TROY ROAD
EAST GREENBUSH, NY 12061
WALMART 1984
830 CURRAN MEMORIAL HIGHWAY
NORTH ADAMS, MA 01247
WALMART 2228
555 HUBBARD AVENUE
PITTSFIELD, MA 01201

Walmart stores in Vermont and its vicinity
© Jesse LeCavalier

What follows are two accounts of architecture understood and deployed as a network of connected buildings in pursuit of a territorial agenda. Looking at these two examples together helps to better understand the possibilities of architecture to operate in unison, beyond the envelope of any single building. The first concerns an experiment in automated retail by Clarence Saunders, the founder of Piggly Wiggly and inventor of self-service (he holds the patent). Though the project never achieved the ubiquity Saunders envisioned, it is an early example of architecture acting territorially and prefigures the contemporary geopolitics of discount retail. These are most evident in the operations of Walmart Stores, Inc., a discount retailer based in Bentonville, Arkansas. Tracking the process by which the company came to have stores in Vermont shows how Walmart carefully deploys its architecture to override certain restrictions and effectively redraw political boundaries.

Clarence Saunders was convinced that his third attempt at getting rich was fail-safe. On and off for the last 20 years of his life, he worked on developing a project for an automatic shopping environment that he called Keedoozle. The name was always a big thing for Saunders, having founded the Piggly Wiggly grocery chain as well as the "Clarence Saunders: Sole Owner of My Name" stores. Keedoozle is derived from a contraction and modification of the phrase "Key Does All," in reference to the device customers used to select their merchandise. Saunders was convinced that having a sample of each item for sale behind glass would increase efficiency, increase hygiene, and reduce theft. Patrons (or patronesses, as was more likely the case in the 1930s) would survey the available goods and then register their selection by attaching the key — often described as a cross between a camera and a gun—and pulling a lever that would in turn perforate a strip of paper. That strip, after accumulating a list of all the desired items, would then be brought to a cashier where it would be fed into a "translator" that would in turn trigger a series of belts and trip switches to automatically direct items into a tote that would momentarily and miraculously appear through a small door next to the cashier. The registration process of the items also tabulated their cost, thereby eliminating the time needed to checkout. Customers would pay the total while their items were being retrieved and would then be on their way. This format is different than an "automat" because in the latter, items are purchased one at a time and the item on display is the one the customer will buy. In the early Piggly Wiggly stores, customers acquired the labor-role of the clerk through



Exterior of the new Keedoozle store in Memphis, Tennessee.
© Paul Robert Alvey Family

the process of serving themselves. In the Keedoozle stores, customers took on the role of the inventory manager by effectively notifying the store of what merchandise was being depleted and what needed to be restocked. [1] The automatic stores themselves functioned like miniature distribution centers with automated conveyors and "trip shelves" that would allow workers in the storeroom to "pick" the orders placed by the customers and their keys. An examination of the plan shows the division of display room and stock room, but is effectively two buildings in one – a showroom open to the public and a small-scale automated distribution center.

Accounts of Saunders's new venture in popular media did their best to promote it, even if they acknowledged the complications of its baroque mechanism. Saunders was a bit of a local hero and, though eccentric and stubborn, it seems the community was pulling for him. In spite of such popular support, the technology of Keedoozle that

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1. According to business historian David Magee, the Piggly Wiggly method of organizing its inventory was highly influential on executives from the Japanese automobile manufacturer Toyota. After a visit to a local Ford plant, the delegation visited a Piggly Wiggly store and were influenced by the manner in which inventory was restocked automatically, as it was removed from the shelves, and how merchandise was replaced only as customers depleted it. Magee asserts that this system was very influential on Toyota's "pull" approach to material in which products are developed "just in time." Source: David Magee, *How Toyota Became Number One* (New York: Penguin, 2007) 36-37.

Plan illustration from Saunders's patent application for an automatic store.
© United States Patent and Trademark Office

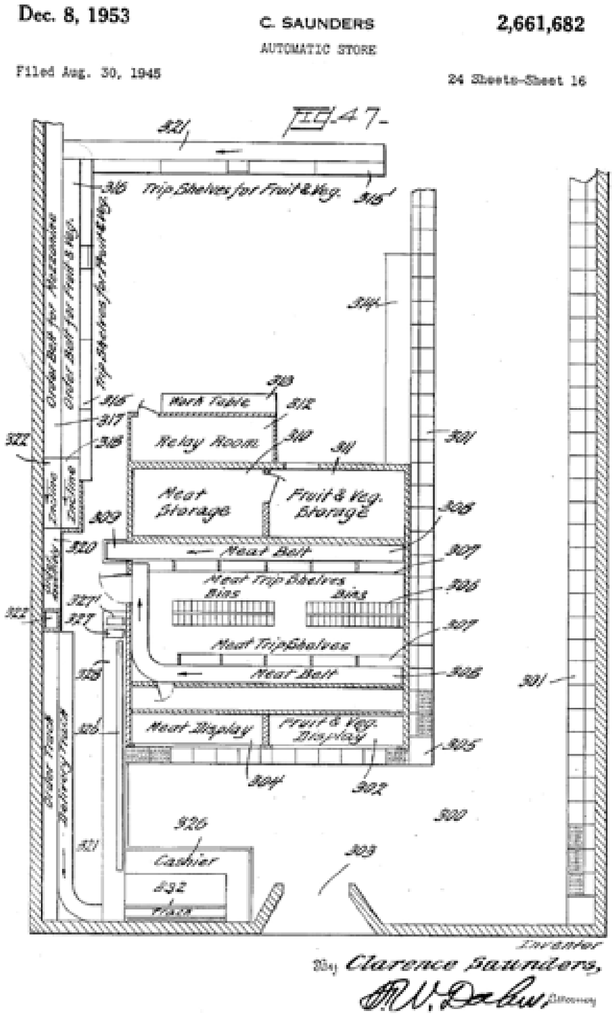
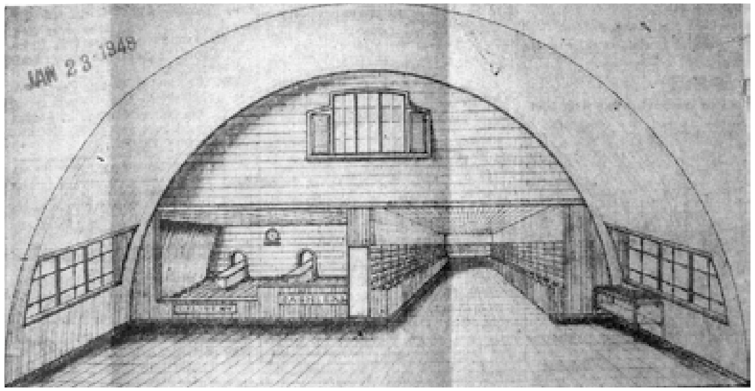

Dec. 8, 1953
C. SAUNDERS
AUTOMATIC STORE
2,661,682
Filed Aug. 30, 1945
24 Sheets-Sheet 16
FIG-47-
321
Trip Shelves for Fruit & Veg.
315
316
Order Belt for Mezzanine
Order Belt for Fruit & Veg.
Trip Shelves for Fruit & Veg.
314
313
Work Table
312
316
317
318
Relay Room
310
311
301
322
Meat Storage
Fruit & Veg. Storage
309
308
320
Meat Belt
307
Meat Trip Shelves
Bins
Bins
306
327
327
307
Meat Trip Shelves
328
Meat Belt
306
301
Meat Display
Fruit & Veg. Display
305
326
304
302
Order Track
Delivery Track
300
326
Cashier
303
321
832
Inventor
Clarence Saunders,
Attorney

Illustration of the interior of a Keedoozle store. From "Saunders Ready to Go Again with a New Store: Keedoozle System Open in March at Union Extended and Poplar," Clark Porteus, Memphis Press Scimitar, January 23, 1948.
© Mississippi Valley Collection, University of Memphis Library



was meant to vault shopping into the future proved erratic and costly. While Saunders managed to open three of the stores and had ambitious plans for expanding his empire of automatic stores, the system never developed as he hoped. [2] However, in Keedoozle we can locate several tendencies and aspirations that remain legible in the contemporary geopolitics of discount retail, including an early form of a retail prototype and a system that prefigures contemporary automated distribution systems. [3]

The Keedoozle model was presented as a deployable prototype, infinitely extendable along one axis, 20 feet at a time. Saunders and his contractors evidently saw the capacity for these new projects to occupy in-fill sites. Keedoozle was designed as a format: deployable, extendable, and refined through wartime use. According to the contractor hired to build the first store in Memphis:

> *The all-steel buildings come in 20-foot sections, and we have eight different widths…The Keedoozle will be 40x160 feet, and there won't be a piece of wood in it. It's been improved since the war. It's fireproof. We recommend concrete floors. All we need is to get vacant lots… These buildings standardize the stores and they will be exactly alike wherever they are put up. This means all the electric connections and plumbing will be alike.* [4]

Significant in this description of the consistent formatting is not that the buildings are of the same design, but that all the connections are standardized. The standard Keedoozle format is really a matter of infrastructural connection and signage and the stores themselves were a combination of engineering and marketing. The focus on concrete floors further reinforces this attitude. Rather than foregrounding the shape of the buildings or their vertical surfaces, the prototypes are described in terms of the required formatting processes necessary to enable their repeated implementation.

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2. "Keedoozle's Robots Fail, Men Get Jobs: Saunders Throws Mechanical Men on Junk Heap, Clerks Will Work Behind the Shelves," Jack Bryan, *Memphis Press-Scimitar*, February 02, 1938.

3. Woody Forbes, former mechanical engineer for Keedoozle, recounts in an interview, "I doubt seriously if it would ever work in the grocery business... I've thought of other things he might have made with that unit so that it could distribute ... a kind of warehouse type thing." Interview of Woody Forbes by Mike Freeman, January 04, 1984. Mississippi Valley Collection, University of Memphis, 438-03-16.

4. Howard Sowell quoted in "Saunders Ready to Go Again with a New Store: Keedoozle System Open in March at Union Extended and Poplar," Clark Porteus, *Memphis Press Scimitar*, January 23, 1948.

The deployability of the stores was part of Saunders's specific expansion agenda. Having already gone through two multi-million-dollar cycles of boom and bust — the first with Piggly Wiggly and the second with Clarence Saunders: Sole Owner of My Name — he put a great deal of energy into the Keedoozle project in the hopes that it would succeed again. Through a gutsy maneuver to corner the Piggly Wiggly shares, Saunders risked much of his fortune and lost almost all of it. He insists that the Board of Trade changed the rules on him—an outsider to the New York financial world — and had they not done so, he would have become incredibly wealthy. Saunders did not get over this easily and his development of a "fleet" of Keedoozle formats in order to mount an "invasion" of the Northeast seems as much expansion strategy as revenge opportunity. [5] The ambitions of the company demonstrate Saunders's optimism in his new enterprise. His new store format would allow him to expand his territory in a dramatic fashion: 40 stores a year over five years for a total of 200, up from 2 in 1949. Saunders had an earlier version of Keedoozle that he tried to get off the ground in 1938, but various technical difficulties made it far to expensive too keep open.

In Figure 45 of U.S. Patent 2,661,682, Saunders includes a drawing of a generic territorial condition that suggests he was thinking beyond the prototype put forth in the plan. In the center of the drawing is a small square at the intersection of two roads and a railroad. The square is labeled "Distributing Store and Display Room" and is surrounded by a larger square simply labeled "City." The roads leading from the central intersection lead to other smaller squares labeled only "Display Room" and each is in a different context: one is isolated along the arterial, one is surrounded by an eroded ellipse designated as "Village," another by a rounded square also called "Village," and a fourth set in a square with sharp corners labeled "Town." Saunders's proposal here is that the showroom and distribution hub would act at a territorial level – customers would visit the store, use their key to punch in their order, and place it with the cashier. Their request would automatically be for-

