LIMITS AND THE URBAN

WRITING CITIES

Brazier Katsikis Pollans Editors

WRITING CITIES 3.

Writing Cities is a collaboration between the Cities Programme, London School of Economics and Political Science, the Department of Urban Studies and Planning at the Massachusetts Institute of Technology, MIT Media LAB, Harvard Graduate School of Design and Harvard Law School

WRITING CITIES
Working Papers Vol. 03

LIMITS and the URBAN

Edited by Nikos Katsikis, Lily Baum Pollans and Cressica Brazier

A collection of working papers by graduate researchers from the Cities Programme at the London School of Economics and Political Science (LSE), the School of Architecture and Planning at Massachusetts Institute of Technology (MIT), the Harvard Graduate School of Design (GSD), and Harvard Law School (HLS).

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To all participants of the Writing Cities Conference 2012

Acknowledgements

Writing Cities is a student-led collaboration and a process of exchange between graduate students from the Cities Programme and Urban@LSE at the London School of Economics and Political Science (LSE), the School of Architecture and Planning at the Massachusetts Institute of Technology (MIT), the Harvard Graduate School of Design (GSD) and Harvard Law School. It emerges out of a process of enquiry and discussion about the city, in which energy has been invested by students and faculty members. Since its conception, this project has substantially benefited from the generosity and intellectual commitment of Gerald Frug, Richard Sennett, Fran Tonkiss and Lawrence Vale.

In addition, we would like to thank Michael Hooper, Mark Jarzombek and Hashim Sarkis for their participation in the 2012 conference. Our project would not have materialised without the institutional support of the MIT, LSE and Harvard GSD. New Geographies Lab at Harvard GSD and Richard Sennett also provided additional support. We extend our great thanks to all of the authors in this collection who first submitted their papers for the Writing Cities Workshop in 2012, and then refined their ideas after three rounds of review. We would like to especially thank Gerald Frug, Fran Tonkiss, Lawrence Vale, Michael Hooper and Mark Jarzombek for reviewing and commenting on papers.

The Process of Writing Cities 2012

This volume reflects upon the 2012 edition of the Writing Cities graduate student conference that was held at Harvard GSD and MIT Media Lab between May 10-12, 2012. The conference suggested that the fluidity and volatility of contemporary urbanization foregrounds the notion of limits. With urban studies often focused on the identification of problems and the articulation of solutions, limits have historically shaped various research agendas. But today, these limits occupy an even more central place in contemporary discourse. To what degree do we as writers on the city perpetuate existing conceptual limits through our work, and to what extent do we question or define them? To what degree does the city exhibit physical or functional limits? Do limits come from exogenous or endogenous sources? How do we recognize and come to terms with the limits to understanding and writing about these phenomena? The conference organizers assumed the notion of limits to have a multitude of meanings and interpretations, and to have resonance in several overlapping discourses related to the city. Reflecting the heterogeneity of participants in the Writing Cities cadre, the question of limits prompted rich investigations through a host of associations. Writing Cities 2012 aimed to shed light on limits and the urban through research addressing the issue from one of two primary perspectives. On the one hand, limits can imply a methodological question; questions to this end explore notions of limits in writing, limits in urban research, or limits in knowledge. On the other hand, limits can imply specific urban phenomena; avenues of exploration here

might include limits in relation to territory, legislation, growth, density, and many more potential directions. Paper topics addressed the conceptual frameworks that sponsor limitations; the recalibration of research and writing due to methodological limits; the articulation of alternative urban practices that limits have provoked; the exploitation of limits by various agents; arguments being advanced for and against limits; and the historical evolution of the concept. Writers also explored a number of spatial and material effects of limits: density thresholds, systems capacities, resource allocation, size determination. Ultimately, the conference combined research threads that tried to push, test, and interrogate limits as a working concept–writing included in the discussion locates and unpacks instances of limits as a central goal.

This third volume of Writing Cities working papers acts both as a documenatation of the two day conference and the opening public lecture, as well as a collection of selected papers that were further edited by the authors. Writing Cities is a close working exchange and collaboration between Harvard, MIT and the LSE. As such, a total of nineteen papers out of more than fifty were accepted and presented to the 2012 conference from members of London School of Economics and Political Science, Harvard Law School, Harvard Graduate School of Design and MIT School of Architecture + Planning. Selected papers were edited through a three-step peer review process by the advisory committee and the volume editors.

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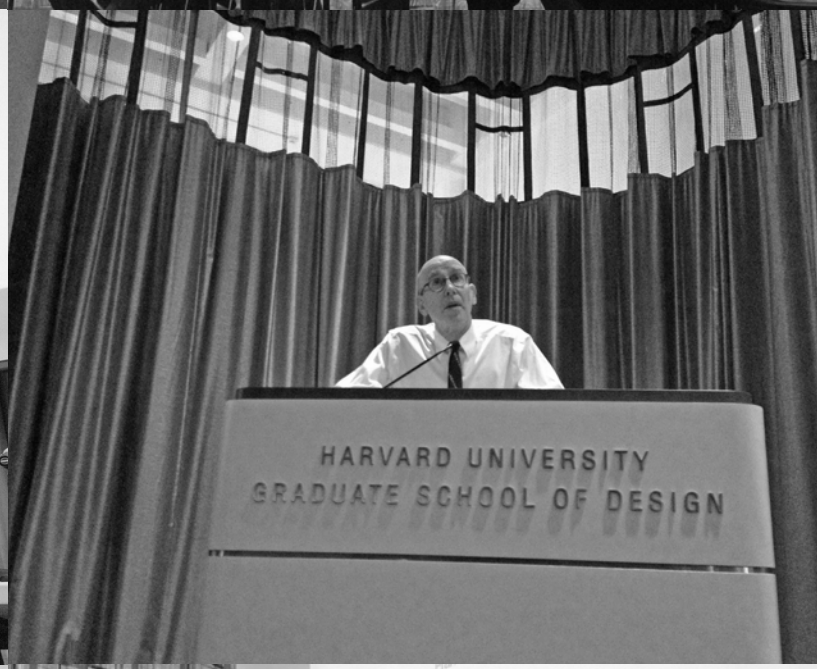
Provocations on Limits


Provocations on Limits
Gerald Frug (HLS)
Michael Hooper (GSD)
Lawrence Vale (MIT-SAP)
Mark Jarzombek (MIT-SAP)
Fran Tonkiss (LSE)
moderated by
Hashim Sarkis (GSD)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moderated by
Hashim Sarkis (GSD)

Provocations on Limits and the Urban

The 2012 Writing Cities Public Lecture

May 10, 2012 • Harvard GSD

A discussion among:
Gerald Frug
Michael Hooper
Fran Tonkiss
Larry Vale
Mark Jarzombek

Moderated by:
Hashim Sarkis

WRITING CITIES 2012

Writing Cities 2012 kickoff event:

Provocations on Limits and the Urban

By
Fran Tonkiss (London School of Economics)
Michael Hooper (Harvard Graduate School of Design)
Lawrence Vale (Massachusetts Institute of Technology, School of Architecture and Planning)
Gerald Frug (Harvard Law School)
Mark Jarzombek (Massachusetts Institute of Technology, School of Architecture and Planning)

Followed by a panel discussion moderated by
Hashim Sarkis (Harvard Graduate School of Design).

Thursday, May 10, 7:00pm - 8:15pm
Piper auditorium, Harvard GSD, 48 Quincy Street Cambridge, MA

Writing Cities is an annual graduate student conference jointly organized by the Harvard Graduate School of Design, Harvard Law School, MIT's School of Architecture + Planning, and the London School of Economics. For 2012, the conference will be held in Cambridge, co-hosted by the GSD and MIT. This kickoff event will take the form of a panel discussion on the annual theme of "limits", contextualized in relation to broader issues in the general topic of urbanism, research and writing.

Jerry Frug

In urban discourse these days, a lot of people say things like: the local is very important, and the global is very important and intermediate places, not just cities and states, but nations, are not important anymore; that these boundaries are not limits anymore. This is an argument against this proposition. Other people in the global city world–but lots of other worlds too–mention the word city and you don't know whether they are talking about the city or the region. You often can't tell. This is an argument against that confusion.

I want to say that cities are important. Why are cities important? The map on the slide shows one view of the Boston metropolitan region. If you are not from the area, you won't be able to find Boston. There is Boston, with all the water in the middle. It doesn't matter that much. In this version of the region, there are 101 cities in the Boston metropolitan region. This is a map that shows the residential tax base per household; blue is very good and red very bad. And, as you learned in kindergarten, orange is pretty close to red, and the light blue gets darker and darker blue. These are the basic figures. The difference is between $31,000 and $500,000 in residential tax base. What I want you to notice about this map is how the reds and the blues are everywhere, how the reds and the blues are very often right next to each other. There is a line between red and blue which changes people's lives. Why? If you have ten to fifteen times the residential tax base of your neighbor, you can have a good school system, because the school system is supported by the residential tax base, in large part. And you can have many other city services as well. So to move across one of these lines is to change your life. You move from a neighborhood of poverty into one of wealth and work is being done by the limits of the city. The city line does the work of separating the people along an income line. So it is important to not say that cities don't matter, because anyone who lives in this picture knows that where they live has an enormous impact on their life chances.

Now, one line that is meaningless is the line that goes around the cities. The region line. There is no such thing as "the Boston region." There are various census definitions, but there is no governmental structure of the Boston region of any kind. There are different definitions. To move across into this beautiful yellow is only meaningful because in the yellow there are more cities and towns. It's more cities and towns all the way across the state. And this condition of stark difference from dark reds and deep blues continues across the state. Regions don't make policy, there is no regional government. You can't use the word "region" as the subject of a sentence. Regions don't do anything. They are places that you can describe in two sentences, but cities do things. Cities do things. And what the cities do makes an enormous difference here.

This slide shows New York. Same thing roughly speaking. You can see this is New Jersey, and how the red blue thing works roughly the same way. What I want to show you is that the yellow, not all the yellow but a lot of the yellow is the City of New York. The City of New York is just one municipality so it all–these are Myron Orfield's maps–so the City of New York, obviously, if you know anything about the City of New York, also divides up the city along red and blue too, not shown on here, because we are doing this by municipality. So one thing to investigate is the separation of rich and poor within the city, by neighborhood. There are no neighborhood governments in New York. None. There are no neighborhood governments in New York. There is no regional government for New York

City. This picture of the region doesn't exist. There is no limit here; it is arbitrary. Why did I cut of Long Island in the middle? What there are, however, are city governments. And city governments make enormous powerful decisions that affect people's lives.

Many of you may recognize this map of the United States. This is Jasper Johns, the famous painter. It's called "Map." When Jasper Johns did this famous paining called "Map," in the 1950s in the Musuem of Modern Art, he followed the lines of the states. Here's the thing about the state lines: the city lines could be changed. The cities don't make their own lines. The red-blue map could be changed overnight by states. The states are the most powerful unit in the United States for the future of cities. They make most of the decisions, particularly about city power. And the state lines can't be changed. The state lines can only be changed by consent from the states, and you're not gonna get that. So the states are incredibly important limits on public policy in the United States, in large part because of how they control city governments and city government decisions. So I want to make a very simple point. Cities, states--extremely important in urban history, extremely important in the way people live.

Michael Hooper

It's a pleasure to be able to offer a provocation as part of this evening's festivities. I should say at the outset that its never a good idea to mention this to some people, but it's never a good idea to ask the Canadian to be provocative, it's not something we're particularly good at. I've been ruminating on these remarks and failed to come up with a single provocative Canadian. I'm sure there are a couple. But anyway, I overcame my nature and soldiered on with this task nonetheless.

I wanted to speak to this theme of limits and the urban because it really rang a chord with me. I should also say before offering my comments that there is a very fine line between being provocative and being annoying, or perhaps curmudgeonly. I have no doubt that my comments will make me sound like a ninety year old man, but the good news is that at least psychically this will make me feel more comfortable at the faculty club.

My first point relates to the tractability of the problems we address in urbanism, architecture, and urban planning. And to this point I want to highlight this Bertrand Russell quote:

> *the greatest challenge to any thinker is stating the problem in a way that will allow a solution*

Please remember that this is just a provocation, but over the last two years that I've been at Harvard, I've lost track of the number of events I've been invited to that have been organized, much like this one, around themes like limits and boundaries, frontiers, adjacencies, thresholds, liminalities, and all other manner of intractable, and frankly rather amorphous, concepts. While fascinating, these themes are hopelessly vague. And this brings me to my first point: for urbanists to contribute effectively to knowledge production about cities and really influence the future of cities, we need to grapple with more tractable topics. We need to focus, or constructively limit ourselves, to narrower, more potentially resolvable questions and issues.

I should say that I work with a large number of people from other fields, and one of the struggles I face is that they claim that they have no idea what we, perhaps in this building, or in urbanism more broadly are

talking about or working on. They argue that much of the discourse on cities produced by architects, urbanists, and planners is unintelligible. They often ask, "what is it that you are working on? What's your question? Why is it important?" And then when they read our work, they also often ask, and I'll turn to this shortly, "what in God's name are you talking about?"

So this issue of posing tractable problems might not seem like huge problem in and of itself. It might seem like splitting hairs. After all, we don't all have to follow some narrow, positivist research model. However, I think that the rather amorphous nature of our topics, such as limits and the urban, often cuts us off from the opportunity to effect real change in cities, which is tragic, since that is one of our primary goals.

To highlight how we so often limit ourselves from engaging with wider academic and public discourse about cities through our rather isolationist approach to academic inquiry, I can think of quite a few instances where I've encountered groups working on critical urban issues at universities and in the international sector where nobody came from the fields of architecture, planning, or urbanism. Perhaps more worryingly, nobody had even thought to ask people from these disciplines to be part of the question. And part of the reason that they offered for why that invitation wasn't extended was that they just thought that we were too far out. We didn't address tractable problems. This is a huge missed opportunity. As the academy and the world at large become increasingly interested in urban issues—urbanization--one might hope that urbanists, urban theorists, architects and planners, would have the potential to play a huge role in shaping the debate and discourse that will develop. However, despite being the traditional home of urban and spatial issues at universities, our fields are increasingly left out, I observe, of wider and emergent academic conversations about the city. In part, I would argue that this is because our intellectual discourse often limits our ability to collaborate with other disciplines, communicate our results effectively, and have impact in the world. Quite frankly, the vague and sometimes intractable nature of the problems we address reduces us in some instances to navel gazing while those in other schools are left to address the real world issues of urban growth and change.

In thinking about research, I often find it helpful to think of TIFs--not tax increment financing--but a rubric that emphasizes tractability, intellectual interest, and fun. We might sometimes critique other fields for relentlessly emphasizing tractability over intellectual interest and fun, but I think one of the real challenges we face is in defining what the role of tractability should be in what is a very theoretically rich, but often incoherent field of urbanism. So my second point builds on this first one, and it relates to the incremental generation of knowledge. Another challenge that urbanism faces is a fixation on the new. While this is also a fantastic and wonderful aspect of urban-related fields, perhaps stemming from our connection with the design disciplines where innovation and novelty are prized, I think it can also be problematic. We want to come up with independent theoretical breakthroughs that will solve huge challenges in one fell swoop. Too often we fail to recognize past research and that we will often need to accumulate smaller breakthroughs to really make an impact on knowledge.

To give you a sense of what I'm talking about here, a couple of weeks ago I was on a panel where a person next to me claimed to have

invented the field of participatory resource management, last year. I was somewhat flabbergasted because I happen to know that this field has existed for at least half a century. So how can someone claim they invented a field last year which has clearly existed for decades at least? Well, by fixating on new and big ideas, we don't really think about how knowledge is incrementally advanced. We run the risk repeating old mistakes and not recognizing our own ignorance. There is a need to look at what the frontier of knowledge is before we establish our contribution, without thinking that we are inevitably making a novel contribution. I often read proposals where people claim to be doing the first work on any number of topics, on urban energy policy, urban land use politics. All of these fields are well established. If we want to make a meaningful contribution, we have to clearly identify where the respective frontier of knowledge lies and how we propose to advance it. And probably depressingly, advance it incrementally.

I see two risks to the relentless focus on developing new theories, with the disregard for testing and building on old ones. First is naturally that we run the risk of making old mistakes, and not recognizing our own ignorance. As Alfred North Whitehead mentioned, "not ignorance, but ignorance of ignorance is the death of knowledge." And perhaps most troublingly, we run the risk of not advancing our field in a meaningful way. We can't, for example, productively collaborate with others in our own discipline if we are all focused on developing our own individual theoretical paradigm.

My third point relates to language. Just as the nature of the problems we choose to address can be a limit, our choice of language doesn't help. George Orwell, considered a brilliant writer in the English language, bids us to avoid or limit "pretentious diction and meaningless words" in our writing. By pretentious diction, he means words "that give an air of scientific impartiality to biased judgment." And by meaningless words, "writing particularly that is seen in art criticism and literary criticism which is almost completely lacking in meaning." So you might very well disagree with Mr. Orwell's position, or find rules of writing somewhat obnoxious, as I do. But, there really can be no condoning the kinds of obfuscation and lack of clarity that often dominates writing in our fields. It limits our impacts, our ability to communicate and build knowledge, and ultimately our credibility. If we truly know what we are talking about, and believe we have something to impart, we should be able to do it simply. We can look to William of Ockham as our guide, who argued that all things being equal, a simple explanation is better than a complex one.

To conclude, and I should probably conclude with a loud harumph, but I'll just say that this is of course a provocation, but I do nonetheless strongly believe that we need to better focus our research efforts in urbanism and related fields if we are to meaningfully advance knowledge and create meaningful change in our cities. I would argue that placing some constructive limits on our intellectual enterprise has the potential to generate impressive results. Working towards research on more tractable problems; advancing efforts of incremental knowledge generation; and improving the accessibility of language in urban discourse could be steps in the right direction.

Larry Vale

The most daunting aspect of making comments about the concept of limits is that there aren't any, except for the limit of five minutes time. But I felt better about that when I remembered that in preparation for

the 2006 Venice Biennale that was focused on cities, LSE's Ricky Burdett gave my then-student Cassim Shepard the seemingly impossible task of making a series of two minute films about 18 different world cities that would capture the essence of places. So in the context of that unnerving task, five minutes is exceptionally generous.
So up there at the top [of the slide] is the question that I think is important to start with. It is this notion of emancipatory limits. My first impulse is to try to figure out some way to make limits a positive thing. I want to see limits as placing emancipatory constraints upon ideas and landscapes; limits that will force clarification of the lens. So if you are talking about cities, that means writing about them that forces the focus without that focus appearing forced. And so to me, though, the biggest, most daunting limit of 'writing cities' has been what might be called the tyranny of the disciplinary lens.

Exactly fifty years ago, MIT and Harvard, through the Joint Center on Urban Studies--when it truly was a joint center, and truly was urban--embarked on a completely overambitious effort to advise the building of a new city in Venezuela, the growth pole known as Ciudad Guayana. One of the things that happened fifty years ago in 1962 is that they added an anthropologist to join the urban designers and the transportation specialists and the economists and all of that. They appointed Lisa Peattie at the time, who later became the first tenured woman in the Department at MIT. So the rest of the team was assigned to design and build the city, where as Peattie wrote it and understood it. She produced two classic books [about the project]. The first one was The View from the Barrio in 1968. And then twenty years later she did something really important. She wrote Planning: Rethinking Ciudad Guayana, which explained how and why the rest of the team failed to listen to their anthropologist. The first book was looking at indigenous people and the second book studied the team itself; the team she'd been working with, the imported planners and designers. To her, the collective inability, the limit on producing a wonderful city, was largely driven by the limits of communication among the many disciplines. Each of them representing their own world in a mutually non-comprehensible way. She had economists, she saw that the economists were sitting around and making charts that, as she put it, "viewed the city as the expansion of the scheduled industries." The urban designers were making drawings of complacent dwellers, as she put it, "quietly enjoying the designers' work." They actually drew pictures of people doing this; they weren't contesting anything. And the existing residents, who lived there before this team from Harvard and MIT had come to join them were told that they lived on "the site," which was not the way they understood their community. So we need urban writers that will understand how to recognize the limits of lenses. We need something that will help discipline the disciplines.

So what I see next is a limit on what might be called methods driven questions. I'm concerned that too often the questions that we are asking are constrained by the methods we choose, which are then constrained by the data we think are available. Instead, we have to make sure we are asking the most urgent and interesting questions. And then try to sort out which methods and which data could help us answer them. So that means being creative and trying to find unexpected sources of data, and being relentless about questioning the assumptions that we bring and the definitions that we are using that may undercut the validity and reliability of the

work we think we are measuring.

And then, and this is not so far from what Mike was just saying, there are limits to actionless theorizing. I'm concerned that if you have a lot of methods driven questions and data-availability-driven framing and assumptions, we don't push ourselves enough to find the significance in our own work. And I don't mean statistical significance, although that could be important, I mean that because we are in urban programs concerned with planning and design and development issues, we need to be constantly asking the "so what" question. We want to be rigorous in the way we describe and analyze the world around us, but we want to figure out ways that will help us best change that world. If we are going to claim to be social science centered, it ought to be applied social science; social science that is imbued with a designer's sensibility about getting us towards alternative futures.

For me the last question is about design-politics, and I use that with a hyphen. I think it means that we need to figure out ways of bridging the thick description that we value and the need for urgent action. What I mean by the concept of design-politics is a kind of limit-transcending lens. It is asking those of us who write about cities to think about how urban design contributes to the distribution of political power and resources. So design is not some kind of value-neutral aesthetic applied to development, but it really is a part of motive driving that development. Good design, as we say, is not somehow independent of social and political forces that affect its production and use. Design is influenced by politics in at least two important ways. The first is that design proposals can be challenged by a variety of groups during the planning process and the second is that political values whether they are tacit or explicit are encoded in the resultant design, whether it is Ciudad Guayana or anywhere else. If we want to overcome what I see are self-imposed limits, and make what we build and what we write more emancipatory for others, we need to seek out the design-politics in everything that we do and everything that we write about.

Mark Jarzombek

I would like to say a few things, that might be a bit weird, to start off. We talk about urban planning, but the word urban is a Latin word. I'm worried about why we are still using a Latin word. It just seems really conventional. I understand planning–I have to be careful with my colleagues here!–but urban planning scares me. I just feel like the Romans are still around. We're long since done doing Roman urbanism, Urbis. We don't put walls around our cities anymore. We don't call people outside the walls Barbarians. So I'm worried about the legacy of this word still haunting us. Even though we don't mean it; when I read all the papers and they talk about urbanism and urban planning and urbanity, we don't mean those things. I understand that. But why have we not invented a better word--over all these years, centuries?

We have "city." City is a better word, I think it is a much better word. City planning. But it's also an old word. It certainly goes back at least to the Middle Ages. And in this sense it's not much better than urbanism. And I really worry about what it means when we use this word. There are papers that try to come up with, or talk about, the recent tendency in the last decade or so to rethink the concepts of what that is out there. But I am worried about the fall back, when we are trying to speed up our conversation, we wind up just using the words, city, urbanism, because we know what they are but we don't know what are; we really shouldn't know what they are.

We should make it much more difficult and painful.
So that's my provocation. For me it comes out because places that I've looked at, cities that have been bombed, blasted, destroyed, brutalized by us, by you and me in different places of the world, like Dresden, a city that has had so many bombs and blasts and rebuildings, not just from World War II, but prior to that, which we tend to forget. By the time we rebuild it four times, is it really the city anymore? Can we really call it that? What is this mutated thing that you live in and work in and play in? In which the residents themselves have very little knowledge of their own history? You think most people living in the city know something about their city, but this is patently wrong. And in a place like that where people have come into the city, imported from West Germany, they have little interest in the history of their own place. So this is a staggering crisis of identity that pervades the place. Can you even call it [a place]? How do you write a history of the place? How does this haunting project of its history continuously percolate through epistemological reasoning about what we do and how we discuss it?

I will show you here [in this slide], a picture from a newspaper that came out just after 9/11. A beautiful, interesting picture of destruction of a particular type. What you see is--you're inside an SUV, presumably, you survived the crash of the towers, the dust has settled down over your car. You're going, phew! You press the windshield wiper, and shoop, it wipes away the dust from your windshield. You can see the building, the bank, CDX, Chevron, Texaco, Gulf Oil is still standing. I mean think about that. Of course it is not a modern building that you are looking at that is still standing in the dust. It is a classical building. You can see the gargoyles and the entablature of a classical building. So in a sense, once again, the classics still are around.

Fran Tonkiss
I come only with my name. I have just arrived in the United States, today. And I'm pleased that I arrived with my luggage but without my slides. I'm in a situation of love your neighbor, love his slides. So I hope you will hold what you've already seen in your minds. Being without images is rather to the point because the things that I want to raise in these few minutes are things that are not obviously visible or immediately legible. I don't have an image, but I do have a poem. As I was thinking about the theme, the very suggestive and generous theme, in spite of its concern with constraints for this workshop, I kept being put in mind of one of my favorite poems by Marianne Moore, which has the virtue not only of being very short and therefore very memorable, but also of being deeply profound. It's called "I may, I might, I must." And it goes in its entirety:

> *If you will tell me why the fen*
> *appears impassible, I then*
> *will tell you why I think that I*
> *can get across it if I try.*

I was reminded of it again when Larry Vale was speaking just now about emancipatory limits and our attitudes to them.

The category of limits is so productive in thinking about cities and writing about cities, partly, I think, because our urban imagination currently is so taken up with the idea of the limitless city in this period of peak urbanization. The endless city, the city without limits—in spite of all the things we know about cities dying on their feet in other parts of the world. But at the same time, this fascination with the unlimited city goes together with this strong political and

practical desire to set limits within and around cities, notwithstanding what Mark has just said about the fact that we no longer define cities by a constitution within walls. So the idea of a city without limits goes together with strong political will in many contexts towards limiting urban space in very stark ways.

One of the papers that we'll be talking about in the next couple of days refers to this in the Haitian context in terms of a wall race. I was quite diverted when I read this very felicitous term, the wall race. The race to build walls. Isn't there a game in one of the British public schools called the wall race? It might even be Eton. I don't think that there is anyone here that went to a British public school...perhaps its called the wall game? And if its true and it is Eton then it explains quite a lot about common policy in the United Kingdom under our current political elite. In fact that city is being turned into a kind of Beijing on Thames in preparation for the Olympic Games.

Having said that, I come this evening not to provoke, I think, but rather to affirm. That is to affirm against this intellectual backdrop of limits and the limits of cities, to affirm the project of writing cities and the ongoing conversation between our institutions and indeed across our different disciplines. That is, our attempts to understand the physical and spatial, through and with the social and the legal, and of course vice versa. The notion of city limits is one that we might all—and have good reason or good grounds—to claim in these various disciplines. Designers, planners, and lawyers are in the business not only of writing about limits and analyzing them, but also setting them, making them, marking them, building them, constituting them in very real ways.

The claims of the sociologist, such as myself, might seem the weakest, then. But in thinking through this category as we are in actual urban contexts and in empirical urban cases that we'll be discussing over the next two days, it soon becomes visible how the physical, the constitutional and the conventional limits one finds, one butts up against, one stumbles across, one is stopped in one's tracks by in the city, are always sociological artifacts. They are social facts as much as they are physical or legal ones. How else are we to explain–and let me here pick up on a couple of themes that the papers in the discussion touch upon–the way that immaterial permutations can be deeply constraining, and definite, while physical edges are often times more porous and more productive. These city limits that we carry in our bodies and our heads can be more constraining of our actions than those that are build by designers, by architects, by planners. Or how else to explain the way that the limits of the body in the city are set not so much by physical capacity as by the sensibilities, the assumptions and ignorances–the unproductive ignorances–of designers of spaces, of buildings, of infrastructures and of course, of procedures. So I am speaking about the well-known but nevertheless enduringly strange truth that material limits can be far more permeable than immaterial ones. Physical limits can be far more porous than social and socially embedded ones.