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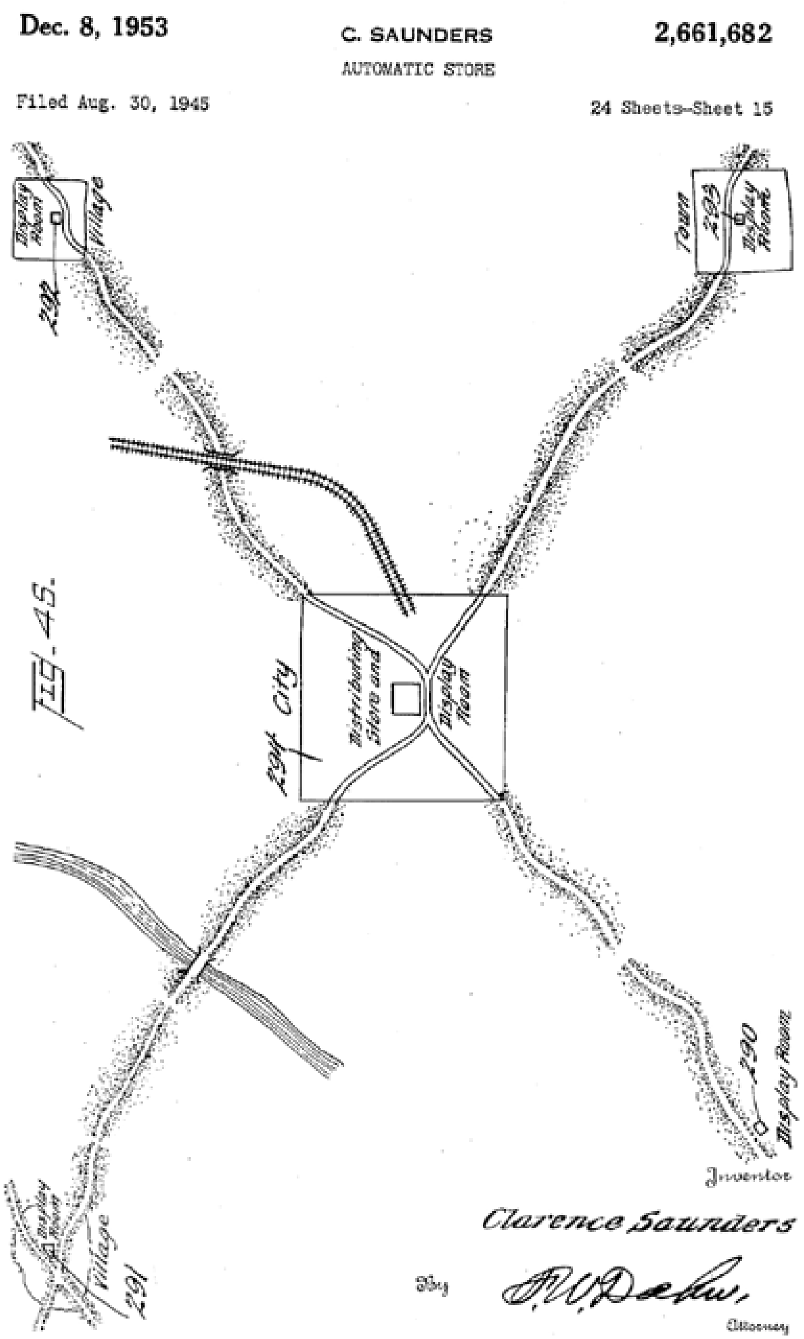
5. According to a article written in 1949, "*The New York Times* tells of the 'invasion' of New York, northern New Jersey and the New England states by Keedoozle. Keedoozle Eastern Corporation has been formed in the east as an affiliate of Saunders' parent company, Automatic Systems Corporation, in Memphis. Franchises to some five stores will be issued this year in New York City. *The New York Times* says the Eastern organization plans to have 100 stores in New York City and another 100 in the rest of the territory by 1954, but Mr. Saunders said he hoped the system would spread much more rapidly in the East." From "Keedoozle Stores Spreading Out: Corporation in East Plans 100 Units," *Memphis Press-Scimitar*, January 20, 1949.



Saunders describes Figure 45 from his patent application for an automatic store as "a geographic layout, illustrating a proposed method of use of the invention." © United States Patent and Trademark Office

warded to the local "Distributing Store" to be consolidated with other orders and delivered to the store from which the order was placed. The communication between the display rooms in the local network would ensure that the distribution hub was kept well stocked. This local hub-and-spoke system suggests a much larger interwoven network of distribution centers and display rooms spread across the country. It also anticipates the model of territorial control adopted by Walmart.

Saunders's patrons saw his price policies as political acts of resistance against an overbearing set of regulatory policies. While the low prices were an affront to the business community, they were a boon for his customers. According to the chairman of the Memphis Consumers' Advisory Committee, "Members of the committee and other housewives of Memphis highly approve of any methods that will bring down prices of their groceries.... The new Keedoozle system seems to do this. To us, Mr. Saunders's efforts seem more truly American than any blanket law which protects business from losses caused by its own inefficiencies." [6] In this case, it is not the business model per se that is being praised, but rather the store itself. Automation was not just a way to save money on groceries; it was a path to freedom. While Keedoozle never flourished the way Saunders hoped, the ideas that it materialized have maintained some currency. Most relevant to the discussion here is the building format itself and its implied geo-political aspirations apparent in Saunders's plans for an aggressive invasion of northern states. The Keedoozle stores were highly mechanical and semi-automated. They were also designed to be identical and to then be relentlessly deployed. A similar use of architecture to invade hostile territory is evident in Walmart's process of building stores in and around the state of Vermont.

Vermont was the last of the United States to have a Walmart store within its borders. Largely because of local conviction that the retailer's presence in the state would increase traffic, threaten local businesses, and encourage diffuse suburban development, opponents waged a tenacious policy and media campaign that kept the company out of the state for several years. This struggle between the small state and the large corporation was seized upon by the news media whose coverage of the conflict consistently painted it in the colors of war by using headlines like: "Battle of Vermont: Walmart Plots its Assault on Last

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6. Quoted in "Thousands Get Free Food: Keedoozle Against Tennessee Law," *Memphis Press-Scimitar*, September 24, 1948.

Unconquered State"; "Walmart Lost Battles, Won the War: Vermont Store Opens"; "Waging War on Walmart"; etc. [7] More than journalistic histrionics, the use of such analogies and metaphors illuminate the military approaches adopted by both sides in pursuit of their aims. In spite of resilient opposition, Walmart continued its high-profile policy-based efforts to gain purchase in Vermont. At the same time, the company proceeded to systematically build a physical line of stores along the Vermont border. This blockade of retail outlets proved to be more potent than policy negotiations because it effectively saturated the market without ever entering it. By the time Walmart was allowed access to the state, the real battle had already been won.

Faced with Walmart's imminent arrival, concerned citizens, flatlanders, "Ecotopians," and even the Vermont government mobilized their resources to prevent the company's entry into the state. [8] Most of the usual approaches were adopted, including petitions, demonstrations, and the strict enforcement of design guidelines. However, in the case of Vermont, other more inventive measures were taken. For example, in an effort to raise awareness of the situation, The National Trust for Historic Preservation – a private non-profit organization dedicated to the preservation of historic places – included the entire state in its annual list of "11 Most Endangered Places" in both 1993 and 2004. [9]

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[7] These articles include Frederic M. Biddle, "Battle of Vermont: Walmart Plots Its Assault on Last Unconquered State," in *Boston Globe*, July 18, 1993; Malcolm Gladwell, "Walmart Encounters a Wall of Resistant in Vermont," in *The Washington Post*, July 27, 1994; John Greenwald, "Up Against the Walmart," in *Time*, August 22, 1994: Ross Sneyd, "Walmart Lost Battles, Won the War: Vermont Store Opens," in *St. Paul Pioneer Press*, September 20, 1995; Pam Belluck, "Preservationists Call Vermont Endangered, by Walmart," in *The New York Times*, May 25, 2004; George F. Will, "Waging War on Walmart, " in *Newsweek*, July 05, 2004; and Alex Beam, "Walmart and the Battle of Vermont" in *The Boston Globe*, September 12, 2007.

[8] "Flatlanders" is a term used by native Vermonters to describe outsiders who have moved to the state. "New Ecotopians" is a term established by the marketing firm Claritas to describe the demographic group made up of "consumers with above-average education who are technology-oriented and civically active. They are more likely than other Americans to make bread from scratch, drive a Jeep, watch the Learning Channel and read Outdoor Life and American Health (Source: Malcolm Gladwell, "Walmart Encounters a Wall of Resistant in Vermont," in *The Washington Post*, July 27, 1994).

[9] The other entries for the 2004 list of "11 Most Endangered Places" include: 2 Columbus Circle, New York; Bethlehem Steel Plant, Pennsylvania; Elkmont Historic District, Tennessee; George Kraigher House, Texas; Gullah/Geechee Coast, South Carolina; Historic Cook County Hospital, Illinois; Madison-Lenox Hotel, Michigan; Nine Mile Canyon, Utah; and Ridgewood Ranch, Home of Seabiscuit, California; and Tobacco Barns of Southern Maryland, Maryland. The 1993 list also includes the following: Brandy Station Battlefield, Virginia; Downtown New Orleans, Louisiana; Eight Historic Dallas Neighborhoods, Texas; Prehistoric Serpent Mound, Ohio; Schooner C.A. Thayer, California; South Pasadena/El Sereno, California; Sweetgrass Hills, Montana; Thomas Edison's Invention Factory, New Jersey; Town of Ste. Genevieve, Missouri; and Virginia City, Montana. (Source: www.preservationnation.org/issues/11-most-endangered/)

Though this inclusion has no immediate policy impact, it nonetheless holds significant sway over public opinion. At the governmental level, Howard Dean, former presidential primary candidate and the governor at the time, flew to Arkansas to meet with David Glass, the CEO of Walmart. According to Dean, "We had a good meeting. I don't think they'd had many governors come to meet with them. I wanted them to understand that we're not against Walmart, but that we're just against suburban sprawl… They agreed to consider downtown locations in the future." [10] As if seeking to broker peace with a hostile invader, Dean's role as ambassador is significant because it implicitly elevates the status of Walmart beyond that of a mere retail operation. The governor's focus on property and territory is also revealing. It asserts that the state has less opposition to Walmart as a retail enterprise, but instead takes issue with its choice of sites, which suggests that the conflict has less to do with ideology or aesthetics than with simple location.

Spatial concerns have been a significant aspect of Walmart's approach, as it has consistently relied on a territorial strategy to expand its operations. As the company originated in rural areas serving a dispersed clientele, it adopted a procedure of peripheral market saturation. According to Walton, "We figured we had to build our stores so that our distribution centers, or warehouses, could take care of them, but also so those stores could be controlled… each store had to be within a day's drive of a distribution center." [11] A claim like this supports an understanding of Walmart's operations as a dynamic totality rather than as a collection of isolated retail locations and is significant because it helps illuminate how highly calculated their operation is. Walton went on to write, "We never planned on actually going into the cities. What we did instead was build our stores in a ring around a city." [12] This statement is supported by a 2006 study that found 49 percent of Walmart locations are within 500 meters of a city boundary, and 18 percent of stores are within 100 meters. [13] This same geographical precision of property acquisition played no small role in Walmart's efforts to enter the Vermont market.

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[10] Sally Johnson, "Vermonters are up against the Walmart - effort to stop retail chain from entering Vermont," in *Insight on the News*, Jan 10, 1994.

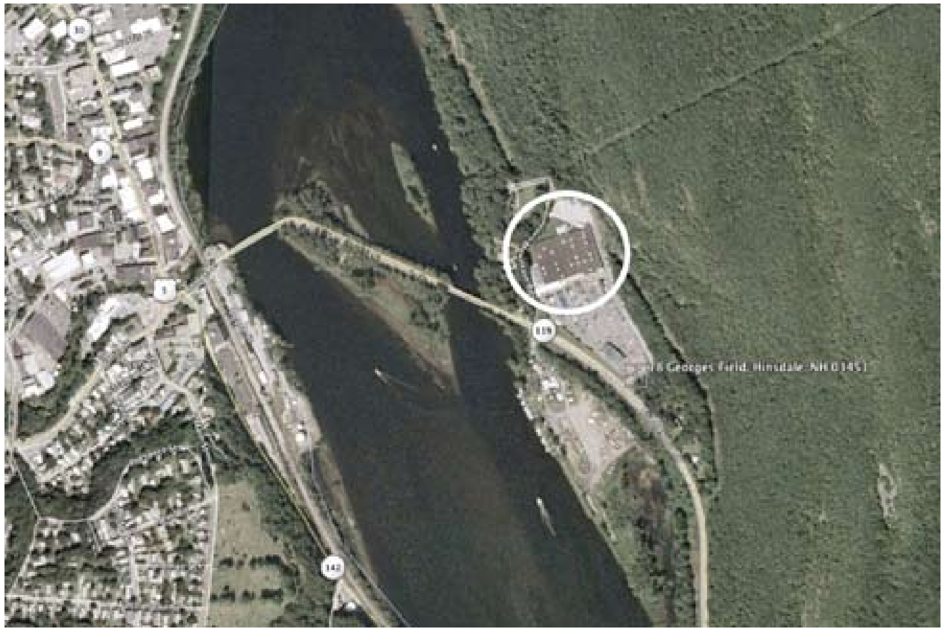
[11] Sam Walton and John Huey, *Sam Walton, Made in America: My Story* (New York: Bantam, 1991), 140-141.

[12] Ibid, 141 (emphasis added).

[13] Matthew Zook and Mark Graham, "Wal-Mart Nation: Mapping the Reach of a Retail Colossus," in *Wal-Mart World: The World's Biggest Corporation in the Global Economy*, ed. Stanley Brunn (London: Routledge, 2006) 23.

In response to the intense opposition from within Vermont, Walmart adopted an aggressive siege strategy and proceeded to systematically surround the state with outlets in an attempt to lure its inaccessible target market across the borders into New York, Massachusetts, or sales-tax-free New Hampshire. One reporter even suggested that Walmart was building a "Maginot Line of four open or soon-to-open stores along the state's border." [14] If Walmart could not enter Vermont, it would get as close as possible and distribute its locations to ensure saturated border coverage. There are seven Walmart locations within 5 miles from the border (two are even less than 2,000 feet away) and another six in a slightly larger ring around the state. [15] Taking a standard 20-mile radius as an index of coverage, The Vermont border is effectively sealed by Walmart stores. If one of the stakes in Vermont's "battle" against Walmart is a kind of authentic "Vermont-ness," then Walmart's spatial tactics would, according to its opponents, threaten this quality. By encircling the state with precisely targeted retail locations, Walmart effectively acquired the market territory it was pursuing without entering Vermont itself. The state border that served as a political boundary is trumped by the "catchment areas" of the store locations and their strategic constellation effectively inscribes a new kind of elastic border within and around Vermont. Faced with the increasing migration of its tax-base, the state eventually agreed to allow Walmart entry into its domain.

The four stores that were allowed to be built—in Williston, Berlin, Rutland, and Bennington—are themselves variations on typical Walmart formats, if only in small degrees. All four are located in towns at crossings of significant state roads or interstates to avail themselves to as much consumer traffic as possible. In Rutland, Walmart seems to have taken Dean's request seriously and opened at one end of a shopping center in the center of the town and as part of a city revitalization project. This location is promoted in the company's 1997 Annual Report as evidence of its interest in maintaining healthy and vital small towns. The company's record might suggest that its interests are elsewhere, but this particular arrangement is an exception to their standard model of growth.



Walmart in Hinsdale, New Hampshire © Google Earth

A last piece of evidence in support of the company's precise location process is the store in Hinsdale, New Hampshire. A supercenter (not permitted in Vermont), the store is located almost immediately over the border—any closer and it would actually be in the river that separates the two states.

The deliberate and systematic discipline required to execute Walmart's space-based takeover strategy is significant because it implicates architecture in practices of power and control. The single retail unit, when understood collectively, becomes an insidious territorial instrument capable of securing space within an established logic of market control. Architecture can be understood here not as a system of isolated buildings, but instead as an interlinked network united in a common purpose. In this sense, rather than developing the symbolic content of its buildings, Walmart emphasizes their symbolic presence and in doing so, asserts the importance of architecture within a territorial practice. By using buildings to create and enforce its own policy, one that eclipses federal divisions and desires, Walmart demonstrates that architecture is not the result of politics; it is politics.

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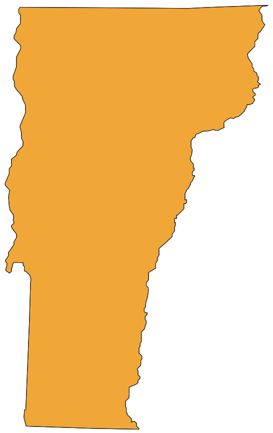
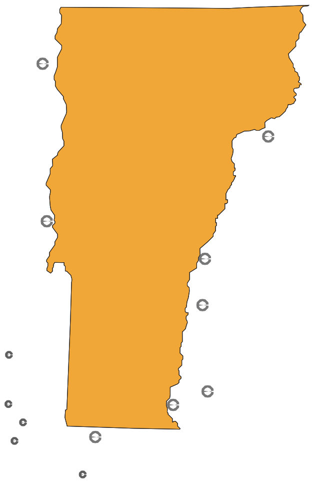
14. Frederic M. Biddle, "Battle of Vermont: Walmart Plots Its Assault on Last Unconquered State," in *Boston Globe*, July 18, 1993. Perhaps it is worth noting that the comparison, however evocative, is misleading because the Maginot line of bunkers and fortifications was designed to serve protective and preventative purposes.

15. Though there are Walmarts in Canada, there are currently no locations within 20 miles of the Vermont border.

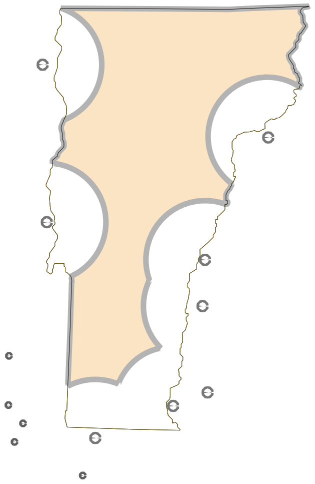
Walmart locations in Vermont and vicinity



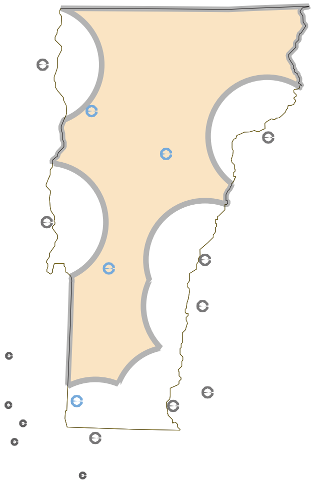
01. The state of Vermont.



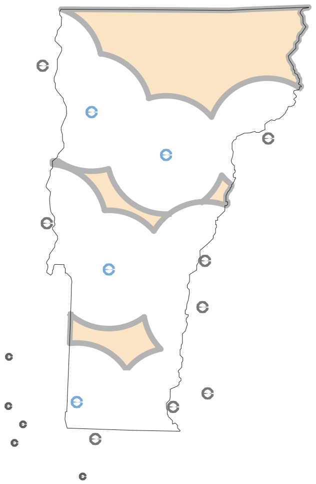
02. Walmart locations within 20 miles of the Vermont border.



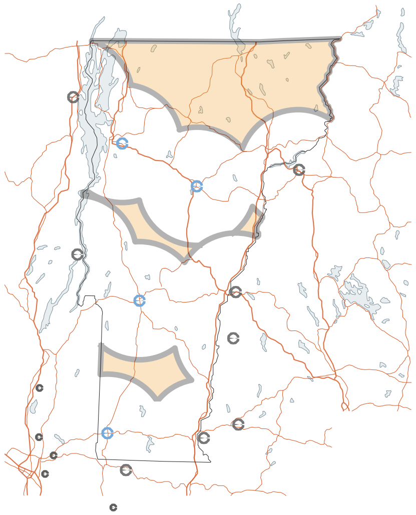
03. Walmart locations at Vermont border with indication of 20-mile catchment radii.



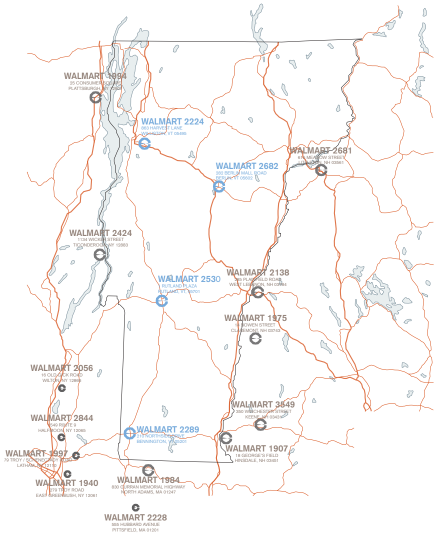
04. Location of Walmart stores in Vermont.



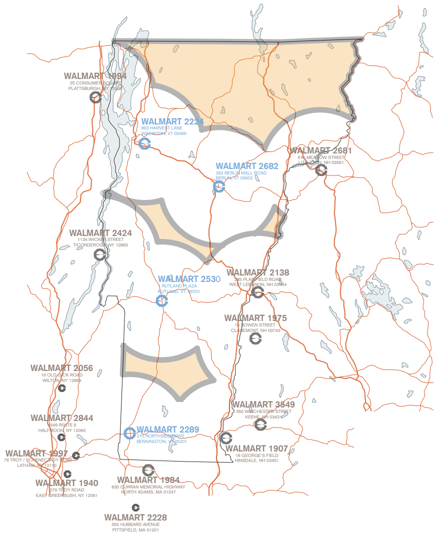
05. Vermont store locations and catchment areas.



06. Walmart locations in Vermont and its vicinity, including highway systems and waterways.


WALMART 1994
25 CONSUMER SQUARE
PLATTSBURGH, NY 12901
WALMART 2224
863 HARVEST LANE
WILLISTON, VT 05495
WALMART 2681
615 MEADOW STREET
LITTLETON, NH 03561
WALMART 2682
282 BERLIN MALL ROAD
BERLIN, VT 05602
WALMART 2424
1134 WICKER STREET
TICONDEROGA, NY 12883
WALMART 2138
285 PLAINFIELD ROAD
WEST LEBANON, NH 03784
WALMART 2530
1 RUTLAND PLAZA
RUTLAND, VT, 05701
WALMART 1975
14 BOWEN STREET
CLAREMONT, NH 03743
WALMART 2056
16 OLD GICK ROAD
WILTON, NY 12866
WALMART 3549
350 WINCHESTER STREET
KEENE, NH 03431
WALMART 2844
549 ROUTE 9
HALFMOON, NY 12065
WALMART 2289
210 NORTHSIDE DRIVE
BENNINGTON, VT 05201
WALMART 1907
18 GEORGE'S FIELD
HINSDALE, NH 03451
WALMART 1997
79 TROY / SCHENECTADY ROAD
LATHAM, NY 12110
WALMART 1940
279 TROY ROAD
EAST GREENBUSH, NY 12061
WALMART 1984
830 CURRAN MEMORIAL HIGHWAY
NORTH ADAMS, MA 01247
WALMART 2228
555 HUBBARD AVENUE
PITTSFIELD, MA 01201

07. Walmart numbers its stores in the sequence of their construction.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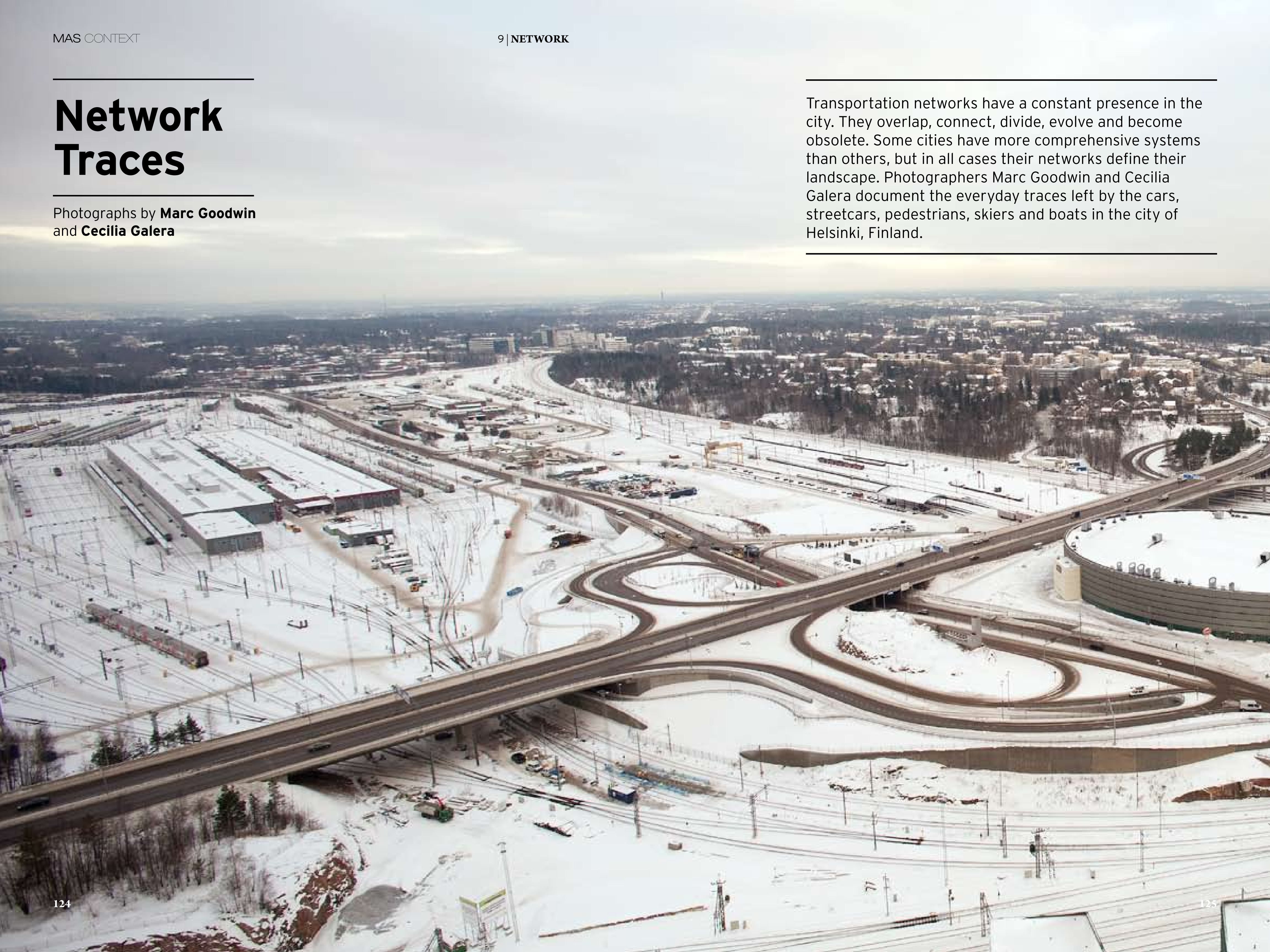
PITTSFIELD, MA 01201