To come back to invisibility, the invisible space on the slide, this has to do, I think, in part with the problem of seeing the social. If problems are to be made tractable, amendable to solution in the city as elsewhere, we need to be able to visualize and ennunciate them. It is easier to see a building than it is to see a social class, for instance. But it is not only the problem of seeing the social and how this implicates the spatial, the physical, the legal, the political, but it calls for us also, the problem of writing

it. We've become adept–not just those of us who work in the obvious aesthetic disciplines–we've become more adept at the use of visualizations to understand the urban world, from maps and census data, to plans, the making of landscapes, and of course built forms. These visual ways of marking and representing limits very easily can become ways of reinforcing and reproducing those same limits. But as much as we may have recourse to the visual, this doesn't crack the problem of writing. The real question for me is about the power of writing, of language, to make limits visible, but also to suggest how they might be forced, tested, transcended. This is a genuine question. We can't, unfortunately, all write like Marianne Moore. It can be dispiriting, I think, to know that poet can capture in a few dozen words something far more profound than any of us, certainly me, could capture in a hundred thousand word thesis. The question of how to write what we see and what we can't see, what we build and what remains embedded but unbuilt, is the challenge of the next two days.

Hashim Sarkis

The irony, to follow from Michael's comments about his nationality, to invite a Lebanese to be your moderator! I think I heard it again and again tonight that the majority of our problems are our categories. Our categories, our concepts. And as much as I agree with that, many of our provocations tonight come out of the changing problem of human settlement, out of the changes in the physical patterns, forms of governments, and forms of transportation that have radically re-described what we have been unconstructively calling urban or city. In other words, I would like to propose that if the concept of the city has reached the limits of its elasticity, it may have done that because of the physical limits that it has also reached or trespassed. This comes with a word of caution, as almost every other academic concept does, that if the concept of city or urban is intractable, as I think everybody insisted on, that does not mean that it will go away. Tractability is not the guarantee of clarity or existence, and intractability is not insolvable either.

My provocation, and here I'm crossing the limit, is that I'm not sure that we have been Roman enough, Mark, in our thinking about the urban. In other words, and I follow from the thinking about the urban coming from certain philosophers like Michel Serres, not Lisa Peattie, that we have been a bit too Greek in our idealization of the urban, or too Judeo-Christian in considering the city as an idea that descends onto the land. I would like to propose that if we operate more like Romans, meaning in territorial empire, where networks across nations and encampments precede everything, and that these can become cities or dissolved into the terrain, perhaps we can come closer to the phenomena that we encounter today as cities become regions and regions transcend the nation state and nation states begin to interrogate the boundaries of the globe.

But the question that I would like to ask up front is the one that I asked halfway through: could it be that we are asking about the limits of the concept of the city because the city has reached certain physical limits in the phenomenon that we are observing today and that the group here today would be writing about? And what are these limits that have been traversed physically? To ask the questions differently: are we asking these questions because of unique phenomena that we are encountering in front of us today?

Limits and the Urban

Abstracts of papers presented at the 2012 Writing Cities conference

May 11 & 12 2012 • Harvard GSD • MIT Medial Lab

Aneesha Dharwadker
Aviva Rubin and Daniel Weissman
Jeannette Sordi
Nikola Bojic
James Clark Osborne
Sai Balakrishnan
Naomi Stein
Kian Goh
Mariel Villeré
Alpen Sheth
Benjamin Solomon-Schwartz
Karen Noiva
Travis Bost
Ian Gray
Graham Willis
Adam Kaasa
Derek Galey
Gunter Gassner
Daniel Daou

WRITING CITIES 2012

CONFERENCE SCHEDULE

Thursday, May 10, GSD

5:30 - 6:30
Welcome and introductory meeting.
Harvard GSD

7:00 - 8:30
Writing Cities 2012 Kickoff Event: “Provocations on Limits and the Urban”
Harvard GSD, Piper Auditorium
48 Quincy Street, Cambridge

8:30
Social Event: Drinks

Friday, May 11, GSD

First Workshop day
Stubbins Room, Harvard GSD
48 Quincy Street, Cambridge

9:45 Coffee

Session 1: Territory
10:00 - 10:30
Aneesha Dharwadker: “City of Edges”. Presented by Aviva Rubin and Daniel Weissman
10:30 - 11:00
Aviva Rubin and Daniel Weissman: “The Walls Race / Walls of Informality”. Presented by Jeannette Sordi
11:00 - 11:30
Jeannette Sordi: “Liquid Limit. The River Plata System”. Presented by Aneesha Dharwadker

11:30 - 12:00
Break

12:00 - 12:30
Nikola Bojic: “Network Topography between Global and Site-Specific”. Presented by James Clark Osborne
12:30 - 1:00
James Clark Osborne: “Producing Disability and Demanding Inclusion in Indian Cities”. Presented by Nikola Bojic

1:00 - 2:00
Catered Lunch

Session 2: Institutions
2:00 - 2:30
Sai Balakrishnan: “Beyond the City: Urbanization and Land Conflicts along Highways in India”. Presented by Naomi Stein
2:30 -3:00
Naomi Stein: “Discontinuous Regions: High-Speed Rail and the Limits of Traditional Governance”. Presented by Sai Balakrishnan
3:00 - 3:30
Kian Goh: “Island-City Limits: Singapore’s Urban Determinism (and, Speculations on a Decolonial Approach to Matters of the Planetary)” Presented by Mariel Villeré

3:30 - 4:00
Break

4:00 - 4:30
Mariel Villeré: “The Line as Territory. A theoretical reading of informal urbanism in Jakarta”. Presented by Kian Goh
4:30 - 5:00
Alpen Sheth: “Under-writing Cities: the new limits to urbanization, insurance, and the circulation of risk”. Presented by Benjamin Solomon-Schwartz
5:00 - 5:30
Benjamin Solomon-Schwartz: “My home is not a castle: Property lines, city limits, and the law”. Presented by Alpen Sheth

5:30
Drinks and Catered Dinner

Saturday, May 12, MIT

Second Workshop day
MIT, Media Lab,
Building E14, 75 Amherst Street

9:45 Coffee

Session 3: Nature
10:00 - 10:30
Daniel Daou: “The Limits to Growth and the Urbanization of Nature”. Presented by Karen Noiva
10:30 - 11:00
Karen Noiva: “A Dynamic Approach to Examining Feedbacks Between Regional Constraints and Water Management: Insights from Singapore”. Presented by Daniel Daou

11:00-11:30
Break

11:30 - 12:00
Travis Bost: “Urban-natures and ‘Limiting Machines’: Evaluating Hybrid and De-limiting Production in Urban Spaces and Infrastructures”. Presented by Ian Gray
12:00 - 12:30
Ian Gray: “Cyber-Panopticon vs. the Anthill: Or, the Clash of Anarchies over the Fate of the Commons”. Presented by Travis Bost
12:30 - 1:30
Catered Lunch

Session 4: Discourse
1:30 - 2:00
Graham Willis: “The Bandido”. Presented by Adam Kaasa
2:00 - 2:30
Adam Kaasa: “The idioms of architecture: a critical reflection on the limit between literature and form”. Presented by Graham Willis
2:30 - 3:00
Derek Galey: “From the City as Oikos to a Politics of the Urban”. Presented by Gunter Gassner
3:00 - 3:30
Gunter Gassner
“Representational Limits: Towards a more inclusive conceptualisation of the new London skyline”. Presented by Derek Galey

3:30 - 4:00
Break

4:00 - 5:00
Final discussion, closing remarks, planning next conference and publication.

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City of Edges
Aneesha Dharwadker (Harvard GSD)

Delhi is a city composed of edges that are constantly being transgressed. This condition is historically rooted in the paradigm of the walled city, multiple constructions of which spanned centuries before colonialism. The 'city,' as imagined by the pre-colonial Hindu and Muslim societies, was defined and limited by a massive, continuous edge, a clear division between urban and non-urban and a defense mechanism against foreign invasion. For most of the second millennium CE, this paradigm appeared in multiple locations across the Delhi landscape, and evolved formally and tectonically but did not fundamentally alter in character. A ruler's desire to express and immortalize his empire through urban construction, and to generate a heterogenous atmosphere within that construction, remained stable. When British-designed New Delhi was inserted into the landscape by 1931, it signified a modern, open-plan contrast to the so-called indigenous urban imagination; however, this paper argues that the apparent negation of the 'Indian' city in New Delhi could not, in fact, avoid the intrinsic wall-ness of Delhi's historical urban ethos. Recently, the walled city has taken on global (and more metaphorical) proportions in the form of the Pragati Maidan convention center, the 1982 Asia Games complex, and the 2010 Commonwealth Games complexes. These various incarnations of the wall over many centuries produce a city of increasingly perforated limits: in other words, the material edges erode, blur, and even disappear as time passes. The paper explores how material 'limitation' has evolved in Delhi, from the massive masonry walls of the 11th century to the wafer-thin, translucent gates of today's sports complexes, markets, residential enclaves, and other 'cities within the city.' Conventional wisdom suggests that the cities of the past are lost, accessible only through nostalgia and a flattening of history into narratives and images; however, this paper proposes that Delhi's multiple cities, past and present, all actively shape the modern condition both spatially and semiotically. The paradigm of the wall—its limiting capacity, and our capacity to breach it in turn—is ever present.

The Walls Race / Walls of Informality: Splintered Urbanism in Port au Prince, Haiti

p.80

Dan Weissman and Aviva Rubin (Harvard, GSD)

In a society where individuals have tenuous capacities to control environments, the wall presents the most tangible method to command physical territory. In Port au Prince, Haiti, the inclination to create internalized utopias that externalize the undesirable–years of corruption, neglect of the city, and effects of the earthquake–have manifested a walls-race. As an ongoing splintering of urban fabric into discrete cells, homes, businesses, and institutions have raced to construct walls that exert control over territory, under pretenses of security. Read through ecological, social and political realities, this paper intends to deconstruct meanings and uses of walls in the Global South, challenging the notion of 'wall as separator.' We first seek to understand how transported cultural values associated with traditional uses of walls in Haiti affect territory when transcribed onto contemporary urban conditions. We look to language–French, English and Kreyòl–as well as procedures of governance–cadastral survey and property law–to decipher these barriers and transformations conditioned in Haitian society. Through these analyses, as well as personal experiences and research by thinkers such as Estudio Teddy Cruz, Nezar Alsayyad, and Eyal Weizman, this paper reveals alternative urbanizations employing the wall. Appropriated by the myriad forms of informality that dominate daily life in Port au Prince, the wall, formerly a barrier, is the backdrop for urban life. The wall has become the very spine on which a robust and resilient informal architecture and economy is hinged, serving as the anchor of vibrant intervention. For these reasons, we put forth a textual and graphic reading of this persistent phenomenon invading cities, investigating the climate of

the walls-race, the typologies of 'wallness,' outliers, and meanings. At the macro scale, this paper theorizes on the use of the wall as a means of anticipating future spatial practices of urbanization.

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Liquid limit: The River Plata System.
Jeannette Sordi (Harvard GSD)

Contemporary communication and transport systems have changed the world geography; both material and immaterial boundaries seem to have lost their historical and political role. But, what if the boundary connected instead of separated, merged instead of divided; instead of presuming its dissolving, it was space of potential development? What if this limit was liquid? What if it was a river? This paper studies the relationship between land and water on the Rio de la Plata system, through a comparative method that investigates how across six cities this "liquid limit" has been treated in their urban development. European colonists discovered the sites of Buenos Aires, Montevideo, Rosario, Santa Fè, Sao Paulo and Asuncion sequentially following the water path. Through the centuries each city has developed its particular relationship to the river and it is in the tenuous limit between the city and the water that the crucial natural, social and infrastructural struggles and transformations take place. It is in the residual space between the built and natural environment, along this 7135 km thread, that lies the greatest potential impact on urban regeneration and ecological of the Plata Region. Different stories and histories drove different stages of urban development along the riverfronts. In Asuncion, an exception, this limit is still undetermined. One can distinguish two cities: one of the water, where the informal Guaraní settlements are; and one of the land, over "quote 54" (m) where the formal city developed. Seasonal floods make this limit variable, dynamic and instable. A critical overview of the transformations of the cities down the river might open questions for this "last", in which the limit between city and nature, formal and informal, past and future, is still undetermined. No matters how developed communication and transportation systems are, no matters how liquid society has become. (Bauman, Liquid Modernity, 2000).

Network Topography:
Between Global and Site-Specific
Nikola Bojic (Harvard GSD)

Thin and Imaginary borderlines stretched between the tangible matter of the city and its intangible manifestations have been wildly erased in the era of locative media and social networking. It becomes impossible to think about the urban tissue without considering real time data flows and threads of global networks intertwined with it. Yet, even though globalization made distant places just few clicks away, our everyday life inside the social network reveals that we are mostly occupied with picking the same places, clicking the same topics, hanging with the same group of people. As an illustration it is enough to compare total number of our Facebook friends with the number of names that we repeatedly see on our Facebook wall. Behind this basic example lies residue of the fifty years long focus on infrastructure of globalization that produced the effect of imaginary cosmopolitanism which prevents us from seeing the limitations of our own networking efficiency (Zuckerman, Listening the Global Voices, 2010). Therefore, instead of living within the totality of the network, it is more likely that we exist only inside the particularity of the social bubbles situated somewhere within the network. In that sense one might say that the internet as a global infrastructure greatly resembles the ideas of Yona Friedman or Constant who imagined light mega structures spreading above the traditional city. Apparently, the drive for social equality and freedom which comes along with these architectural visions confirms that democracy of the world infra structure stays within a domain of utopia. On the other hand, recent political changes on the global scale

illustrate that democracy might vigorously occur exactly inside the social bubbles. Appropriating different forms and durations these bubbles have been inflated around certain topics of public interest (Latour, From Realpolitik to Dingpolitik, 2005). This paper aims to ask what happens when those bubbles hit the ground? Can we say that new urban forms follow the topics around which social bubbles have been inflated? Can we speculate on typologies and functions of these spaces and can we observe city as an unstable landscape of these junctures? Finally, it becomes clear that globalization in the era of social networks does not reflect itself just through metropolitan architecture of a global cities like it did during the last century. Quite opposite, new measurement of the globe is a pinpoint on the Google map. Contemporary globalization is bringing critical inversion of scale; from world -city to site-specificity as the only appropriate spatial module through which a bubble society could be represented.