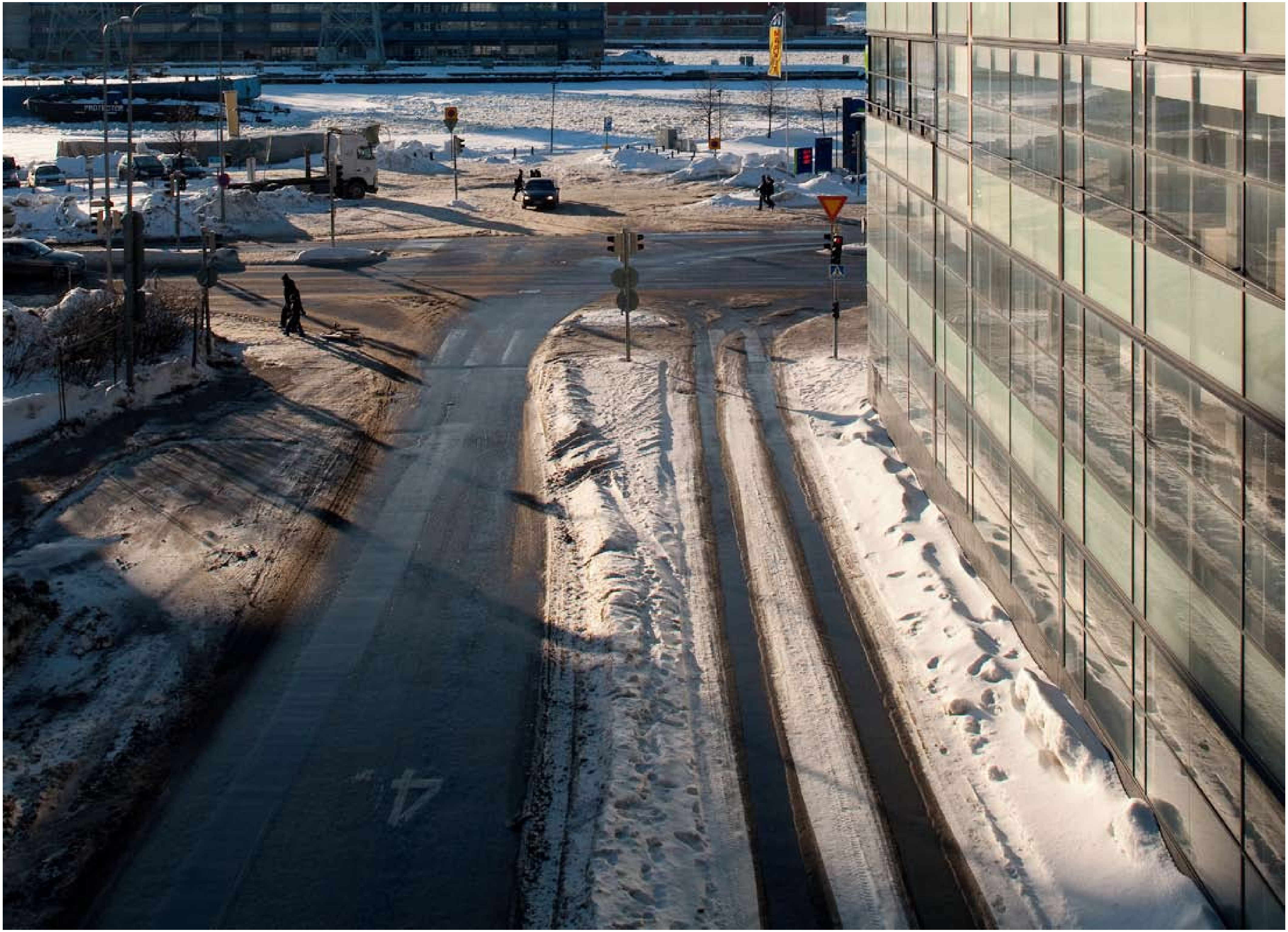
08. Territorial saturation.

Network Traces

Photographs by **Marc Goodwin** and **Cecilia Galera**

Transportation networks have a constant presence in the city. They overlap, connect, divide, evolve and become obsolete. Some cities have more comprehensive systems than others, but in all cases their networks define their landscape. Photographers Marc Goodwin and Cecilia Galera document the everyday traces left by the cars, streetcars, pedestrians, skiers and boats in the city of Helsinki, Finland.

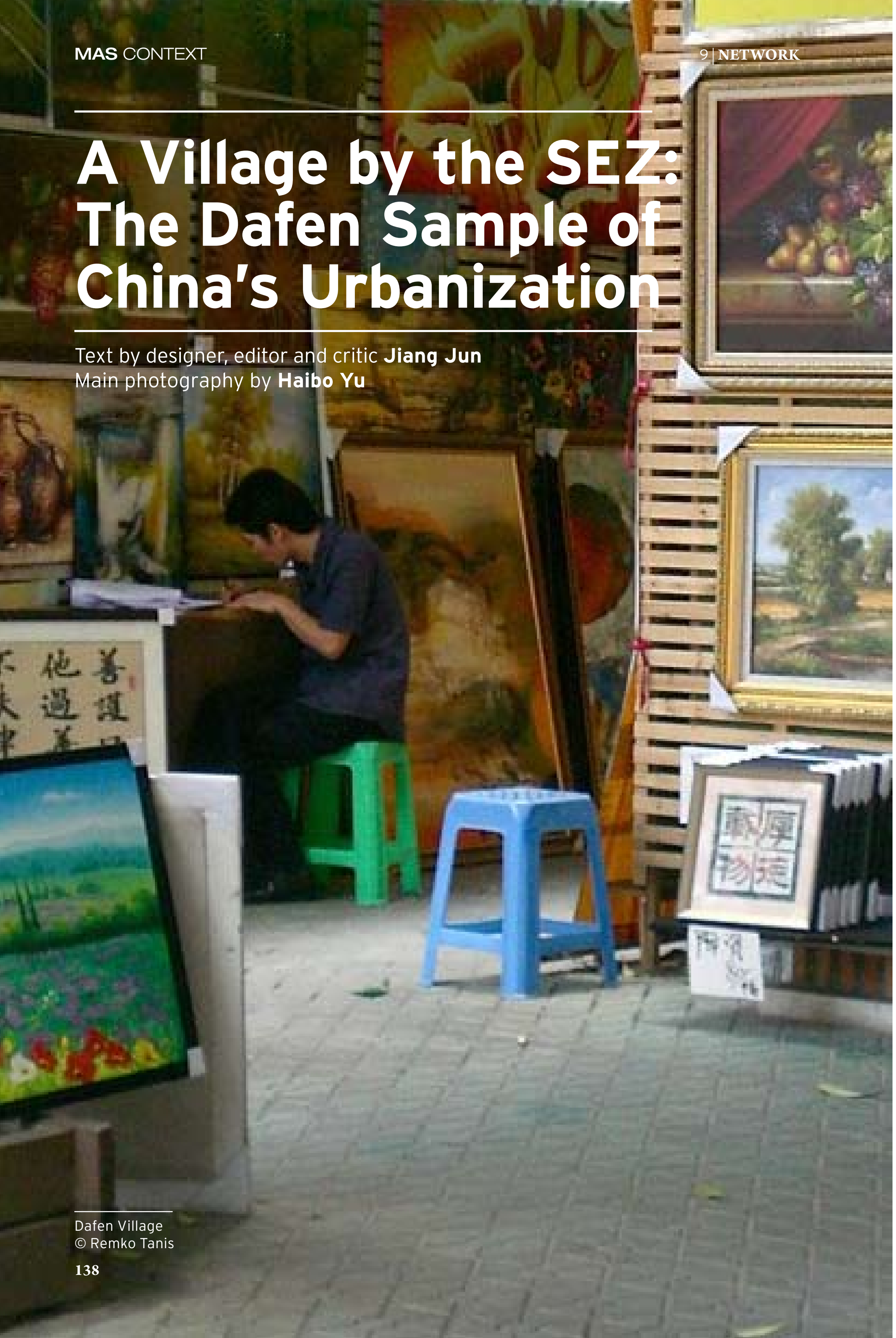




SILJA LINE
SUNLINES

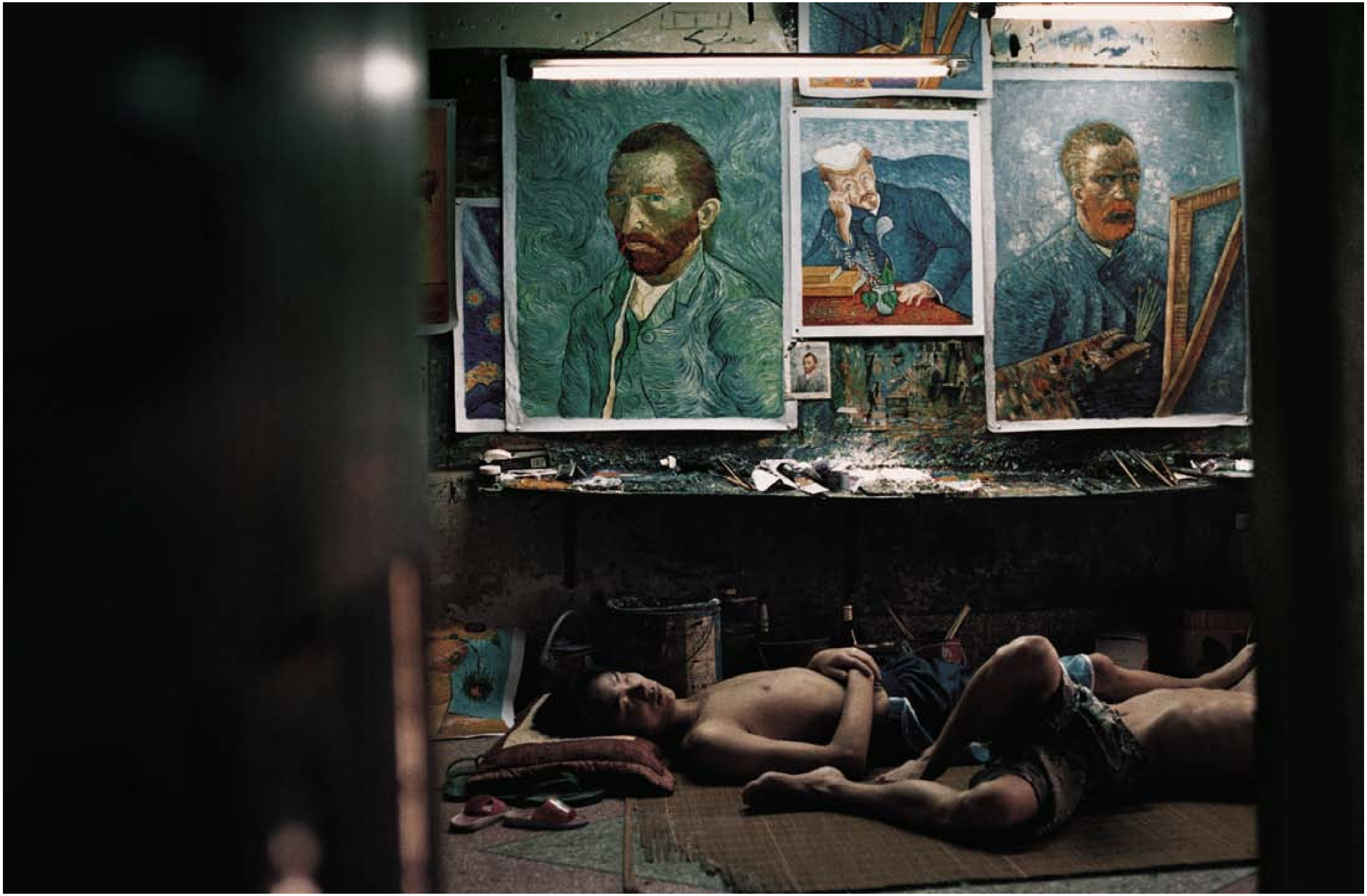
A Village by the SEZ: The Dafen Sample of China's Urbanization

Text by designer, editor and critic **Jiang Jun**
Main photography by **Haibo Yu**



Dafen Village
© Remko Tanis

At World Expo 2010 Shanghai, a village named Dafen was chosen as Shenzhen's exhibition theme in the Urban Best Cities Practice Area. This village on the outskirts of Shenzhen SEZ used to be known for its replication industry of masterpieces and popular oil paintings. Consequently, it experienced predictable arguments after being selected. Meanwhile, due to the village layout as a series of concentrated significant samples closely related to China's urbanization and social transformation process, its appearance will be distinguished from the official aesthetics and positive narration of the Expo, presenting a unique kind of atmosphere combining both the real and surreal. In the sample of Dafen, its amazing alignment of western-type aesthetics with China's labor-intensive industry helps us find almost all the key words emerging during the great transformation from farming China into an urban one: Special Economic Zone, land reform, industrialization in rural areas, rural migrant worker, Made-in-China, village-in-city, creative and cultural industry and urbanization. Selecting Dafen to participate in the Expo symbolizes that China's informal economy, developed in the past three decades, is gradually getting more and more attention and is normalized under official planning and policy support. The selection also raises the proposition of how to adapt to local conditions and nurture our own typical "Created-in-China" on the grassroots foundation of "Made-in-China". Therefore, Dafen is significant not only for its contribution to documenting China's 30-year long industrialization and urbanization process, but also because the modernization model represented by Dafen becomes a revelatory sustainable model for the latecomers while maintaining the importance of being a sample. The book *A Village by the SEZ* is more than an analysis on Dafen sample's status quo; it can be regarded as one of the samples of Dafen's diverse cultural industry, which raises new propositions for the future development of China's urbanization.



At Dafen Village, painters taking their afternoon nap in the 12th corridor on the 3rd floor. Overlooked by the determined eyes of Van Gogh portrays.
© Haibo Yu

SEZ, 2nd Frontier, Informal Economy

One of the success factors of the Dafen model is its geographical location. Shenzhen used to be a "beleaguered city" located between the 1st and 2nd frontier. Customs and checkpoints on both frontiers were passageways connecting the SEZ, hinterland China and Hong Kong, around which a series of open or secret "economic zones" involved with border trade gradually emerged. Dafen sits at the broadest mouth of the mountains along the line of 2nd frontier (so it becomes the most urbanized region outside the border later), directly leading to Hong Kong through the Buji checkpoint and Luohu custom. Thanks to its position, Dafen benefits from Hong Kong just like Shenzhen, and became both the investment target of foreign capital and the backyard of global markets. Since locating outside of SEZ, it has been able to import labor resources from hinterland China very conveniently. Dafen Village situates at the interface location between the external capital and internal labor force, which gives it the conditions to establish "informal special zone" from the bottom-up; it also forms conditions to develop export-oriented economies like other industrial villages along China's southeastern coastline. Based on the geographic location and economy orientation, the factors of production spontaneously regroup themselves "according to current scenario" and form their own industrial choice. Underlying the particularity of Dafen's oil painting industry, it is de factor a series of universalities caused by the interaction of geographic and policy factors. The development of China's dislocation competition pattern of "one brand in one village" is driven by the market and guided by the government, so Dafen is nothing more than a simple representative on the map of rural China's industries, which is composed of various specialized industrial villages.

Land Reform, Cheap Labor, Labor-Intensive Industry

Another success factor of the Dafen model is the large amount of cheap labor transferred from the hinterland. China initiated Land Reform in rural areas almost at the same time of SEZ's establishment. The seeming unlimited supply of surplus rural labor liberated from new rural policies, combined with the cheap land and foreign investment, formed the dynamic model of China's industrialization and urbanization in the first three decades of Reform and Opening-up. The industrialization and urbanization occurring in villages and towns were launched by Land Reform in 80's and lasted for 10 years; after that , the agriculture production, marginalized by the long-lasting price scissors between industrial products and agricultural produce, took rural China back to an unprofitable situation in the 90's — the time Dafen started its oil painting industry. Similar to other township industries, after training the peasant workers into competent artistically skilled workers, Dafen integrates the cheap labor from hinterland and cheap rent in the urban village into vast amounts of low-price oil painting products, which enters the global market through convenient trade approaches. However, the special nature of fine arts to "educate and cultivate human beings through literature and culture" makes Dafen's oil painting industry different from others: at an earlier stage, the artistic training in Dafen was flow-line-type skill training only for workshops of low-skilled painting workers, but today it has evolved into quality-oriented training open to students, painting workers and painters, which makes Dafen competent to export outwardly the oil painting products and supply inwardly human resource specialized in fine arts. Therefore, it becomes possible for Dafen to introduce quality-oriented education into a pure Fordist art production, through enriching the value of human resources of getting involved in creative industry, and to cope with Pearl River Delta's bottleneck situation caused by the shrinking of the export-oriented economy and the increase of labor costs.

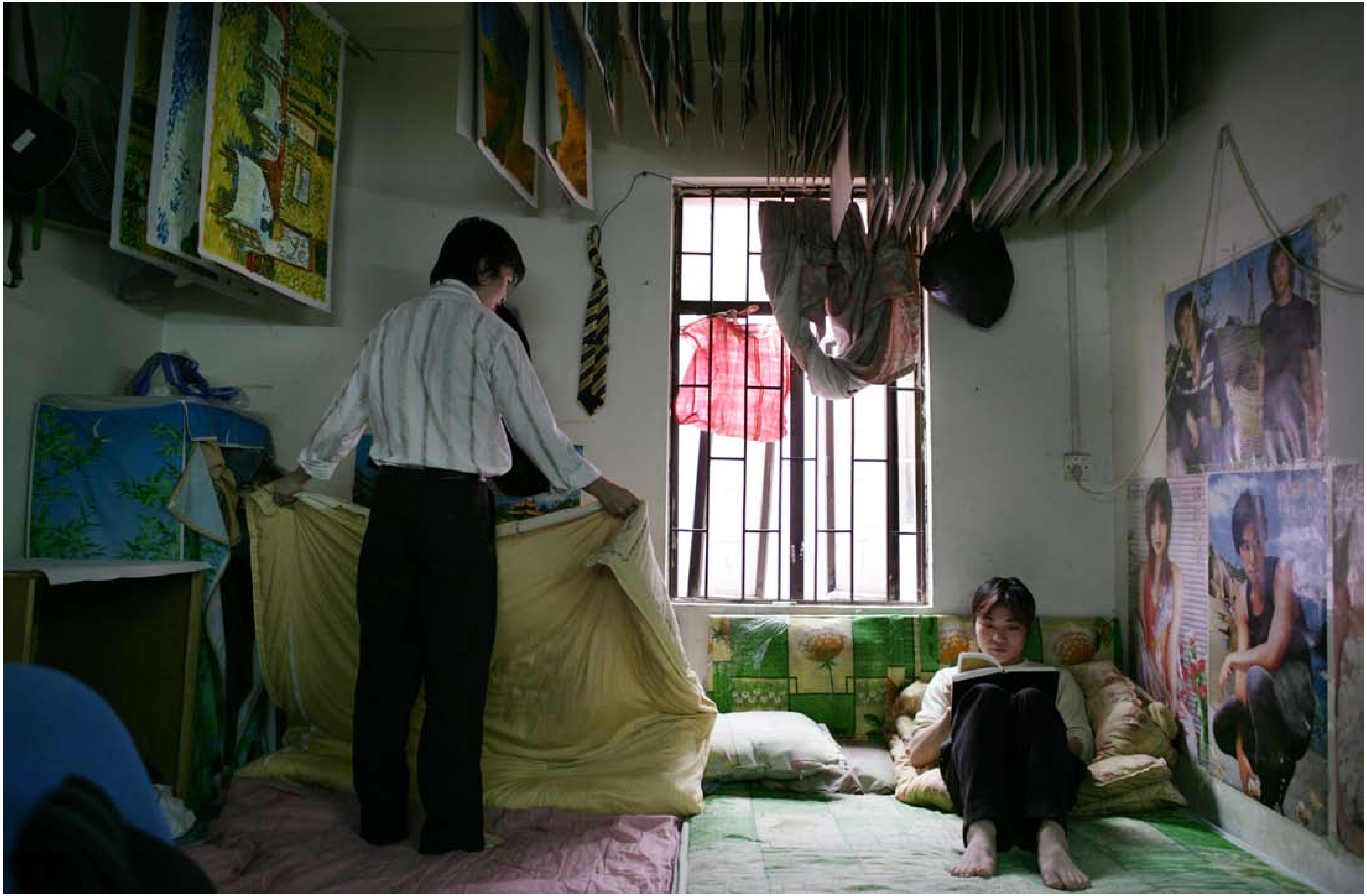
Forming a single line, people at the painter's workshop gather at the cafeteria for their meals.
© Haibo Yu

Made-in-China

People's Republic of China has produced two kinds of "Made in China" during the 60-year industrialization process. One is the model of "made by large state-owned enterprises" in the previous three decades, which mainly focuses on capital-intensive heavy industry; the other is "made by private enterprises," gradually forming in the latter three decades, majorly in the labor-intensive light industry sector. Made-in-Dafen stands alongside with the latter one, so Dafen has parallel characteristics like it: stressing "quantity" rather than "quality", using low price as its core competitiveness, ranking low in the global industrial chain, but still able to obtain decent economic benefit thanks to its model to scarify small profit for larger sales volume; the manufacturing entities are mainly the small, medium enterprises responsible for their own profit and loss; it has the shadow of family workshop or fellow townsmen enterprises beneath the modern enterprise system's organization surface; the boring assignments on the flow lines; and the scenery of labor-intensive manufacturing production which shifts among the factory building, dining hall, dormitory and warehouse constituting the image of "sweatshop" of "Made in China". Similar to other leading industries in their respective industrial chains, Dafen's oil painting industrialization also brings a chance for industries like painting color, canvas, frame and other materials. What's more, through the clusterization of industries related to oil painting, it has had a radioactive effect on logistics, catering and other service business around Dafen. The oil painting products "made in Dafen", together with other "Made in China" products including clothing, toys, home appliances and commodities, export into remote market in Middle East, Africa, Europe and America. The informal economy of Dafen is embodied by the formal image of "Western Fine Arts"; its products cover almost all of the genre generations in western art history, processing them into amusing goods massively assembled on the flow line. The amazing uniqueness of Dafen is its accomplishment to mix the aura of classical western aesthetics into the primitive capital accumulation process of an eastern agricultural country within the international industrial and business chain. Amid the worship type of imitation and the mechanical reproduction, Dafen presents a great tension between the lofty and the humble, the dream and reality.

Industrial Village, Urban Village, Urban Community

Dafen is also the spatial result of the successive collision of the three elements: land collectivization in rural areas, clusterization of oil painting industry and integration of regions outside and inside Shenzhen. In the time of agriculture, Dafen was merely one of the villages scattered around Pearl River delta's alluvial plain, most of which have experienced fierce transformation of de-agriculturalization in the three decades of Reform and Opening-up. Villages on the outskirts have changed into production-oriented industrial villages, while those located in downtown turn into consumption-oriented urban villages, and almost all the urbanized industrial villages later experienced another round of "de-industrialization" and became urban villages depending on collective property and estate at large. The security policy as the legacy from an urban-rural dual system, including the house sites, residence registration system and so on, isolates those industrial villages and urban villages into a cluster of prehistoric solitary islands in the wave of modern industrialization and urbanization. It is the non-agricultural villages built upon these house sites that lower the threshold of entire Pearl River delta, to provide living space for external small and medium enterprises as well as low-skilled workers, decreasing the cost and enhancing the region's competitiveness within the global industrial chain. Dafen is distinctive not only due to its fast and complete transformation from the countryside to industrial village to urban village and finally to urban streets and community; it has partly retained its productive nature as a oil painting industry base along with the urban reshaping process, combining the supply created by industrialization and the demand stemming from urbanization within the existing space, and formulating a "SOHO urban village" type of community model. Thus, the particular space produced by China's rural urbanization in the field of informal industry during the past 20 years is preserved as historical heritage and gets interpreted into the particularity of creative industry, the particularity usually getting erased in urban village reconstruction project, and is actually the capital Dafen utilizes to break through the bottleneck of "Made-in-China" and locates itself among "Created-in-China" business.



In the evenings, painters will clear their own areas and that space becomes their home.
© Haibo Yu

Creative Industry, Community Ecology

At the end of the last century, the significance of coastal SEZ was gradually weakened when their experimental experience was promoted through the country. Shenzhen had to search for a more sustainable development model beyond its glorious "border economy," so the Pearl River delta city with strong northern China culture background appeals to a "culture-oriented city". In the time of "post-SEZ," Shenzhen city is eager to re-orient itself and needs a "cultural industry base" as the prototype for policy support. Meanwhile, challenged by restlessly rising rent cost, Dafen's oil painting industry also requires a prompt transformation from single manufacturing featured as "low profit but large sales volume." Dafen's debut as local producer and its brand establishment as the cultural card are driven by the resultant force of the initiative, bottom-up "informal development" and the posterior, top-down "self-consciousness." The "Dafen Model," which is "driven by market and led by government" is rightly set up and promoted under the effect of the resultant force. Dafen's geographic location near the 2nd frontier determines its earlier initiation of the strategy "suppressing the second industry and developing the third one." The establishment of a series of cultural institutions and public spaces, symbolized by Dafen Art Museum, strengthens Dafen's position in industrial upgrade and its significance as the landmark in city management. When Dafen introduces consumptive space and public space, it also stresses the requirements on original creation. The upgrade of community also speeds up community industry to transform from imitation into creation, realizing the individual evolution from painting manufacturer to painting worker to a real painter and even an artist, so that Dafen's community ecology will be more diverse. The public policies planned specially for creative talents in aspects of housing, residence registration etc. further highlight Dafen's creative industry as a demonstrative sample on a micro level, making Dafen the "Special Cultural Zone" in the time of "post-SEZ".

Dafen's precautionary measures on independent innovation enable it to function continuously against the recent international background frustrating China's export-oriented economy. Dafen therefore becomes the transformation paradigm for "Made-in-China" and "Chinese urbanization movement" in the new period: the industrial diversification mirrors the transformation process of "Made-in-China" towards a holistic, multilevel manufacturing system; and the diversification of community ecology reflects the model shift of "Chinese urbanization movement" from extensive to intensive development and construction. The sustainable model chosen by Dafen not only makes it the most distinctive among Shenzhen's numerous urban villages, but also presents a reference for the regeneration course of Chinese cities on a broader sense. Now here come the next questions: Where is the further sustainability of Dafen? The spatial feature as a village-in-city has been preserved, but is it also possible to maintain Dafen's industrial feature as an oil painting production village? How to imagine a Dafen still keeping its own characteristic when painting is no longer the leading industry? How to preserve the particularity of Dafen's grassroots creation, and make it distinguished from other elitist artistic communities? 10 years later, will Dafen still be a sample for us to learn from? A Village by SEZ leaves these questions for our readers to investigate.