Producing Disability and Demanding Inclusion in Indian Cities

James Clark Osborne (MIT, DUSP)

In this paper, I think critically about the role of the "disability access audit" in creating new forms of embodied participation, experiential and technical expertise, and imaginaries of what the modern Indian city should be. Over the past ten years, disability rights activists in urban India have used a new tactic, the access audit, to call attention to the physical and functional limits created by inaccessible public spaces such as transportation stations, government buildings, and parks. For this exploration, I utilize participant observation and interviews conducted in New Delhi, Mumbai and Bangalore between 2008 - 2009 in order to analyze the current trend within urban Indian disability activism of conducting access audits of public spaces. I situate these access audits in relation to other forms of audits prevalent in India today, Indian and international disability legislation, and the current political terrain for disabled people in India. I look critically at how (the absence of) regulation frameworks and technical standards create a sense of disability universalism whereby activists imagine themselves to be a new local citizen as well as an extension of an international disability community. I reflect upon the resistive and performative implications of simply being disabled in the Indian urban sphere. I analyze how disability activists make claims about the relationship between subjective bodily experiences and bodies of objective knowledge. In doing so, I explore the emergence of a professional access audit apparatus focused on technical standards. As neither volunteer nor professional access audits have yet resulted in significant architectural or programmatic changes, I am interested in what other effects and affects these audits produce and what discursive authority claims of inaccessibility have. Who is empowered by physical space in the emerging city? In keeping with the theme of this conference, I examine how the modern Indian city is both a space of possibility and constraint (or limits for the purpose of this conference). The city is a space of possibility in that it allows for the emergence of new identities and imaginaries and it is a space of limitation in that political and material changes do not occur.

Beyond the City: Urbanization and Land Conflicts along Highways in India

p.36

Sai Balakrishnan (Harvard, GSD)

Urbanization is no longer contained within the spatial limits of cities. Much of the urbanization, particularly in developing countries, is taking place along infrastructure corridors. These corridors cut across multiple cities and villages, and are larger in scale than the political jurisdiction of individual local governments. The transformation along these infrastructure corridors are fraught with contestations between real estate developers, industrialists, farmers and informal residents over the acquisition, consolidation and conversion of agricultural land into urban

uses, and more broadly, the distribution of costs and benefits of the new corridor developments among these diverse, competing interests. Since traditional institutions, like urban and rural local governments, collapse in these trans-local territories of overlapping cities and villages, what are the new institutional arrangements that can effectively manage these large-scale, emergent transformations? This paper investigates new hybrid institutions – like land cooperatives - that are emerging on the ground to manage land consolidations at this regional, i.e. corridor, scale. The land consolidations along the Pune-Nashik highway in West India are regulated by farmer-owned land cooperatives. Cooperatives are regional institutions, i.e. they are at an intermediate scale between decentralized local governments and centralized sub-national governments. They are hybrid, i.e. they lie somewhere between the pure state and the pure market. Through a close examination of the land cooperatives along the Pune-Nashik corridor, this paper challenges the inadequacy of our existing spatial limits of the urban v. rural, and argues for new spatial divisions and hybrid institutions that are reflective of the complex urban transformations unfolding on the ground. Institutions like the land cooperatives merit attention both because our current institutional frameworks of the state v. market do not adequately capture them, and because they open up alternative possibilities for managing emergent forms of regional transformations.

Discontinuous Regions: High-Speed Rail and the Limits of Traditional Governance
Naomi Stein (MIT, SA+P)

Globalization and the interconnectivity of the economy have magnified the role of regions, large-scale polycentric agglomerations with networked labor markets. At the same time, increasing attention is due to localized urban quality, as non-vehicular modes as well as more compact forms of development become imperative in an environmentally conscious world. Within this context, the increasing interest and adoption of high-speed rail—a mode that simultaneously addresses multiple scales—is perhaps unsurprising. Because of its multi-dimensionality, high-speed rail (HSR) challenges traditional distinctions between intra- and inter-regional transport. Capturing a portion of both short-haul air and mid- to long-distance auto travel, HSR changes the time-space landscape. From streetcar suburbs to interstate-induced sprawl, metropolitan growth has always been closely linked to the development of the urban transportation system. HSR pushes this boundary further, enabling the possibility of discontinuous regions: single labor markets that spans large distances but do not include all intermediate areas due to network effects. Such a form may in turn stimulate a new form of regionalism in which the connected areas are not, as in the traditional metropolitan case, municipal governments linked by contiguous development, but rather are clusters of cities and towns, linked across much longer distances by the high-speed rail network. This paper will present the relationship between high-speed rail development and limits on traditional models of governance, using the case study of current HSR plans in Portugal. Based on information collected during a series of interviews with national and local officials, this paper will discuss a number of ways in which high-speed rail is changing modes of thought about metropolitan areas and urban governance, including: the integration of national entities into local planning processes, the potential for new models of commuting, and a the role of HSR planning as an exogenous catalyst for regional cooperation.

Island-City Limits:
Singapore's Urban Determinism
Kian Goh (MIT, DUSP)

"Everything we do or say, good or bad, thinking not thinking, is to stay the horror of the randomness of planetarity" (Gayatri Spivak, NYC, Feb 24, 2012). Spivak invoked the planet, she said, because "something should

remind us of the limits to what we do." This paper engages planetary limits by beginning with a study of Singapore, an islandcity-state. Geographically contained, with scarce natural resources, and a history until recently dominated by its status as colonial outpost, Singapore has surpassed its humble DNA to become an economic powerhouse. Its success is predicated on a carefully negotiated relationship between its postcolonial identity and status as present-day Global City. The island-city-state has accomplished this positioning by deploying the themes of multiculturalism and meritocracy as transformative nation building concepts, and strategically invoking the limits of resources and geographies – its sheer island-ness – to impose social and urban determinism. Singapore constructs and reconstructs colonial and postcolonial identities and built and natural environments. Recently, urban scholars have posited the idea of complete human colonization of the Earth - a planetary urbanization. What can we assess from Singapore's management of postindependence fragmentation and concrete spatial boundaries to address this new confrontation with limits? I do not suggest that we transpose Singapore's strategies to a global scale - an impossibility. Instead, we can learn from both the process of Singapore's negotiated decolonization and Spivak's planetary admonition to unearth and assess global landscapes of power. Based on this I propose a decolonial urbanism, simultaneously to address issues of global environment and justice.

The Line As Territory: A Theoretical Reading of Informal Urbanism in Jakarta
Mariel Villeré (MIT, SMArchS)

As Manhattan celebrates the 200th anniversary of its trademark grid, scholars and designers reflect on the grid's evolution and influence in shaping city institutions and public life. Read as a dense series of borders, the grid divided land by its inhabitants' race and class, creating voids and solids. Heidegger questions the implicitness of the border, declaring that it is constructed, believed to be there, but thoroughly abstract. Derrida furthers this theory with deconstruction and the discussion of the parergon, which emerges from that always-present thickness in-between. It becomes obvious that every border is fiction (in its intangibility) and reality (in its importance for thought operations) at the same time. As writers and theorists of the urban condition, we depend on borders, or limits, to qualify and quantify people and places. Benedict Anderson's Census, Map, Museum intertwines the development of institutional census and nineteenth century map-making as co-dependent mechanisms used to quantify ethnic-racial classifications, specifically in the complicated territory of Southeast Asia. Imagined communities in and the social perception of power emerge from the map. Examining the drawn lines of a map with reference to Derrida's theory of the parergon, the interior vibrates the exterior and would be nothing without it, and we are left without a precise measurement –what edge of the line do we measure from? If a map's lineweights are scaled 1:1, the line itself may span several city blocks, as with the Green Line between Israel and Palestine. The line becomes territory. This paper will explore the phenomena of pocket urbanism in Jakarta, where squatters appropriate liminal spaces and occupy the line itself as a participatory process in political and discursive space. While arguing the reciprocal conditioning of this occupation and the process of explosive urban growth, development and industrialization, the paper will trace the historiography of drawn representation from which space becomes contested.

Under-writing Cities:
The New Limits To Urbanization,
Insurance, and the Circulation of Risk
Alpen Sheth (MIT DUSP)

With the expansion of the built environment and its hyperconcentration of value, "cities" are a site for the production of concentrated risk for all sorts of catastrophic events and underwriting that

risk is a complex business. The transformation of the insurance industry and its role in transferring the risks of urbanization are the focus of this paper. The seismic events that began with September 4, 2010 earthquake in Christchurch, New Zealand and accounted for a loss of 50 percent of the buildings in the central business district will serve as a critical illustration among others of contradictory processes that have emerged since the 1990s. The two processes particularly relevant to the contemporary moment are: 1) the narrowing of insurability and its impact on urbanization in the aftermath of environmental catastrophe; and on the other hand 2) the expanding scale, scope, and circulation of insurance as a risk-transfer mechanism. Understanding these processes helps to explain how the specter of environmental catastrophe and the production and circulation of its risks are altering the very limits of urbanization and accumulation under neoliberalizing capitalism.

My Home is Not a Castle:
Property Lines, City Limits, and the Law
Benjamin Solomon-Schwartz (Harvard, HLS)

The law creates boundaries between places and gives them meaning. When people travel through space, they are subject to different rules implemented by different authorities. These travelers might be trespassing in one location and free to walk in another; they might be able to build a tall building in one place, maintain a single-family home in another, and farm in yet another. Many designers and urbanists ignore the importance of legal limits like property lines and municipal boundaries, sketching pictures that too often collide with legal realities. But even when architects and planners consider the legal effects of these limits, they frequently present conceptions that are simplistic and, sometimes, deeply mistaken. First, in the U.S., private property rights are frequently presented as creating a hard distinction between space under the control of a private entity and the public realm. In reality, shades of grey characterize these lines. The public has certain rights to intrude on private land, and the property owner can establish some rights that transcend the boundary of her land. Second, the conventional American discourse around local government describes municipalities as having absolute autonomy within their boundaries, called Home Rule. In fact, Home Rule powers are extremely limited, their scope determined by the state in which a municipality is located. Furthermore, the singular importance of municipal boundaries is complicated by the fact that there are boundaries with high legal significance within municipalities. These boundaries include zoning districts established by local governments, electoral districts set by state governments, and boundaries of common interest communities set by private parties (governed by homeowners associations). The legal effects of these boundaries operate in the background of any proposed urban intervention. In order to facilitate effective urbanist programs, it is critical to unpack the nuances of the operation of these legal limits.

A Dynamic Approach to Examining Feedbacks Between Regional Constraints and Water Management: Insights from Singapore
Karen Noiva (MIT, SA+P)

Historically and prehistorically, water quantity and quality issues have challenged urban policy and technology. Singapore, an island nation located o the coast of Malaysia, was an important trading outpost for Great Britain since the mid-19th century. Since gaining independence in 1960, rapid economic and population growth have been maintained through aggressive and conservative top-down management strategies, which integrate economic and social goals with resource considerations. Water has been a particular focus on Singapores integrated resource management: although receiving twice the global average precipitation, by 1960 demand occasionally overwhelmed supply. Today, however, Singapore leads the world

in desalination and reclamation technology and is known for its success integrating land-use, nancial, and research management in securing freshwater for the past ve decades. Using System Dynamics and 50 years of water management data, I developed a methodology examining how Singapore altered exogenous physical limits imposed by local land and infrastructure resources through endogenous factors including policy, nancial management, and technology. However, even as Singapore has modied its natural local environmental carrying capacity through technological and cultural adaptation, it is increasingly dependent on complicated water-purication technologies that are more intensive in material, energy, and nancial resources, raising questions salient to larger issues of urban sustainability and resilience. Our intention with this paper is to present a quantitative approach to examining how both physical and social limits can contribute to long-term urban water availability. At Writing Cities, I also hope to gain insight into how quantitative approaches to resource constraints can contribute to discussions on policy and design for sustainability and urban resilience, and vice versa.

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Urban-natures and 'Limiting Machines': Evaluating Hybrid and De-limiting Production in Urban Spaces and Infrastructures

Travis Bost (Harvard, GSD)

A dualist conceptualization of the urban-nature relationship has proven increasingly irrelevant and counterproductive as has been noted in many ways by authors including Swyngedouw (1996), Haraway (2004), and Latour (1993). While early Kantian Enlightenment conceptions justified a conquest of nature for industrialization, Modernist era urban infrastructures (dams, canals, aqueducts, etc.), embedded this dualist relationship in city form and process where nature was: externalized (Harvey 1996), 'hidden' from visibility and consciousness (Kaïka 2004), socially produced and commodified (Smith 1984), and spectacularized (Gandy, 2002). These industrialized infrastructures mediated nature through an opaque and mystifying process where nature was always located at the end of a tube or beyond the wall of a dike. They then produced social constructions of 'hinterland' and 'first nature', and forming hard-lined limits of the space of nature and that of the urban. However these limitations have proven mere ideological constructions rather than veritable historical conditions. Castree and Braun's (2002) 'social natures', Gandy's (2005) 'cyborg urbanization', and Swyngedouw's (2006) 'hybrids' have sought to explain the synthetic qualities and implications of socio-natural production. The consequences of a hybrid nature thesis involve the dissolving of socially-produced urban-natural limits, as each omnipresently shapes the other. While there has been considerable theoretical and critical repositioning of infrastructure along this line of thought (e.g. Fletcher 2008), within design of urban landscapes and infrastructures—despite the ample enthusiasm to 'bring nature into the city', 'heal post-industrial scars', and 'give back waterfronts'—the critical question remains: are we succeeding in revealing the social-production process of synthetic urban-natures, or are we in fact producing new urban-natural limitations and alienation with nature merely on display in the city? This paper therefore takes up this question, making use of recent design polemics and New York City's High Line—the most celebrated recent project claiming a re-orientation in perspective.

Cyber-Panopticon vs. the Anthill: Or, the Clash of Anarchies over the Fate of the Commons

Ian Gray (MIT, SA+P)

The Democratic Republic of Congo (DRC) is endowed with the second largest tropical forest in the world after the Brazilian Amazon. Yet unlike Brazil, where industrial agriculture and commercial timber harvesting account for the bulk of deforestation, DRC's forests are cut down

by subsistence farmers in need of cropland or to provide fuel wood for cook stoves. Indeed, nearly 90% of the country's household energy supply comes from forests in the form of charcoal and firewood. Kinshasa, with nine million people, serves as the principal market for fuel wood and as a result, the city limits are represented as a visible line of deforested plains expanding year by year into the Congo Basin. This resource dynamic, made comprehensible by remote sensing technology, has caught the attention of climate experts who would like to alter the increasing degradation of the Congo Basin's forests as a means to reduce global emissions of greenhouse gases. Toward this end, the World Bank has developed an experimental investment program, financed through avoided carbon payments, intended to substitute the supply of wood from rainforests with wood from vast acacia farms planted on the degraded Bateke plateau surrounding Kinshasa. The agenda to separate the forest from the city implicates a number of questions concerning limits. Can a set of non-state actors, leveraging panoptical, yet networked mapping tools, fulfill the traditional role of the state and establish new limits on the use of common resources in the DRC? If the State is not in control, who is being invited to participate in the creation of these new limits? This paper analyzes how these asymmetries in the global valuation of carbon are being articulated and localized in the landscape around Kinshasa.

The Bandido in Urban Brazil

Graham Denyer Willis (MIT DUSP)

The bandido – bandit, robber, drug trafficker, thug, criminal, thief- is a fixture in research and popular imagery of urban violence in Brazil. Most examinations and representations of the world of crime and disorder touch on the concept. Yet, even in the most prominent work in the field, the bandido has always been poorly translated and/ or awkwardly defined in clunky and transplanted, if not literal, terms. Current representations typically construe the bandido as a one-dimensional character, sever the word from its meanings and limit a complete analysis of the spatial, racial and social position that bandidos hold in urban social relations. I draw on ongoing ethnographic research with police detectives in São Paulo and Rio de Janeiro, Brazil, and interviews with urban residents to examine the production of the bandido and the significance of the term as a social marker. In particular, I highlight the various dimensions of the bandido- as individual, social unit, social space, personification, governance, political conviction, and identity. I attempt to show that the concept is currently limited by awkward or literal translations that do not reach into the various imaginaries of the term. In transcending these, I argue that the concept of the bandido is embedded in a complex pattern of social relations that underpin the current dynamic and emerging trends of violence and governance in urban Brazil.

The Idioms of Architecture: A Critical Reflection on the Limit Between Literature and Form

Adam Kaasa (LSE Cities Programme)

What are the limits of architecture? As researchers concerned with the built environment, this question is as conceptual as it is pragmatic. Doing research concerned with the built environment, particularly historical work that depends as much on archival materials and documents as it does on built projects, invites the debate around what materials constitute architecture, and therefore, what materials should be analysed, or determined as analysable. Understanding the limits of architecture insofar as to what extent it stretches beyond its sometimes-built materiality, is to construct the limits at which we can begin to ask questions. As researchers, the limits of our questions depend, at times, on the limits of the materials we are questioning. And so understanding the limits of architecture is a necessary exercise for conducting research about it. This paper grounds itself in the methodology of an in-depth archival

project analysing a moment in the history of modern architecture and planning in Mexico City as an exercise to think through this limit. The project relies on postcolonial theories to interrogate historiographies of the modern that condition spaces beyond a European origin as mimetic. It does so by examining three case studies: the building; the architectural journal; and the plan. Each case study employs one idiom of architecture as a different way into the building as a form and its relation to politics and Mexican modernism. These idioms test certain limits regarding what can, or should be considered architecture. Building on the work of Beatriz Colomina (1987; 1994; 1995) and Kent Kleinman (2001; 2007), this paper will use the tensions arising from the distinction between the archival document and the built environment, between media and architecture, between literature, in a broad sense, and the materiality of form, to critically address the methodological choices researchers make when confronted with questions about architecture. The paper aims to raise questions about the limits assumed about or placed on the multiple idioms architecture, and their impact on the limits around the questions we, as researchers, can, and end up, asking.

From the City as Oikos to a Politics of the Urban

Derek Galey (Harvard GSD / HLS)

Contemporary accounts overwhelmingly ascribe the essence of urban development to economic factors—think Ed Glaeser, Richard Florida, etc. We are told that cities are economic engines, that density fuels productivity, and that urban living is a necessary evil for the sake of access to quality employment. The word economy stems from the Greek root, oikos, which conveys the domestic sphere. And yet, the Greeks referred to the city by precisely the opposite term, polis. The polis was both a functional urban unit and the form of relations that took place among its citizens—namely, the political. While the oikos populated the city, the latter was understood to convey something beyond an amalgamation of households. For the Greeks, a city was first and foremost a political space. The collection of economic actors contained within a polis was greater than the sum of its parts, giving rise to the possibility of collective action. Functionally, the elevation of the oikos over the polis has privileged economic development over identity formation, inter-urban competition over metropolitan cooperation, and real estate speculation over empowered community decision-making. While it is true that urban residents generate a disproportionate share of economic activity, it is also true that cities have given rise to the ideas that enable the regimes of sociopolitical organization under which economic activity unfolds. Cities certainly accelerate the process of market exchange, but the essence of the urban lies not in incremental advancement in economic efficiency. Instead, cities must be conceptualized as political spaces, opening up possibilities for natality, contestation, and revolution.

Representational Limits: Towards a More Inclusive Conceptualisation of the New London Skyline

Gunter Gassner (LSE, Cities Programme)

“The reconquest of architectural vision entails the use of many of the same methods that are employed in curing amnesia. A shock will often do it, or the focusing of attention on familiar objects, which have almost disappeared by being taken for granted. It is like the proverb often heard in childhood, whose significance is suddenly understood for the first time in later life, when it is used in an unfamiliar context. Through such experiences, the eye as well as the mind can discover fresh meanings, and through it the creative ability” (Hastings in the Architectural Review, 1947). Extend limits of visual urban planning and ‘the new London skyline’ What are the limits of visual urban planning? Does the city as a visual composition affect us? Are buildings capable of creating drama and/or critical awareness of traditional power structures? Is

it possible that urban views draw people out of themselves and create empathetic relationships between people and people and between people and buildings? These questions may sound naïve, even irrelevant to many of us. In times of a global economic recession and the ongoing Euro-crisis, politicians, urban planners, architects and sociologists seem to have other and 'bigger' problems. Yet, it is interesting that the City of London – the historical core of London and one of its two financial service industry hubs – locates both: some of the largest construction sites for commercial high-rises in Europe as well as the 'Occupy London' anti-capitalism camp. Within 'the new London skyline', oppositional developments are taking place simultaneously. In London, more and more commercial high-rises that host FIRE (Financial, Insurance and Real Estate corporations) have replaced church steeples as the tallest structures in the city. London's skylines are rapidly transforming from 'historical' to 'commercial' ones, a process New York underwent more than one hundred years ago. Professional debates regarding 'the new London skyline', however, are English specific and strongly related to the Townscape movement as developed in the middle of the twentieth century. In the aftermath of WWII, theorists developed eighteenth century picturesque garden principles such as 'irregularity' and 'sudden variation' further, but now for an urban context. Drawing on Surrealism, urban planning was conceived as 'democratic art' and urban views as 'Surrealist collages': broken images made up of pieces. Arguing for 'old and new rubbed together', Townscape theorists de-contextualized elements (buildings, tress, traffic, etc.), that is, they took them out of their conventional context and created illuminating conceptual collages. In so doing, they shifted the focus from elements to relationships between elements and aimed at jolting citizens out of their complacency. For Surrealists, then, the collage represented a discontinuous representation of history, or rather, a historical rupture, a rupture of the history of the powerful. For the Writing Cities Conference 2012, I propose to take some of the seemingly 'naïve' ideas about these extended limits of visual urban planning seriously and discuss them in relation to contemporary London. In so doing I hope to contribute to transatlantic debates about the impact of aesthetics on socio-political processes in general and ideas of skylines in particular. The proposed paper is related to my PhD thesis The Topicality of the 'new London skyline', which is an analysis of professional skyline debates and their proactive and critical potential in global London.

Existential Risk, Marxism, and Natural Limits

Daniel Daou (Harvard, GSD)

Forty years ago, the publication of the "Limits to Growth" commissioned by the Club of Rome added fuel to the old debate to whether there are natural limits to human growth on the planet (Meadows, Randers and Meadows 1972). There would seem to be a clear cut line separating those who think that growth can be decoupled from prosperity -and thus see a steady state economy viable- and those who see in scientific progress and endless source for humanity's increasing problem solving capacity (Tierney 1990; Myers and Simon 1994). The present paper has three purposes. First, it will try to offer a broad overview of the arguments for and against the limits to growth tracing the modern schism between "boomsters and doomster" (Tierney 1990) to Marx and Engel's attempt to dismiss Malthusianism (Malthus 1798; Marx 1875; Walker 1979; Benton 1989). Second, the case for a "sustainability" based on our capacity to face "existential risk" (Bostrom 2004) will be briefly developed elaborating on Holling's distinction between adaptability and resilience (Tainter 1988; Holling, Gunderson and Ludwig 2002). Finally, the paper will attempt to ground the discussion within urban theory by exploring the potential effect the proposed definition of "sustainability" could have on the revision of neo Marxian urban studies loosely suggested by Erik Swyngedouw and Maria Kaika under the rubric of the "urbanization of nature" (Swyngedouw 2006, 2009; Kaika, 2006).

Selected Papers

Aneesha Dharwadker
Aviva Rubin and Daniel Weissman
Jeannette Sordi
Sai Balakrishnan
Travis Bost

Highway Urbanization and Limits to the City:
Analyzing Land Conflicts and Cooperatives Along India's Highways

Sai Balakrishnan

Rapid urbanization in the 21st century is exploding beyond the boundaries of the city, into the agrarian countryside and revealing the limits of our conventional categories of space like city/village. In India, for instance, 40 percent of the rural population was engaged in non-agricultural work in 2005, and this proportion has been increasing since then (Gupta, 2005). By 2021, 70 percent of India's urban expansion will take place not within cities, but along infrastructure corridors connecting cities (Sivaramakrishnan and Singh, 2001; Sivaramakrishnan, 2006). Non-agrarian villages, urbanization without cities, rural industrialization: as contemporary urban planners are confronted with these seemingly paradoxical realities, what are our new analytic optics to even start to understand these large-scale urban transformations outside cities? In this paper, I focus on a specific form of contemporary urbanization – the urbanization along highways. I show how this emergent form of urbanization poses new spatial, institutional and social limits to our conventional categories of space like city and village.

India's highways are part of an ambitious infrastructural development program, comparable only to the colonial enterprise of the sub-continental railway network of the last century (Waldman, 2005). As the Indian government implements its plan of building and widening around 64,000 kilometers of national highways (Ibid), industries and real estate developers have started flocking to these highway villages. Highways are attractive destinations for new industrial and urban uses: the highways assure good connectivity, the land along the highways is cheaper than inner-city land, and the land is in abundant supply to meet the demands of large-scale urbanization. Highway urbanization is not the resurgence of an older form of ribbon development. Instead, the highways merely telescope and make more perceptible a large-scale agrarian to urban transition that is underway in much of India's rural countryside. Using the case studies of the highways connecting the city of Pune, in Western India, to its neighboring cities, this paper exposes the limits of our conventional categories of space – city and village, urban and rural – in describing and managing these highway urbanizations.

Spatial Limits: The Politics of Highway Lands

The phenomenon of urbanization without cities is not unique to India. It represents a shifting pattern of urbanization in countries all over the world (Dewar and Epstein, 2007; UN-HABITAT 2010). Urbanization without cities is also not a new phenomenon. As early as the 1960s, urban planners and geographers recognized the need to de-link the urban from the city (Gottman, 1961; Friedmann, 1966; McGee, 1967). They saw that the social, cultural and economic processes that constitute urbanization – non-agricultural economies, 'urban' ways of life – were unfolding outside the familiar spatial entity that we call the city. Neologisms like desakota, rurban and agropolitan development were introduced into the urban vocabulary to account for these political geographies with interlinked urban/rural economies and ways of life. Though a different form of urbanization has been unfolding outside the city over the past few decades, expert and everyday discourses and practices continue to use the stubborn categories of urban and rural to describe these highway transitions. The use of these categories is not just a matter of semantics, nor

is it of relevance to urban theorists alone. It has practical repercussions for how we understand, manage, and intervene in these highway transformations.

Land is at the core of highway urbanization. The proponents of these new forms of urbanization argue that by 2050, 70 percent of the global population will be urban (UN-HABITAT, 2010) and the supplies of urban land have to be exponentially increased to accommodate this 'urban turn.' Some forecasts predict that India's urban population is expected to increase from 340 million in 2008 to 590 million in 2030 (McKinsey Global Institute, 2010). More than 5 million acres of serviced lands are needed to meet the demands of this urban expansion.[1] The critics of these new forms of urbanization trace the historical continuity of these "land grabs" and "land rushes" to the colonial enterprises of the nineteenth century. However, the new land grabs, they argue, are taking place within the new *"political economic context of neoliberalism"* (Li, 2012; White, et al., 2012). The urgent search for new lands to accommodate urban expansion, whether productive or speculative, is fueling the frenzied conversion of agricultural lands along inter-urban highways to serviced urban lands. The consolidation and conversion of fragmented agricultural lands along the highways into urban and industrial uses is fraught with conflicts, the most paradigmatic of which is the Singur case.

In 2008, the small village of Singur, located outside of Kolkata (formerly Calcutta) along the Kolkata-Delhi national highway, grabbed international media attention as the site of one of India's most contentious and violent struggles over land. The state government of West Bengal acquired 997 acres of privately owned agricultural land through the exercise of eminent domain. The acquired land was to be transferred to the private sector firm, Tata Motors, for the setting up of a factory for the manufacture of the world's smallest car, Tata Nano. Landowners, with the support of oppositional political parties and activists, staged a protest against the forced acquisition of their agricultural lands by the state government on behalf of a private sector firm. The publicized and protracted protests resulted in Tata Motors pulling out of Singur and the state government returning the 997 acres of acquired lands to the farmers.

Other similar conflicts over the consolidation of agricultural land for urban/industrial expansion include the contestations over the Yamuna Expressway and the Bangalore-Mysore Infrastructure Corridor. In both of these cases, landowners protested against the forced acquisition of their agricultural land both for the construction of privately built, owned and operated highways and for the construction of private residential and mixed-use developments adjacent to these highways. These conflicts are not all taking place within defined political jurisdictions like cities or villages. Instead, the scale of the urban transition is much larger than the political jurisdictions of individual cities and villages along the highways. As urban and rural local governments struggle to manage these large-scale urban transformations, agrarian landowners and bureaucrats on the ground are innovating with new regional institutions to cope with, and resolve, these land conflicts. The next section describes one such regional institution – land cooperatives - that is emerging along the Pune-Nashik highway in Western India.