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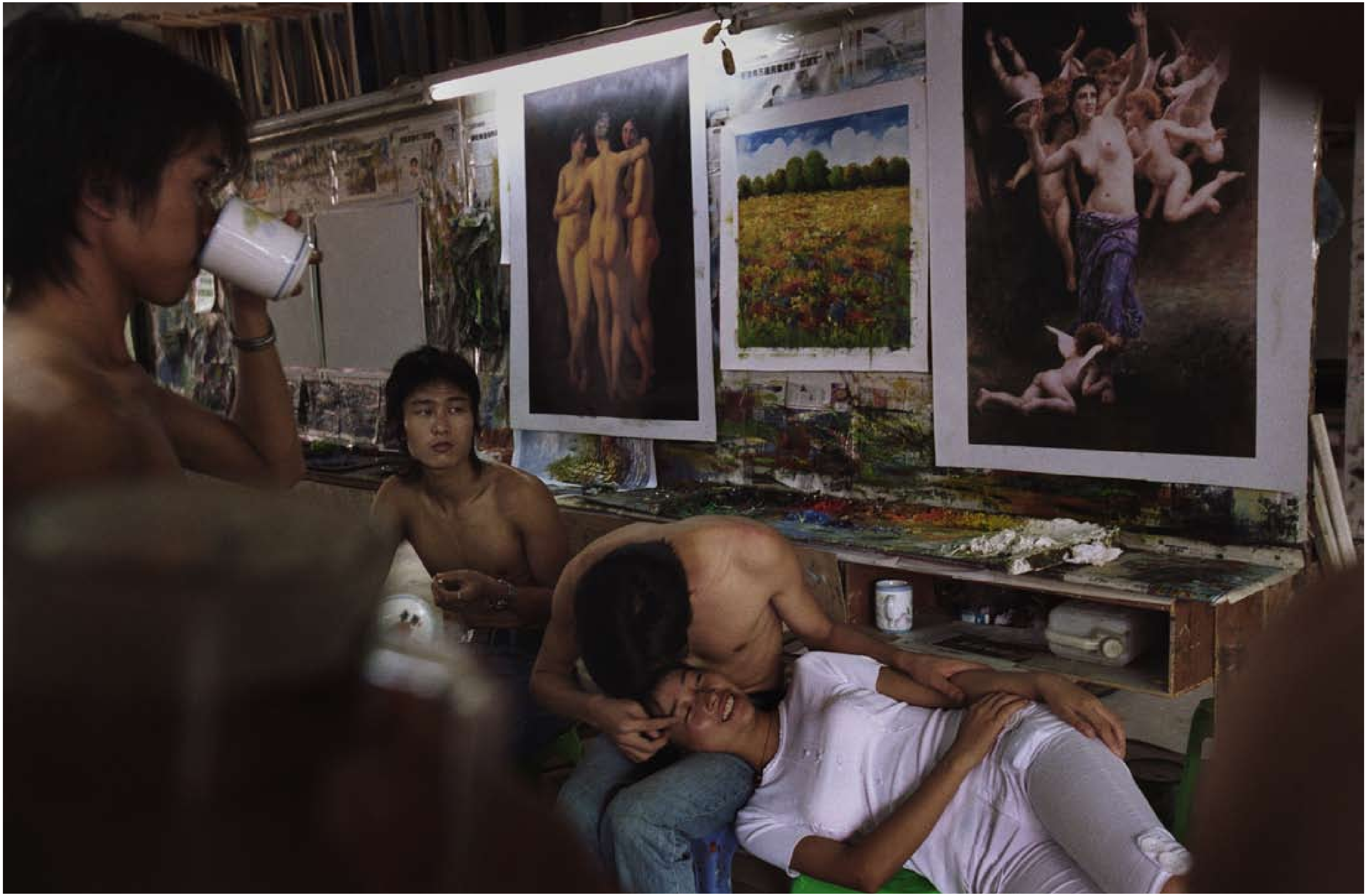
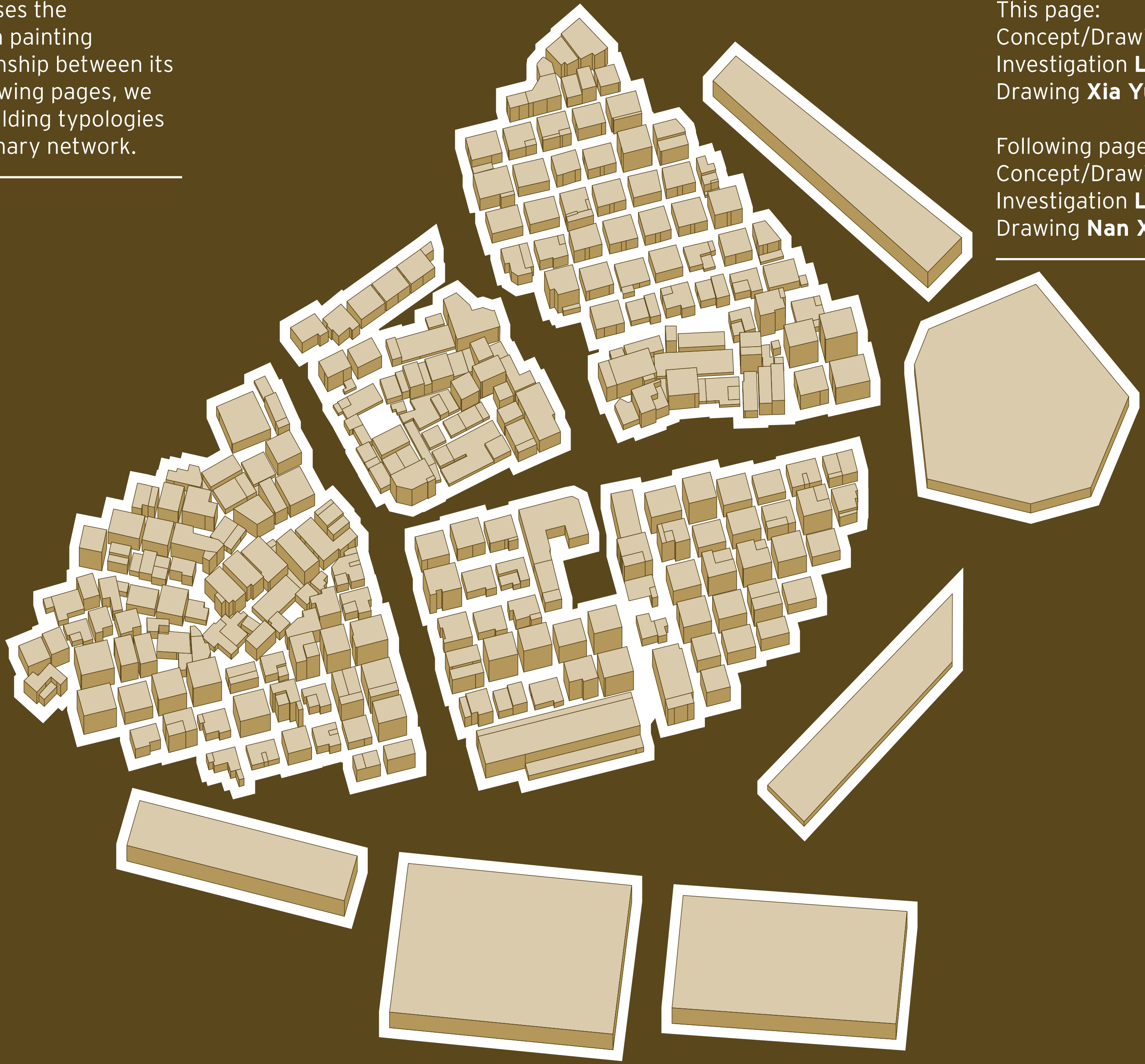


At the narrow and tight space of dafen workshop, lovers show affection for each other during their short break.
© Haibo Yu

This illustration showcases the distribution of the Dafen painting industry and the relationship between its parts. Through the following pages, we explore the different building typologies that form this extraordinary network.



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Concept/Drawing **Underline Office**
Investigation **Li Meng**
Drawing **Xia Yu**

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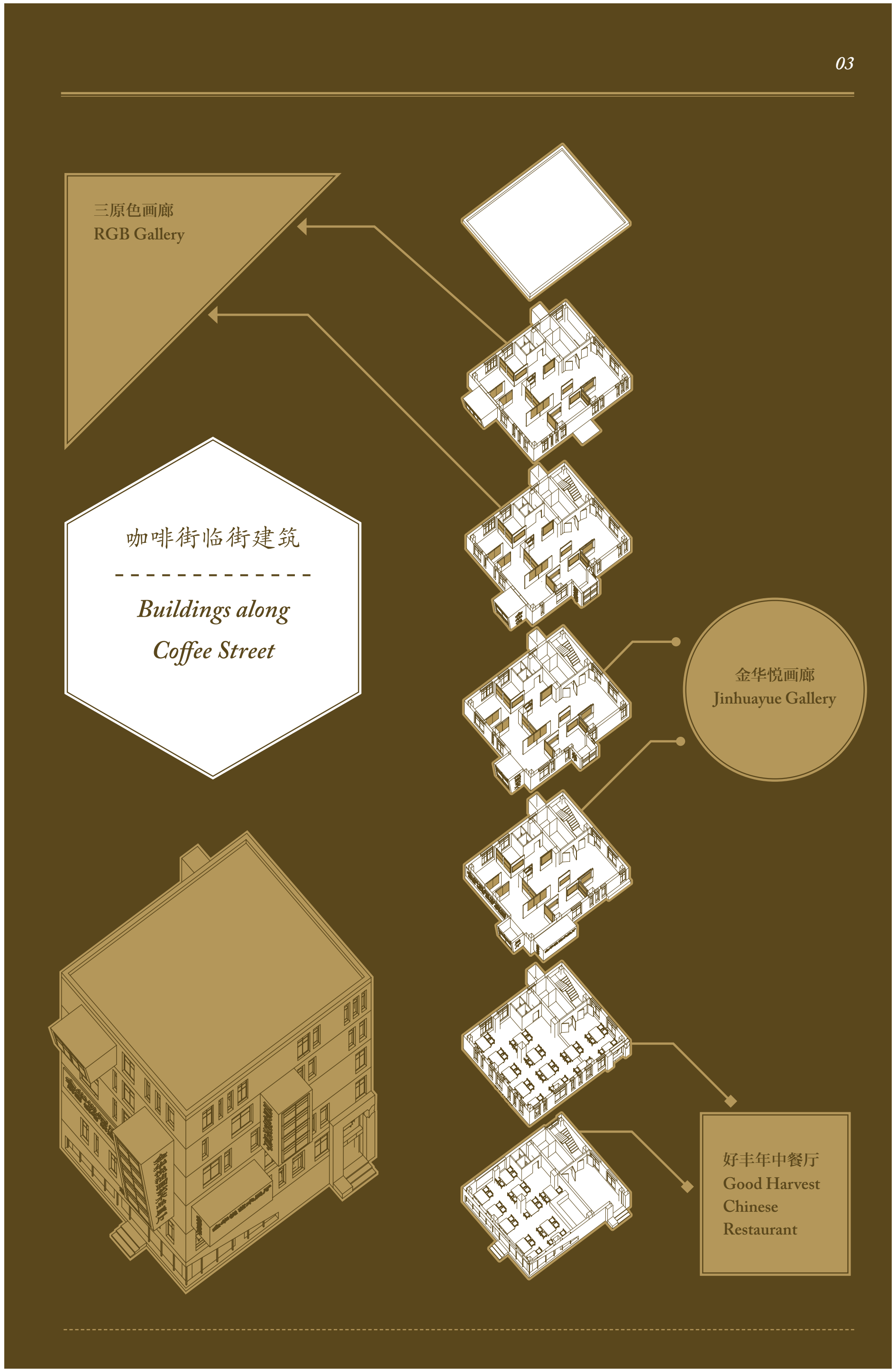
Concept/Drawing **Underline Office**
Investigation **Li Meng**
Drawing **Nan Xueqian**

Dafen painting industry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三原色画廊
RGB Gallery
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Coffee Street
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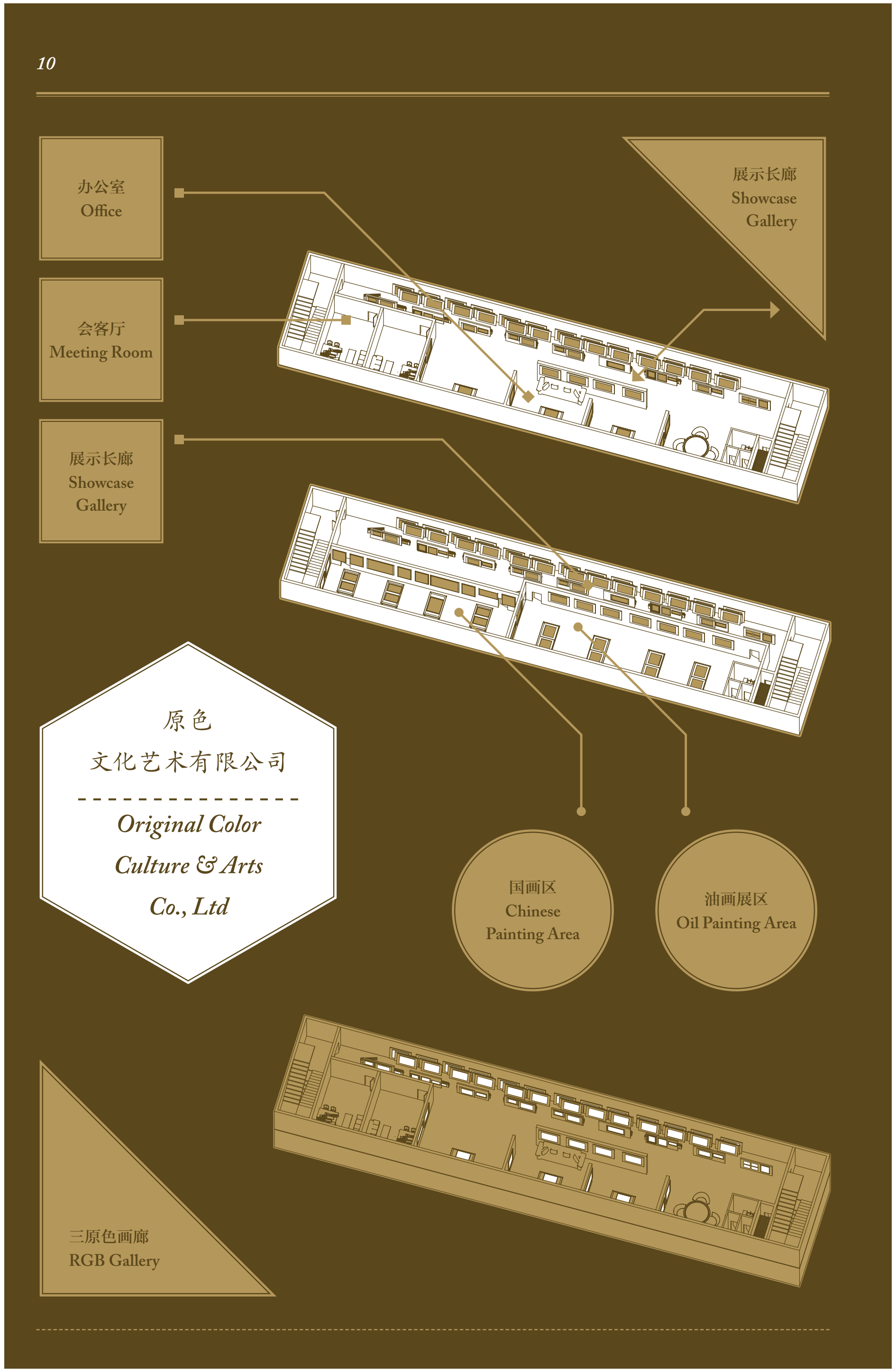
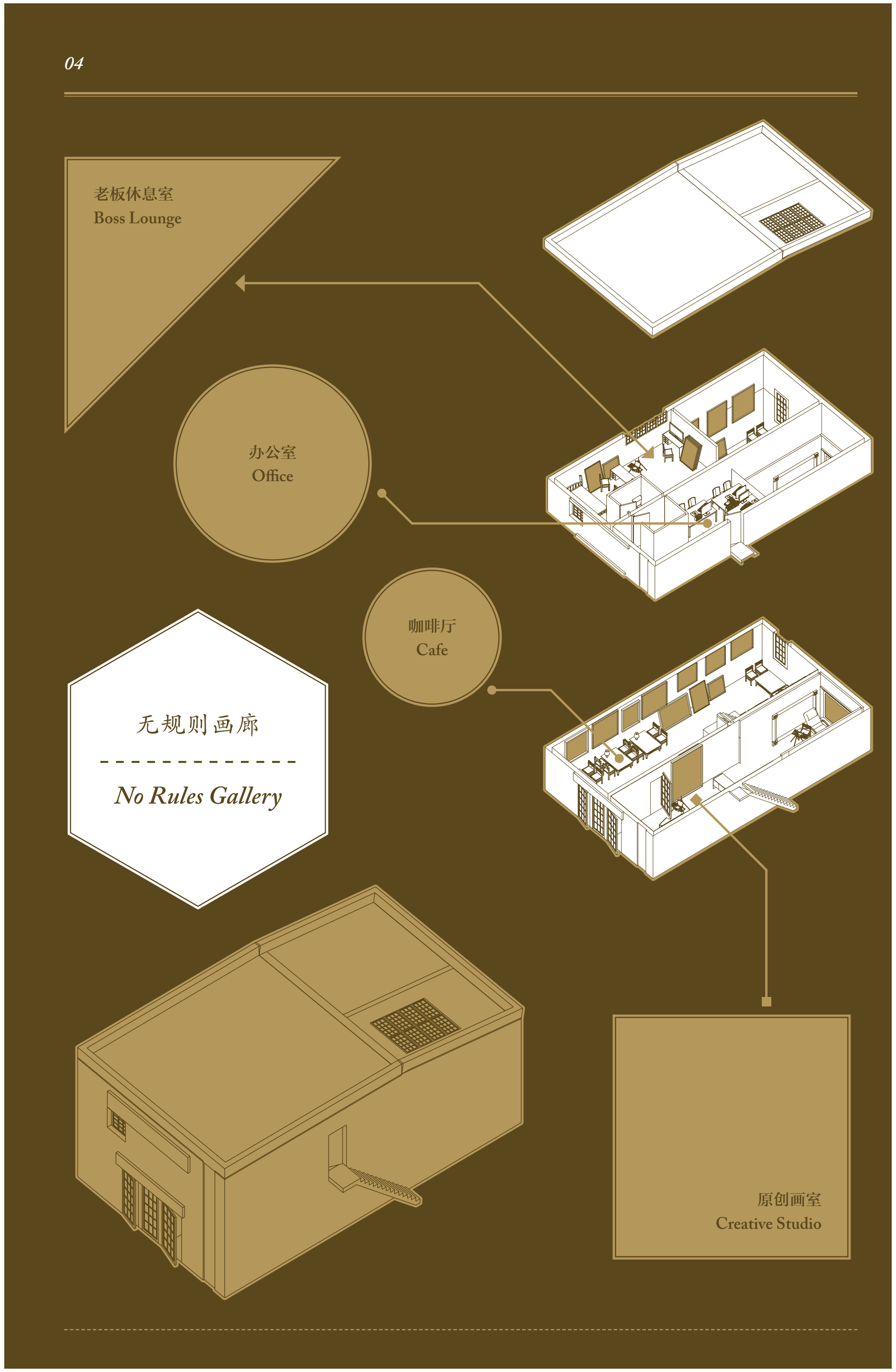
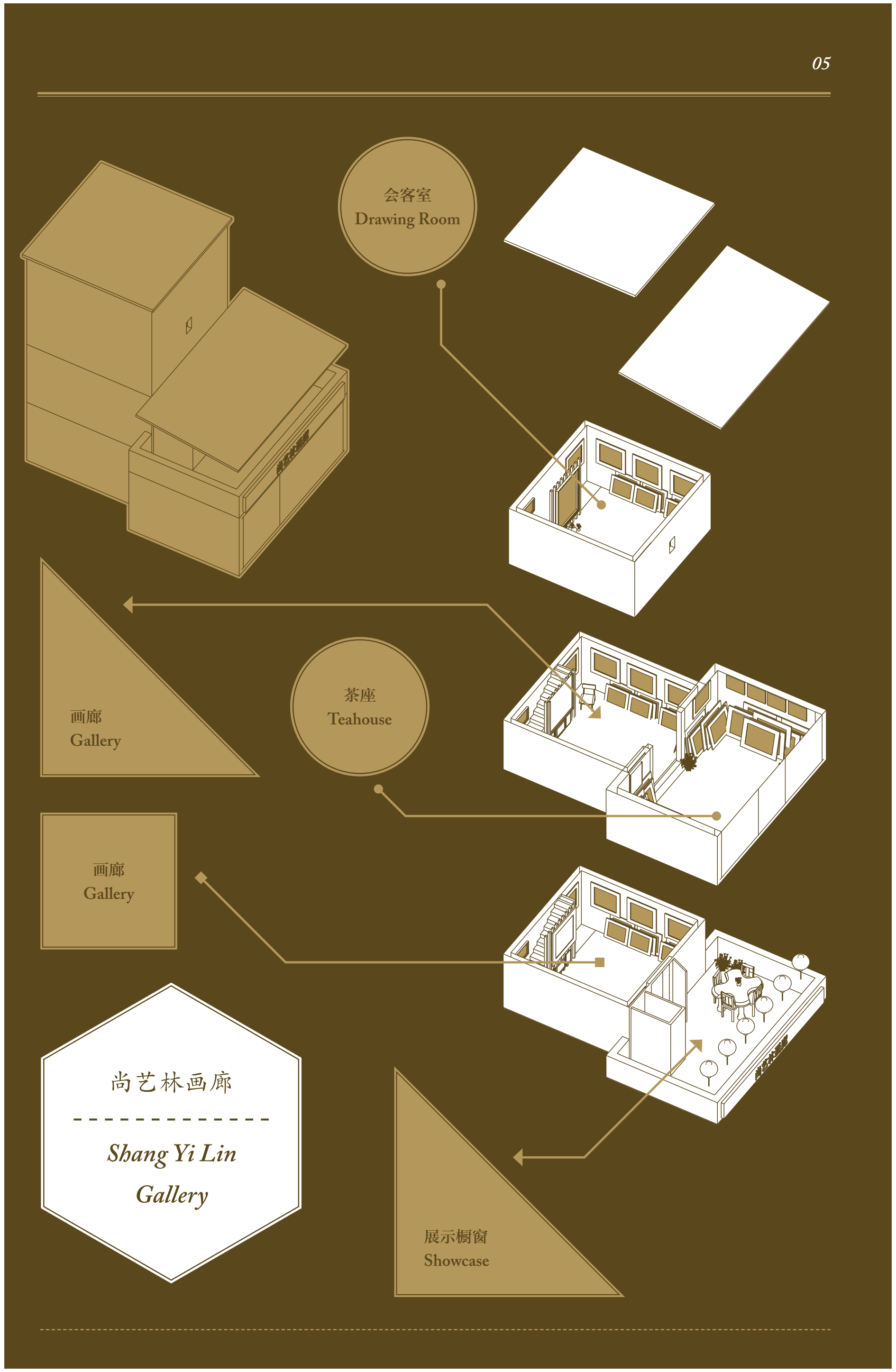
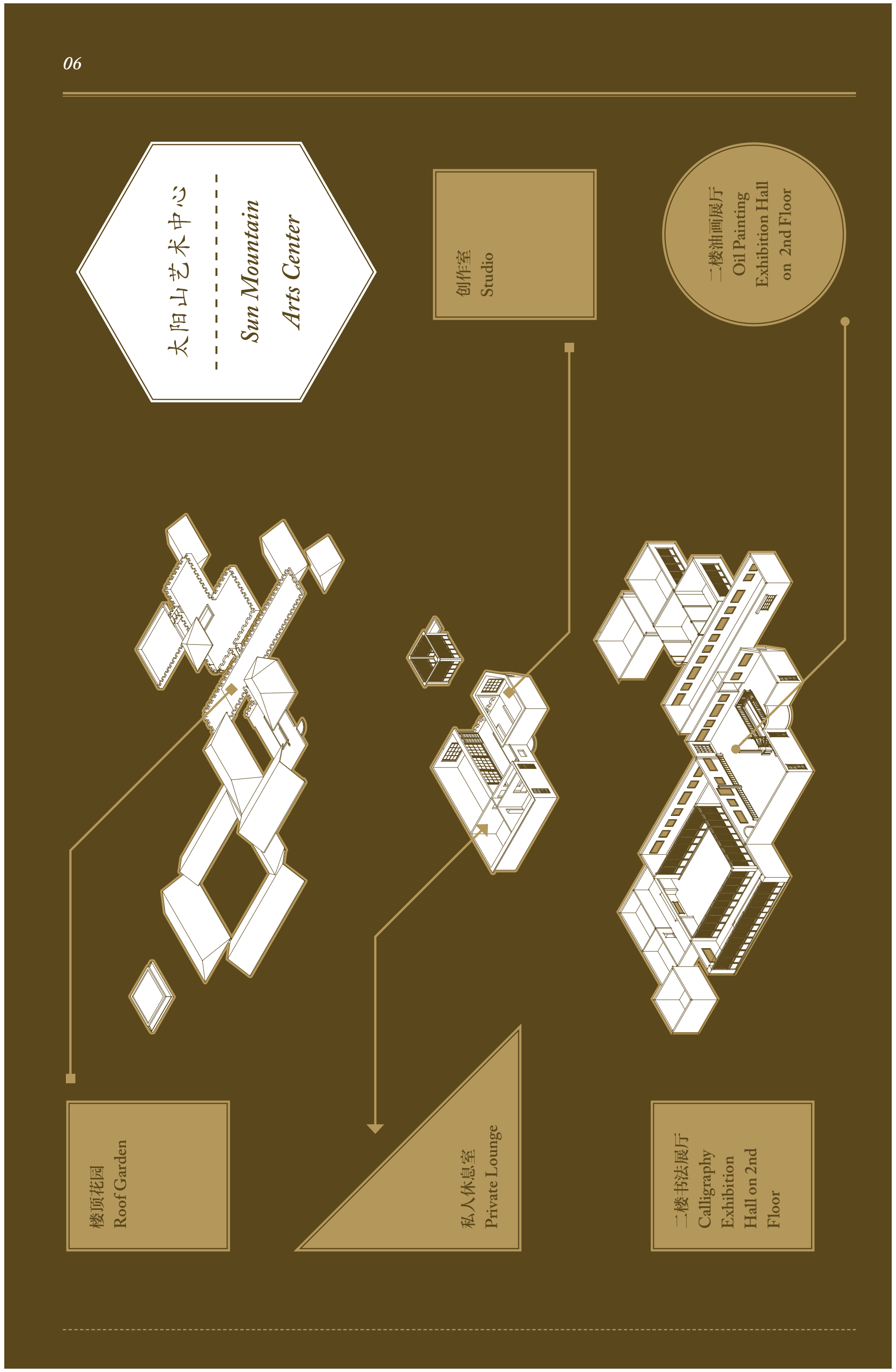
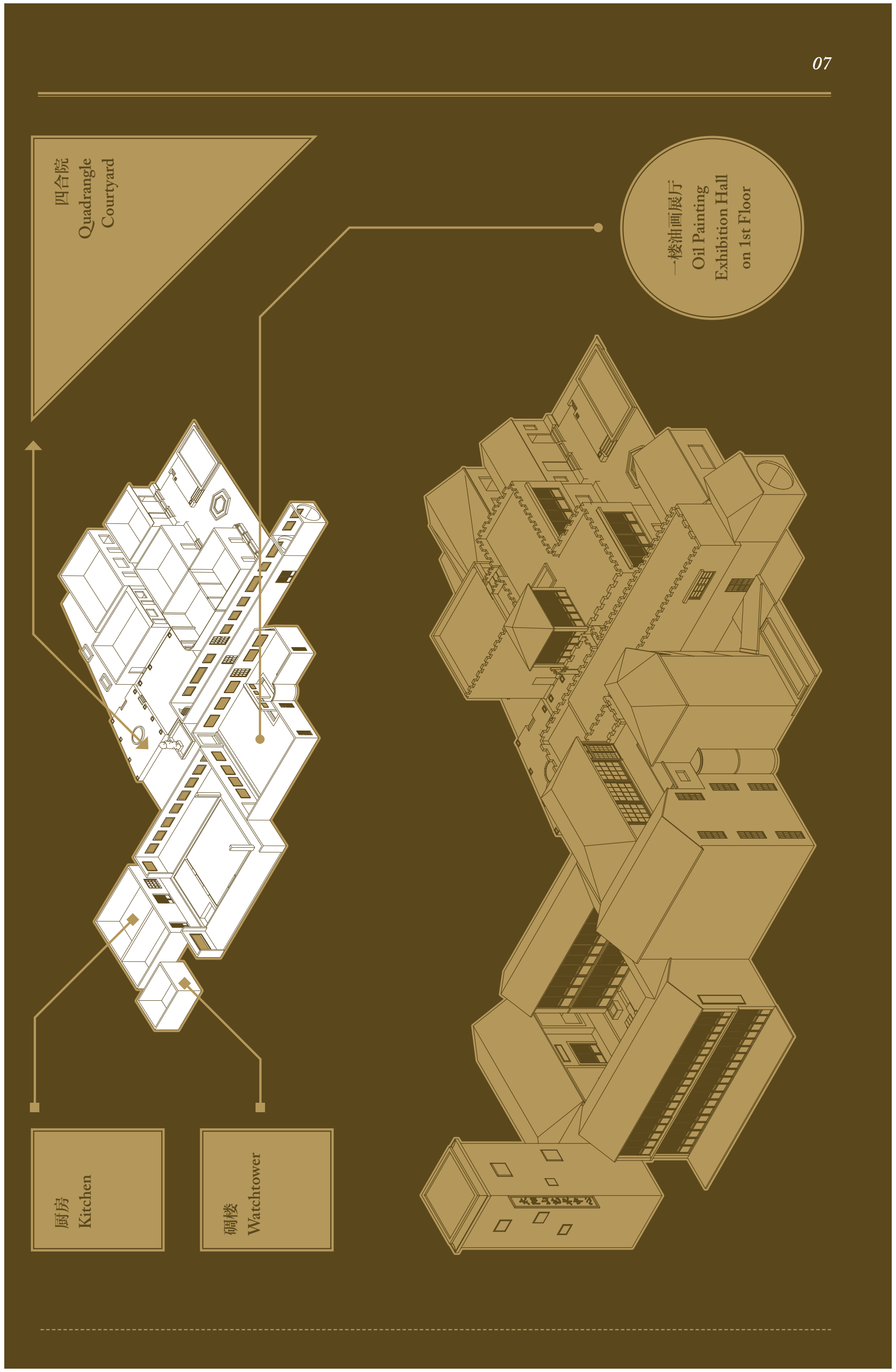