Institutional Limits:
Towards Regional Institutions

The highway regions are in-between regions, i.e., they are in-between cities and villages. The spatial ambiguity of these highway regions imposes institutional ambiguities in the management of these regions. Multiple axes of authority, which previously functioned independently, now intersect in these overlapping highway regions that are both urban and rural in character. For instance, urban and rural land administrative regimes clash in these regions. Urban land in most Indian states is managed by parastatals, which are special purpose governments. Compared to general purpose governments like municipalities, the parastatals have greater financial discretion, more internal organizational flexibility and lower levels of citizen accountability (Burns, 1994; Foster, 1997). Rural land management, on the other hand, falls under the jurisdiction of Revenue Departments. Revenue

Figure 1 (top): Apartments surrounding sugarcane fields along the Pune-Sholapur highway.
Figure 2 (middle): Apartment in Chakan village along the Pune-Nashik highway. The proposed location for the new Pune international airport is Chakan, and the apartment advertisement reads: "Book your flat and fly to Singapore."
Figure 3 (bottom): View from the Chakan apartment shown above, of the fields behind the apartment.

Departments were initially set up in the late 19th century during colonial rule to extract taxes from agricultural lands, which were a significant source of colonial revenue. After Indian Independence in 1947, agricultural lands remained with the Revenue Departments. The industrial parastatals and the Revenue Departments are often seen as institutions with competing interests, because the former is tasked with managing urban land and the latter with rural land. The main responsibility of the parastatals is to anticipate future urban growth and to prepare these areas with land use changes and infrastructural provision so that they are ready for urbanization (Patel et al., 2009). Parastatals, then, promote the conversion of agricultural land in anticipation of future urban growth. Revenue Departments, on the other hand, are responsible for rural land management and are primarily concerned with the collection of agricultural taxes for rural revenue generation (Ibid). Unlike the parastatals, these rural institutions are conservative in converting agricultural land to urban land because doing so will erode their sources of revenue. These two institutions are generally seen as *"work[ing] at cross purposes"* and thereby undermining one another's land policies (Ibid). As is clear from the example of the parastatals and the Revenue Departments, urban and rural regulatory regimes collide in these emerging spatial configurations like the inter-urban highways.

An added layer of complexity in these highway villages is that of caste. Caste is an important marker of political, social, and economic relations in these highway villages. Before the highway, the powerful dominant caste[2] landowners - a social group that has controlled the lower castes through land and credit since Independence in the 1940s - owned the most valuable lands in these highway villages, the fertile lands, and the most marginalized groups owned the driest lands. With the insertion of the highway, dry lands that were previously unproductive now become attractive market commodities, thus disrupting the historically produced mapping of social power with land ownership. Consolidating land along the highways, then, is a complex process that involves multiple competing interests – conflicting institutions like the parastatals and Revenue Departments and conflicting social groups like the dominant caste landowners and marginalized landowners.

In this paper, I focus on the land cooperatives emerging along the Pune highways, and in particular, on the Khed land cooperative, which is located around 42 kilometers from Pune along the Pune-Nashik highway, as unique examples of how these competing interests are being negotiated and reconciled. Before I describe the sequence of events leading to the formation of the Khed cooperative, I provide a brief outline of the planning process for the conversion of agricultural lands to industrial lands and of the institutional actors involved in this process. Because the focus of this paper is the Khed industrial development, I restrict my attention to the specific land use change from agricultural to industrial; the conversion from agricultural to residential and commercial uses is a slightly different process.

Planning Process for Converting Agricultural Lands to Industrial Uses

The main public institutions involved in land consolidation are the industrial parastatals, the district-level Revenue Department, and the elected rural local government called the Village Panchayat. Land acquisition and conversion for industrial uses (including Special Economic Zones)[3]:

- The private sector firm approaches the industrial parastatal with a proposed industrial location.
- The industrial parastatal issues a preliminary notification for the area. The notification has to be publicized in the locality, in the official gazette, and in at least two local newspapers, one of which has to be in the regional language.
- The owners/occupiers of the land have 30 days to show cause notice as to why the parastatals cannot acquire their land.
- The industrial parastatal has the discretion to accept or reject the notice, and it passes the final notification for the area. With the passing of the final notification, the land vests with the state, free of encumbrances. Unclear land titles are an endemic problem in India,

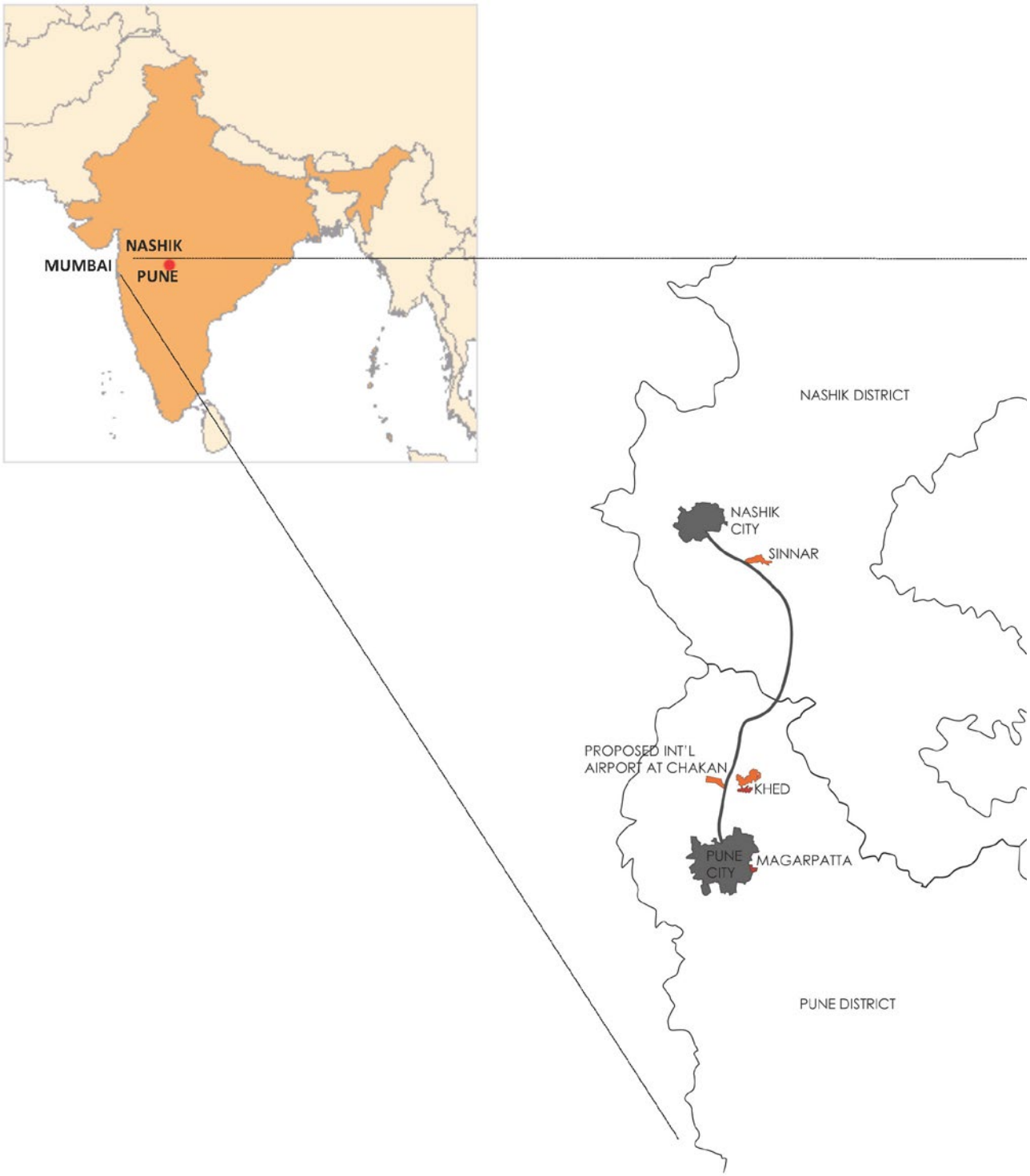

Figure 4: Map of land cooperatives along the Pune-Nashik highway

and the mediation of the state in acquiring agricultural land and conveying the land free of encumbrances relieves the private sector firm from any future legal troubles that may arise due to irregular tenure.

- The District Collector, the bureaucrat in charge of the Revenue Department, is the price-fixing authority. The DC mediates the negotiations between the industrial parastatal and the landowners for the fixing of the price of land compensation. The fixing of the price is not arbitrary. It depends on the guidance and market values of land in that region.
- The converted land application is forwarded to the Village Panchayat. If the proposed land use and development do not endanger public health and safety, the Village Panchayat approves the building permit.
- The industrial parastatal either services the converted and unencumbered land itself and then sells the serviced industrial land to the private sector firm, or it hands over the unserviced land to the private sector firm that then develops the infrastructure itself.

The Khed Land Cooperative

The Khed development, a Special Economic Zone (SEZ), is owned and developed by a joint venture company, the Khed Economic Infrastructure Private Limited, which is comprised of the private sector firm, Bharat Forge; the industrial parastatal, the Maharashtra Industrial Development Corporation (MIDC); and the farmers' land cooperative, the Khed Developers Limited. Bharat Forge owns 63% equity in the joint venture company, MIDC 22%, and Khed Developers Limited the remaining 15%. Landowners have been compensated for 85% of their lands at the prevalent market rate, and they own and control the remaining 15% of developed lands as members of the land cooperative and shareholders of the joint venture company.

Forming a land cooperative is not easy. It involves huge transaction costs in bringing together a large number of fragmented landowners in a collective experiment. The protagonist who initiated the Khed land cooperative was the Revenue Department bureaucrat in charge of the Khed area. Through their daily engagements with agricultural land tax collection and resolution of land disputes, these bureaucrats are embedded in the social life of these highway regions. They spend long periods of time in particular geographic locations and are familiar with local power structures and politics. It takes such socially embedded bureaucrats to navigate the messy land records and resolve any land disputes. It also takes such on-the-ground bureaucrats to seize the right time to strike a deal that has benefits for otherwise conflicting interests. I outline the clever timing of the Khed land cooperative by focusing on the benefits of the Khed institutional arrangement for the MIDC, the Revenue Department, the dominant caste landowners, and the marginalized tribal landowners.

Parastatals

Parastatals have been receiving harsh criticisms and negative publicity for their coercive land acquisition practices (Benjamin, 2010; Goldman, 2010). When the industrial parastatal, MIDC, announced the setting up of the SEZ project in early 2006, thousands of agricultural landowners from the Khed villages organized themselves and staged a protest outside the Khed Revenue Department office, demanding the scrapping of the project. The Khed protest received nationwide media attention when eminent social activist who spearheaded the tribals' movement against the Narmada dam, Medha Patkar, joined the farmers' protest in October 2006. From past experiences of stalled parastatal projects in other parts of the country, the parastatal knew that these protests could lead to interminable project delays, and even to project termination. Instead of coercively acquiring the agricultural land in Khed for the SEZ through the exercise of eminent domain, the parastatal bureaucrats were shrewd enough to recognize that they had to adopt alternative non-coercive modes of land consolidation to overcome the local protests and appease the protesting landowners. The formation of the land cooperative was one such attempt.

Revenue Departments

With the rapid urbanization along highways, the interests of the Revenue Department District Collectors has shifted. For one, agricultural taxes

cease to be a significant source of government revenue and the Revenue Departments are more open to agricultural land conversion. Another reason is the constant shifting of bureaucrats from one department to another. In the Pune case, the District Collector at the time of the Khed negotiations had earlier worked as a bureaucrat with the industrial parastatal, MIDC. This ensured smooth working relations between the parastatal and the Revenue Department. As a parastatal bureaucrat told me, "The District Collector was an MIDC bureaucrat and he understands the pressures we face." Finally, when parastatals acquire land coercively, agrarian landowners protest outside the offices of the Revenue Department, which is the face of the state for land matters in rural areas, and not outside the more distant parastatal which is located in cities. Revenue Department bureaucrats are often at the cross-fire between the parastatal and landowners, and resolving these conflicts has become one of their core responsibilities. Highway urbanization is realigning institutional incentives and these two institutions are increasingly working with, and not against, one another. In the Khed case, the Revenue Department District Collector was proud of his department's negotiation skills: "Farmers who had earlier protested with Medha Patkar and other prominent people have now given their consent to the development and have handed over about 4000 acres of land."[4]

Dominant caste landowners

The Khed protests were initiated by the dominant caste landowners. Following the protests, the Revenue Department ensured that only the dry lands on the hills were acquired for the SEZ project, and fertile lands on the plains were left untouched. The dominant caste landowners in the Khed region own multiple plots of land, sometimes in joint ownership with others, at several geographically dispersed sites.[5] These dominant caste landowners gave up their dry lands on the hills for the SEZ, but continued farming on their remaining cultivable land on the plains. The cooperative offered these landowners the possibility of making profits from dry lands that were otherwise left unused. Besides the benefits as shareholders, the new SEZ development allows these dominant caste landowners to slowly transition into India's thriving service economy. Many local leaders have established trucking, earthmoving, and other tertiary sector businesses to service the new SEZ development. Six of the local leaders have started a construction company, and the MIDC and Bharat Forge have promised them construction contracts. Though they lack prior experience in construction, MIDC and Bharat Forge see these construction contracts as necessary "concessions that have to be made as confidence-building measures."[6] The dominant caste landowners have urban aspirations to transition to a service economy, and industrialization along the highway allows them to make this transition in situ. But they hedge their bets against the uncertainty of an industrial future through holding onto their fertile lands and their agricultural lifestyles.