10
办公室
Office
会客厅
Meeting Room
展示长廊
Showcase
Gallery
展示长廊
Showcase
Gallery
原色
文化艺术有限公司
Original Color
Culture & Arts
Co., Ltd
国画区
Chinese
Painting Area
油画展区
Oil Painting Area
三原色画廊
RGB Gallery

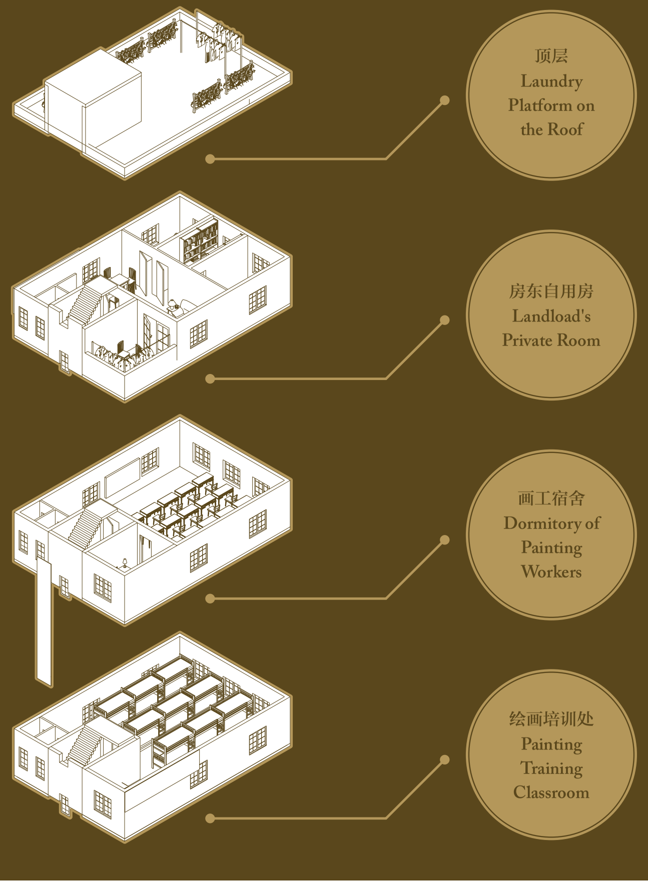

04
老板休息室
Boss Lounge
办公室
Office
咖啡厅
Cafe
无规则画廊
No Rules Gallery
原创画室
Creative Studio


05
会客室
Drawing Room
画廊
Gallery
茶座
Teahouse
画廊
Gallery
尚艺林画廊
Shang Yi Lin Gallery
展示橱窗
Showcase


06
太阳山艺术中心
Sun Mountain Arts Center
创作室
Studio
二楼油画展厅
Oil Painting Exhibition Hall on 2nd Floor
楼顶花园
Roof Garden
私人休息室
Private Lounge
二楼书法展厅
Calligraphy Exhibition Hall on 2nd Floor


07
四合院
Quadrangle Courtyard
一楼油画展厅
Oil Painting Exhibition Hall on 1st Floor
厨房
Kitchen
碉楼
Watchtower

08


顶层
Laundry Platform on the Roof
房东自用房
Landload's Private Room
画工宿舍
Dormitory of Painting Workers
绘画培训处
Painting Training Classroom

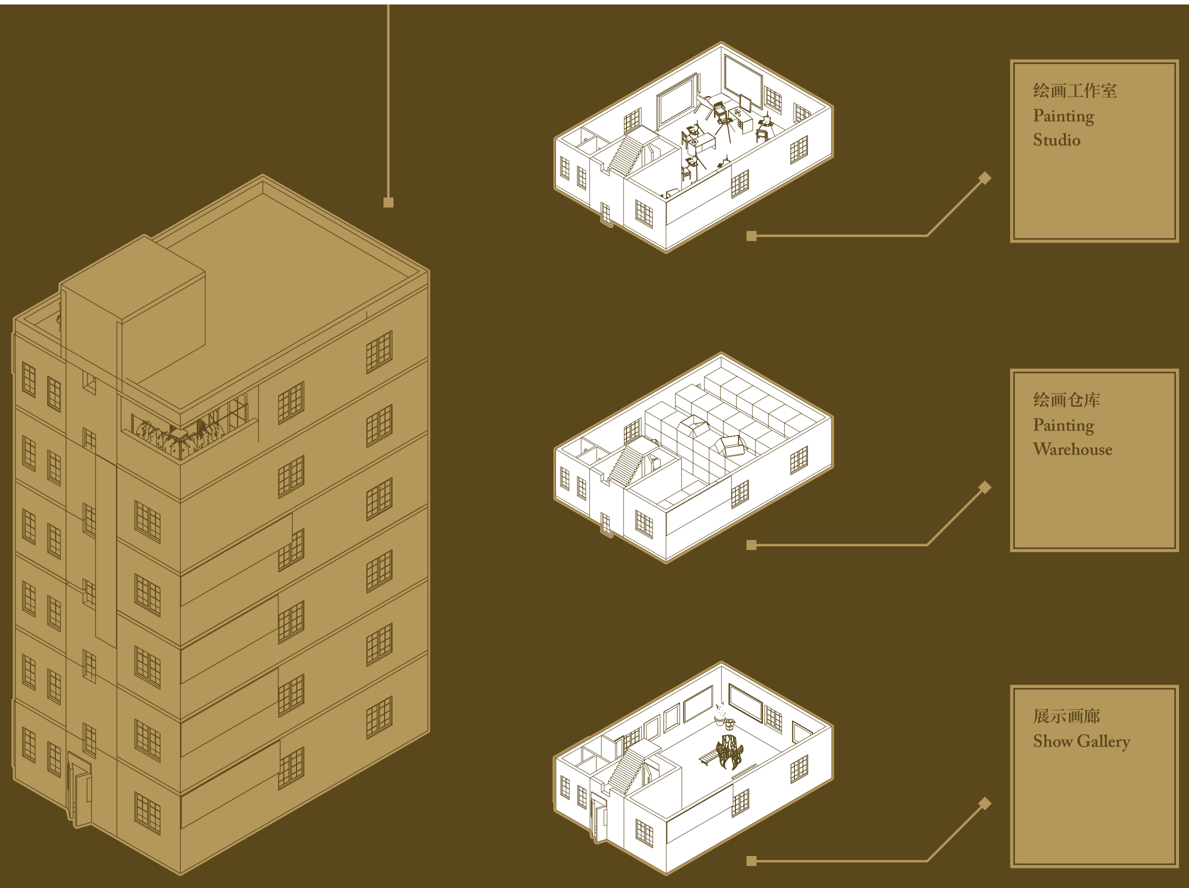
筒子楼是大芬村的标准模块，是村民们以最大容积率为原则，在宅基地上规划红线内建成的通属建筑，而其内容却有可能因为大芬油画产业的分工和细化而千差万别。

Tube-Shaped Apartment is the standard module in Dafen Village. It's the generic building with maximum FAR that the villagers can build within the planning red line on their house site. However, it could have diversified contents because of the labor division in Dafen oil painting industry.

筒子楼

Tube-Shaped Apartment

09


绘画工作室
Painting Studio
绘画仓库
Painting Warehouse
展示画廊
Show Gallery

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Power of Networks
Paul Butler (pg. 6-7); Chris Jordan (pg. 11)

From Xerography to HTML
ACTAR (pg. 14-15); dpr-barcelona (pg. 18, 20-21, 23)

Network Reset: Rethinking the Chicago Emerald Necklace
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The Chicago Freight Tunnels
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Networks of Architecture: Keedoozle and Walmart
Jesse LeCavalier (pg. 110, 122-123); Paul Robert Alvey Family (pg. 112); US Patent and Trademark Office (pg. 113 top, 116); University of Memphis Library (pg. 113 bottom); Google Earth (pg. 121)

Network Traces
Marc Goodwin and Cecilia Galera (pg. 124-137)

A Village by the SEZ: The Dafen Sample of China's Urbanization
Remko Tanis (pg. 138); Haibo Yu (pg. 140-141, 144-145, 148-149, 152-153); Underline Office (pg. 154-163)

NEXT ISSUE:
10 | **CONFLICT** SUMMER 11

Our next issue will focus on the topic of CONFLICT.

CONFLICTS are an inevitably part of our society. Their origin can be political, economical, or social; their outcome impacts physically and emotionally cities and countries, economies, and societies. We will explore the consequences that those CONFLICTS have in our cities and how design can be a useful tool to address them.

For information on the submission guidelines and other questions, please visit www.mascontext.com

10 | CONFLICT SUMMER 11 will be published on June 6.

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