Marginalized landowners

Due to long histories of socio-spatial segregation, the dominant caste landowners owned the most fertile lands on the plains, and the most marginalized groups in these villages, a tribal group called the Thakkars, were pushed to the driest lands on the hills. Now, as land is valued based on its location and not its fertility, the Thakkars' previously dry lands are in high market demand. The Thakkars have been working on the lands of the dominant caste landowners for many generations. Due to a combination of reasons – the political mobilization of tribals, availability of alternative employment in the factories coming up along the Pune-Nashik highway (albeit as daily wage, unskilled labourers) and the rising market demand for their dry lands – the younger generation Thakkars are breaking out of their patron-client ties with dominant caste landowners. The compensation money for 85% of their land allows them to assert short-term independence from their former agricultural employers. The Thakkars are now part of a land cooperative and will receive long-term dividends from their land assets. Those who have resumed agricultural work are negotiating agricultural rates with the wage rates set by the industrial informal economy as the standard: "The construction contractor pays me INR 150 [USD 3] per day. Why should I work on

the [dominant caste landowners'] land for less?"[7] The Khed case is hardly an instantiation of a "farmers" cooperative resisting and challenging exogenous actors like industrialists. Instead, this case points to a new form of politics that defies the urban-rural dichotomies of the role of dominant caste, agrarian landowners in shaping the direction of industrial/urban land policy. It also demonstrates the emergence of new urban-rural coalitions, as India's politically important agrarian class seeks new terms of inclusion in contemporary India's urban growth story. In addition, the empirical case of the land cooperatives opens up the possibility of designing new regional institutions that are capable of redistributing the land value increments of the newly converted highway lands more equitably among the different social groups that live and work along the highways. It points to the urgent need to delineate the highways as a new category of space, and to design democratic regional institutions that can manage these highway regions. These institutions will be tasked with the important function of deciding which villages will be included within the highway region, which villages will benefit from the allocation and redistribution of the highway land value increments, and the process through which redistribution will be done.

Social Limits: Disaggregating the Agrarian Landowners and the Thakkars

Policy, activist and everyday discourses misleadingly frame India's highway land conflicts as taking place between "farmers" and "industrialists."[8] The framing of the highway land conflicts as taking place between "farmers" and "industrialists" fetishizes the highway 'villages' as peasant societies organized around traditional norms of reciprocity and the "subsistence ethic" (Scott, 1976) that are resisting the threatening and exogenous forces of globalization and industrialization. This essentializing of the village as the place of peasant cultivators, and as the site where "the 'real India' is knowable" (Yang, 1998, p. 6) traces its origins to colonial India. Ideologically, the village as a site of non-market transactions and pre-modern solidarities "represented the backwardness of the subject peoples – it legitimated the right of the rule of modernity, of the Raj" (Ibid: 9). In terms of material practices, the constructed notion of the Indian village flattened the differences between the various agrarian systems prevalent before British rule. This allowed the British to introduce standard revenue collection systems in the villages, thus furthering their fiscal goals of maximizing agricultural rent and tax collections. Nationalist leaders like Mahatma Gandhi continued the representation of the "village Indian republic" as a politically and economically self-sufficient unit and further reified the constructed notion of the self-sufficient village. Though seminal works by M.N.Srinivas and other sociologists burst the myth of the "imagined village" through exposing the deep caste and class inequalities in rural societies, the historical constructions of the village and its peasant populations continue to shape our current popular imagination on how the highway "farmers" are experiencing the agrarian to industrial transition. 'Farmer' is an undifferentiated term that includes diverse social groups: wage-laborers, big farmers, capitalist farmers.

As I mentioned in the previous sections, dominant caste landowners are diversifying into tertiary services, by starting construction and trucking companies that service the new highway developments, and by integrating city-based information technology, banking and other serviced into their agricultural production. In this section, however, I focus on the most marginalized groups in these highway regions, the tribal Thakkars. Within the Thakkar collectivity, the changing valuation of highway lands enfranchises certain sub-groups of Thakkars, while disenfranching others. Age, gender, security of industrial employment, and physical ability to work in factories are some of the variables that determine who benefits from these highway changes, and who does not. By recognizing the specific aspirations, opportunities, and vulnerabilities of different sub-groups within the Thakkar collectivity, policymakers and social activists can be alert to the specific interventions needed to facilitate the progressive aspects of this shift, while also minimizing the vulnerabilities of marginalized groups during this moment of transition. I outline three variables – mode of land

settlement, age and gender – that disaggregate the Thakkar collectivity into sub-groups that experience these highway transitions differently.

Mode of land settlement

Four Thakkar settlements in the Khed area have willingly given up their lands for the new developments. Two other settlements opposed the developments, and the SEZ site boundaries have been re-drawn to exclude these set-tlements. In the settlements that supported the new development, the tribal landowners had acquired their lands a century earlier as a gift. During colonial times, the princely ruler had gifted these lands to the tribal groups. When their dry lands acquired high market values, these Thakkars effortlessly made the switch from using their land as a plot for subsistence cultivation to trading their land as a market commodity. In contrast, the Thakkars who opposed the development were influenced by the tribal mobilizations that swept through the Pune-Nashik region in the 1980s and 1990s. During this period, the younger generation of more educated Thakkars mobilized the others to settle on dry lands owned by the state forest department, environmentally regenerate these lands through a program of reforestation, and work out a limited equity agreement with the forest department wherein the forest department continues to own the land, but the Thakkars are entitled to the products grown on the land. The Thakkars fenced their newly settled lands against free cattle grazing, which led to conflicts with dominant caste landowners who used to send their cattle to graze on these hills. Depending on the mode of land settlement, land takes on different "meanings" (Wolford, 2010). The Thakkars who had received their lands non-confrontationally as a gift made an easy transition to using their land as a tradable asset. When land is appropriated through political struggles, it takes on a wider meaning of counter-hegemonic resistances and emancipatory politics. Land then cannot be captured by the simplistic frame of use value versus exchange value, but instead it becomes part of a larger political struggle for citizenship rights.

Age

Many of the younger generation Thakkars have the aspiration and the physical ability to work in the factories rising along the highways. Alternative factory jobs improve their bargaining position with dominant caste landowners. But the older generation of landowners lack the physical strength and ability to work in factories. Most of the older generation Thakkars I spoke to expressed dissatisfaction over their sons' decisions to give up their lands for industry. Dairy farming has been a common supplemental occupation along these highways since the 1970s, but older generation Thakkars are turning to dairy farming as their only livelihood option after the disposition of their lands. In the earlier decades, before land in this region became a hot market commodity, the Thakkars used the village common lands for grazing their cattle. Some of them grazed their cattle on the dry lands owned by dominant caste landowners. If their families had been working on the lands of the dominant caste landowners for generations, norms of reciprocity obliged the dominant caste landowners to allow their laborers to graze cattle on their lands for free. The past decade has seen a rampant privatization and commodification of village common lands for urban development (Gidwani and Baviskar, 2011). As Thakkars are now breaking away from the old norms of dependence and reciprocity from dominant caste landowners, the latter have started charging a monthly rent for the use of their dry lands for grazing. The older generation Thakkars are being dealt a double blow: the loss of their dry lands and the only source of livelihood with which they are most familiar, and managing the commercial demands and risks of the only livelihood option open to them – dairy farming.

Gender

The highway transition is creating new as-pirations for the Thakkars – aspirations that are anchored in an imagination of becoming urban. For the Thakkar men, becoming urban is concretely expressed through the conspicuous consumption of automobiles. The Thakkar settlements in Khed are geographically sec-luded from the main village. I visited one of the settlements that had consented to joining the Khed joint venture initiative. The settlement was on a hill and lacked running water and electricity. The women trekked 45 minutes down the hill every morning to fetch

water from the village public tap. In a settlement that lacked basic amenities of water and electricity, the surprise finding was a Jeep and two motorbikes parked outside the homes. The male heads of household had purchased a Jeep for INR 800,000 [US$ 16,000] and two bikes for INR 100,000 [US$ 2000] each with the compensation money for their land. The cash compensation for land vests economic control with the male heads of household, and the women have little or no say in the use of this compensation money. The urban aspirations of women are different from that of men. A Thakkar woman expressed the desire to send her children to a better school. For these women, becoming urban is concretely expressed as better educational opportunities for their children that will prepare them for a secure industrial future. A researcher in South India found that malnutrition in peri-urban areas of Bangalore city are increasing because mothers, in the hopes of better education and better 'urban' lives for their children, are prioritizing education over nutritious food.[9] The distribution of highway benefits within the household can further disenfranchise women and reinforce their supplicant positions vis-à-vis the male members of the household.

Describing these highway regions as 'villages' and casting their residents as 'peasants' elides the multiple, intersecting axes along which transition is experienced – gender, age, and physical ability for industrial work. It also over-simplifies a more complex social process wherein highway residents are negotiating a tricky transition from an agrarian to industrial economy.

Conclusion

Highway urbanization is an instantiation of a new form of urbanization unfolding outside cities. This paper uses highway urbanization as a lens to comment on the spatial, institutional and social limits of the urban/rural and city/village categories. As highway urbanization becomes the dominant mode of urbanization in countries around the world, it calls for some fresh categories of space that can enable planners to more accurately describe, intervene in, and manage these emerging geographies.

A small niche of scholars has started interrogating the limits of the city/village categories. In a trenchant critique of urbanization under the capitalist mode of development, Brenner has argued that these categories reify settlement typologies like cities and villages, with the disastrous consequence of eliding the sociospatial processes through which these "variegated landscapes of modern capitalism" are produced (Brenner, Forthcoming). The ETH Studio Basel attempted a new map of Switzerland that eschewed the traditional city/village boundaries and instead demarcated the country into metropolitan regions, networks of cities, quiet zones, alpine resorts, and alpine fallow lands (Schmid, 2011).

My own work argues that the core of the agrarian to urban transition is a restructuring of land markets, and a new conceptual mapping of highway urbanization is possible based on the territorial politics of the highway land conflicts. "Territorial politics" is the control of land, and more broadly of a territorially bounded space, to articulate larger projects of accumulation, resistance, identity, and/or power consolidation (Delaney, 2005; Jessop et al., 2008). Though the land cooperatives in the Pune region are motivated by an instrumental rationality to overcome dominant caste landowner protests, they are a viable option to redistribute land value increments along the highways equitably amongst the different, competing social groups. Though the Thakkars incidentally benefited from the land cooperatives, they were beneficiaries of this institutional arrangement nonetheless, because they have private property rights to small plots of dry land. Land cooperatives will be exclusionary in their distributional outcomes in agrarian regions with large incidences of landlessness. Thus, using the variable of the status of property rights of the most marginalized groups in different highway regions offers a new way of mapping these highway urbanizations. Planners can provide a much needed corrective to the urban theories inherited from the 19th and 20th century urban experiences of North Atlantic countries through articulating such alternative, critical mappings of contemporary processes of urbanization.

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Notes

1 Author's calculation, based on the average population density of a large Indian city like Pune of around 48 persons/acre. At this density, around 5 million acres of serviced lands will be needed to accommodate the estimated urban population expansion. To put this figure in perspective, 5 million acres is equivalent to the area of 230 Manhattans.

2 Dominant caste is a term coined by M.N.Srinivas to describe an intermediate caste group between the upper caste Brahmins and the low castes, that "wields preponderant economic and political power" over the other castes (Srinivas, 1987).

3 Special Economic Zones (SEZs), also called Export Processing Zones in some countries, are specially delineated industrial enclaves that are granted exemptions from the country's general economic regulations. The state also provides SEZs with subsidies, with the intention of attracting foreign direct investment (FDI) and increasing the economic growth of the country. Economists have written extensively on the need for, and performance of, SEZs in India (Mukhopadhyay, 2009; Jenkins, 2011). Since the land consolidation process for SEZs is the same as for unsubsidized industrial developments, for the purposes of this paper, I do not go into the substantive differences between SEZs and other industrial developments.

4 Personal Interview, 20 January, 2011.

5 Source: File with the details of landholdings for the SEZ project, compiled by the Maharashtra Industrial Development Corporation (MIDC). This file contains the names of the landowners, their land survey/title number and land acreage.

6 Personal Interview, 16 May, 2011.

7 Personal Interview, 28 June, 2011.

8 The "farmers" v. "industrialists" framing is common in media, activist and even private sector reports. For media accounts, amongst others, see Aljazeera's "The great land grab: India's war on farmers" (7 July, 2011), The Washington Post's "In India, fresh clashes over rural land as farmers stand up to government" (21 May, 2011), NDTV's "UP farmers bring agitation to Delhi, plan Parliament 'gherao' " (26 August, 2010) and "Farmers' agitation spreads to Agra, villagers set office on fire" (8 May, 2011). For private sector reports, see Infrastructure Development and Finance Corporation (IDFC – one of India's largest infrastructure financing companies) "India Infrastructure Report 2009."

9 Personal Interview, November 2010.

Urban-natures and Delimiting Machines:
The Limits of Nature from Critical Urban Studies to Urban Design Realities

Travis Bost

At urban-nature interfaces, the points at which the two – however defined independently – are explicitly juxtaposed in material, space, or sequence (a pipeline or roadway perhaps), a socially-constructed definition of each can be found in the techniques of their connection. Within critical social and urban theory, the common oppositional framing at these interfaces, implicit in the ideologies of and made concrete in the physical spaces of modernization, has repeatedly proven inaccurate and counterproductive within critical urban studies scholarship for describing both the form and process of today's urban environments. Meanwhile, this framing has proven equally inhibiting within design fields, not only for conceptualizing the urban landscape, but more crucially for engaging with and shaping the urban, in all its architectural, infrastructural, and topographic forms. While oppositional conceptualizations in the early Enlightenment period produced a nature that justified the Enlightenment's conquest for early industrialization, Modernist urban infrastructure later embedded this dualist relationship in concrete forms and processes, both natural and urban. Mature industrialization saw urban design strategies, infrastructures, and amenities such as park spaces, sanitations systems, and planning regimes mediate existing nature through opaque and mystifying processes. These constructed natures (here I use the plural to emphasize their infinite individuality defined by their local social and material conditions) were limited to being found at the end of a tube, beyond a dike, or enclosed by a fence. Despite their local specificity, such concrete urban 'solutions' – which I will describe as 'delimiting machines' – largely produced equally constraining, abstract social constructions of a 'primal nature' relegated to a distant 'hinterland'. These constructions formulated hard-lined limits between the spaces of nature and the urban. Thus material design and socially constructed frameworks together reinforced the operational modes of conceptualizing urban-nature interfaces of the time. Especially in critical urban theory, this process is now not a new realization and the resulting oppositional natures of past eras have been well identified. However, much effort is currently being invested in renovating the operative conceptualizations of present urban landscapes that tend toward non-oppositional, hybrid 'urban-natures', several of which I will examine below. As this renovation process is ongoing, challenges remain for designers and other who are materially engaged in shaping the urban — challenges which, though exacerbated by an insufficient model for conceptualizing urban-natures, may prove instructive for on-going abstract formulations in critical urban theory. Novel perspectives may arise from the more concrete experiments of designers operating without an established cognitive model as a road map.

Looking to concrete elements of urban design may pay off for theory as "[u]rban infrastructures are not only material manifestations of political power but they are also systems of representation that lend urban space its cultural meaning" (Gandy 2004, 39). Of all designed features of the urban landscape, infrastructures – machines connecting the urban structures to the landscape – are so often sited at the urban-nature interface and, consequently, the devices giving shape to urban natures (plural infrastructures producing plural natures). In the design of these structures, we may find a transition from the 'delimiting machines' of

tubes, embankments, and fences to 'de-limiting machines' producing distinctly hybrid 'urban-natures'. In a thesis of hybrid urban-nature, socially produced urban-natural limits dissolve, as each thoroughly and explicitly shapes the other. In geography discourse, Gandy's (2005) 'cyborg urbanization' and Swyngedouw's (2006) 'hybrids' attempt to explain and expose the inherent synthetic qualities in the socio-material production of 'urban-nature'. Meanwhile, despite the recent enthusiasm within design-related fields to 'bring nature into the city', 'heal post-industrial scars', and 'give back waterfronts'[1], a level of uncertainty remains. Has contemporary design practice overcome the delimiting machines of modernization to recognize, design, and implement new 'de-limiting' machines, forms, and landscapes in sync with these recent abstract models of urban-natural synthesis? Or is an optimistic view of the evolution of design practice unfounded, and any enthusiastic reorientation is in fact another way to obfuscate the continuing urban-nature binary? In either case, what role might these new products of design practice play in the re-framing of those abstract reconceptualizations? In this paper, I take up these questions by applying critical geography concepts to cases of urban design investigation and action. I find in the examined cases that new hybrid urban-natures are indeed being embedded in the design of urban landscapes and infrastructures, but while challenging prevailing ideologies, they do not necessarily displace them and at times even continue to propagate them. However, though their claims are often overstated, they are not carte blanche, uniform designs but generally locally-specific physical and conceptual renovations of cracks or failures in surviving Modernist works, a methodology critical urban studies, I argue, should support and mobilize itself.

The Delimiting Machine from Binary to Hybrid

Urban dwellers, in order to act on and operate within the space of the city, must construct a world view that frames themselves, the environment, and the relative position of each. Within these socially constructed ideologies, the urbanites thus produce nature as a subject, object, place, and relationship. Not only is the concept of nature socially produced, but its materiality is also produced in parallel, both facets that are governed by the prevailing ideology logic of a given historical and geographical context. The dominant ideologies are embedded within human-constructed delimiting machines, making the latter of the two facets. These are the urban infrastructures, architectures, and landscapes which, in the course of operation, set the limits of constructed natures, the space of necessary resources, and of constructed urban space, the space served by the delimiting machines. Any transformation of space, executed under certain urban-natural relations, "requires the reproduction of those relations in order to sustain it" (Harvey 1996: 94). These machines are therefore necessary for the reproduction of existing urban-natural relations, and their embedded ideologies are found not only in social but formal and self-reproducing terms in the process of urbanization. The result is that "[t]he production of urban nature" is "a microcosm of wider tensions in urban society" (Gandy 2002: x). Ideological transformation and material or spatial transformations are thus inseparable and reciprocal. In order to comprehend the processes of urban spatial transformations and their designers' intentions, we must investigate the prevailing conceptualizations of nature, which are implicit in the social and formal constructions embedded within the urban and natural environment.

There are many ways in which delimiting machines have physically produced an oppositional urban-nature, but throughout the era of modernization, their essential role has been to cleave and alienate the urban and human experience from natures. Scholars in critical urban studies have sought to identify the methods by which that cleaving occurs and the alienating constructions of nature brought about by the delimiting machines operating within, acting on, and in active support of our urban spaces.

The oldest such construction may be that of nature as 'other', occurring in two primary forms: feminization and commoditization. In the first, an erratic, unpredictable, yet beautiful nature is positioned opposite mankind, beyond the limits of the city. Both women and nature then become

'objects which mankind attempts to dominate and oppress, ravage and romanticize; they are objects of conquest and penetration as well as idolatry" (Smith 1984: 14). In the second, nature may be thought of as abstract and isolated from its ecological origins. It is therefore easily interchangeable in measured quantities, whether wood stockpiles or measures of land, to facilitate commercial exchange. This is a 'fetishization' process, "through which the commodity form becomes the form of existence, severed from its historical and geographical (hence social) process of production" (Kaïka and Swyngedouw 2000: 121). After commoditization, the next major construction of delimiting machines is perhaps peculiar to early modernization: spectacularization. Matthew Gandy (2002) gives the example of the construction of Manhattan's Union Square and its central fountain that miraculously delivered drinking water from far upstate springs for the first time, through unseen viaducts, to flamboyant sculptural ducting and raucous crowds.[2] The resulting 'phantasmagoria' "subverts the pos-sibility of actually experiencing and living the desires promised by the commodity," by way of mystery and celebration (Kaïka and Swyngedouw 2000: 123). A third, perhaps most pervasive construction is nature as banal and hidden. As the products of those spectacularizing machines became routine, "vast infrastructural networks gradually disappeared from view as part of the 'taken-for-granted' world of everyday life" (Gandy 2005: 35). In the urban fabric and collective consciousness, the result was what Gandy (2002) calls 'urban symmetry': two halves of the urban, despite having become interwoven in the reproduction of their present form and definition, are delimited yet still parallel, whether in pipes hidden in walls, drains buried beneath streets, or reservoirs nestled in peripheral secrecy. I have only briefly summarized the three most apparent constructed natures that are produced by urban delimiting machines; though still in operation, they are becoming increasingly displaced by other less oppositional formulations of nature, material and conceptual.

Despite great efforts to pursue the above strategies and to render the urban world clean and anatural, Maria Kaïka has noted that the goal "to do away with fear and anxiety," which drove the construction of those environments, "actually served to deepen the very same problem it tried to eradicate" (2005, 72). Still, these early strategies for isolating and segregating urban-nature have been spatially perpetuated, despite mounting problems within the concrete environment and the delimiting machines such as urban droughts, brownouts, and ecological degradation.

Although modernization increased the complexity of and often intensified the delimiting of urban-nature, it may also have inadvertently responded to the failures of urban-nature dichotomies and radically, if momentarily, reoriented conceptualizations of urban-nature. Kaïka borrows from Freud to apply 'the uncanny' to the material fabric of urban infrastructure in order to reframe gaps in the entrenched ideologies of modernization. In the case of a water main break, she explains, "the unexpected surfacing of typically hidden elements rather than being a source of fear and anxiety has the potential to be a source of knowledge and emancipation" (Kaïka 2005, 72). That is, the failure reveals the interweaving of the urban and natural fabrics. Such cracks in the delimiting machines and ideologies hint at the potential for emerging alternative urban-nature models to more directly challenge the logics of the modernized landscape. These alternatives models do not come de novo from outside urban space to challenge the reigning ideologies; rather they are in fact built out of those same delimiting machines and the social-material conditions they engender. To explore these alternatives, I begin with Noel Castree, who reminds us that throughout these modernizing conditions "[n]ature and the world never come to us unmediated" (1995, 38). He goes on to argue that in this type of criticism, too often the congruent shaping of nature by capital is overemphasized, and critics "have frequently not theorized," in the reverse perspective, "the role and importance of those produced natural environments themselves" (21). Castree refers to this added layer of study as the 'materiality of nature,' "the ontological reality of those entities we term 'natural,' and the active role those entities play in making history and geography" (1995, 13), to which should be added architecture and

urban form. From 'the urbanization of nature' to 'the naturalization of the urban,' recent de-limiting reconceptualizations of urban-natures in literature from geography may have significance for design, which I explore later in this essay. The notions of the 'cyborg' and the 'hybrid' are thus significant theorizations that reframe the social conceptions of a 'de-limiting' urban-nature, an advancement that may prove useful in engendering a subsequent reframing in material form.

Donna Haraway's 'cyborg', "a hybrid creature, composed of organism and nature" (1991, 1), is the key beginning for a more nuanced understanding of nature, humanity, and technology. Matthew Gandy then builds out this notion to address urbanization. Haraway's manifesto contains two important facets that are noted by many authors of political ecology and that will also be of use here. First, her 'cyborg' concept is fundamentally concerned with the body. A superficial concern, but in a very literal sense it encompasses appearance and its physical interfacing with other bodies, which can range from organic to machinic. Second, Haraway sites the cyborg "at key breaches in the categorical containments demarcating the boundaries between humans and animals, organisms and machines" that were so rigorously drawn in pre-war Modernism (Luke 1997, 1369). The cyborg can be understood as a subtle crumbling of those binaries, whether in space as organic machines or in the body of machine organisms.

Gandy expands the first facet to apply to urban space: "The emphasis of the cyborg on the material interface between the body and the city is perhaps most strikingly manifested in the physical infrastructure that links the human body to vast technological networks. If we understand the cyborg to be a cybernetic creation, a hybrid of machine and organism, then urban infrastructures can be conceptualized as a series of interconnecting life-support systems." (2005: 28)

For Gandy, added to the cultural implications of Haraway are the implications of space: "[t]he figure of the cyborg is at root a spatial metaphor" (2005: 28). Following from the second facet, infrastructure is positioned at those 'key breaches' and has clear influence on humans and urban space-making. Infrastructure thus marks the transitions between the spaces of machines or humans, while shifting the nature of space around us. The idea of the cyborg suggests that urban infrastructures can operate "as a prosthetic extension to the human body" (2005, 29). Like Gandy's nature-obscuring pipeline networks, the machine infiltrates the human, both in body and in space, and the alienation of modernism is dissolved. This 'cyborganization' of that moment of transition becomes conceptually import as urban infrastructures "are also systems of representation that lend urban space its cultural meaning" (2005, 39). Given the mediating role of technology and infrastructure through cyborganization, nature and the urban are co-produced and the cultural meaning of urban space is transformed.

Gandy contrasts two historical conceptualizations to make this point. The first he calls the 'organicist city', recalling early Modernist models of the city as a closed organism undergoing linear metabolism of natural resources. The second, the contemporary condition, is the 'neo-organicist city'. Whereas the material metabolism of the organicist city produced a single, immediate, and delimited 'hinterland' via alienating infrastructures, the city is now a 'neurological' construction of cyborg networks (rather than independent organs). These networks produce highly complex urbanization in which metabolism becomes a far more integral relationship of urban-nature (Swyngedouw 2006), with significant implications for city form: "the distinction between 'city' and 'non-city' becomes extensively blurred under cyborg urbanization to produce a tendential landscape exhibiting different forms of integration between the body, technology and social practices" (2005, 41).

In further exploring the urban spatializing of the cyborg, Erik Swyngedouw (1996; 2006) sees infrastructure in an alternate light: rather than acting as a prosthetic, infrastructure permits the city itself to be produced as a cyborg. Implicating social influences to a greater degree and downplaying the agency of the machine, he instead describes these human-infrastructure-nature

relationships as 'hybrids'. Hybrids are not an 'ontological strategy' or a lens, as the cyborg is for Gandy, but instead they are actively produced. The hybrid extends from a localized bodily prosthetic and through its 'neurological' structure to "[open] up a new arena for thinking and acting on the city, an arena that is neither local nor global," where 'ordinary' spaces become a deeply connected weave of the two simultaneously (1996: 80) —an arena that, I would add, is neither exclusively urban nor natural.

Most importantly, Swyngedouw insists the hybrid is, in essence, a similar tool to Marx's commodity. Both are tools for encapsulating seemingly disparate properties: labor and capital, or organisms and machines. They each are subject to politicization and contribute to the shaping of urban-nature, in scales local and global. Whereas Haraway posed the machine as an external thing crudely fused onto the body, and Gandy reconceived infrastructures as cyborgs imposed on the city, Swyngedouw sees the urban-nature dialectic as an internalized process within urban space itself; the hybrid is there from the beginning, within urbanization as a hybridized production process (1996, 69-70). A hybrid holds both the urban and nature in tension to produce and reproduce itself. For Swyngedouw, this 'neurological' concep-tualization of metabolism — the myriad conflated flows of natural resources, capital, wastes, and labor that flow through the bundled networks — "[produces] the urban as a continuously changing socio-ecological landscape" (2006, 21), ensuring there is no delimited 'outside' of a bifurcated urban-nature. "This metabolic circulation pro-cess," one wholly different than that of the industrial (organicist) city, "is deeply entrenched in the political-ecology of the local and national state, the international divisions of labour and power, and in the local, regional, and global socio-natural networks and processes" (2006, 36). The greater the extent and density of flows through the landscape, the greater the influence of a given spatial configuration of urban-nature through which circuits must pass. The hybrid, as a co-production model, creates a rippling opportunity for agency in the 'ordinary' spaces — the de-limiting machines of infrastructures and urban landscapes — that then connect globally, while functioning locally as concrete political-material constructions of urban-nature.

The above theoretical reframing is an attempt at a socio-ontological reconceptualization, and "the recognition of the social production of nature and the city is essential if issues of sustainability are to be combined with just and empowering urban development" (Swyngedouw 2004, 115). Timothy Luke submits that "[t]he acceptance of Haraway's world-changing cyborg fiction signals the searching for some facts of this world change" (1997, 1369). Thus, if we are to effect concrete change and solidify abstract conceptualizations, we must go in search of not only material evidence of hybridity and synthetic urban-natures, hidden by Modernist ideology, but also pathways to the dissolving of urban-natural limits in the design, construction, and production of urban-natures.

De-limitation and Design[3]

While geography and social science circles have debated over the cyborg, hybrid, and other abstract theorizations of the urban-natural interface, these positions have also been appearing in the more concretely engaged sphere of design. At times these concepts arrive from cross-overs of discourse and at other times independently from within, when design practice concretely engages with the landscape. Whether in the polemical debates of 'landscape urbanism', the ex-urban resources and landscapes of urbanization, or the speculative proposals of green-washed urban farm towers, integrated strategies for implementing urban-natures have found recent favor in design. This is, however, only partially true. Designers have accepted these strategies on the level of examination and critical re-positioning of existing urban environments which then become design inspiration or opportunities. But in the design process and material realization, the cyborg or hybrid gives way to Enlightenment dichotomies and the inclination to subjugate a 'foreign nature.' This tendency surfaces in both the practical language of design as well as critical design writing. It appears easier to recognize the hybrid as 'found' than it is to

engage, design, or construct it.
The reasons why projective design practice falls short of achieving the de-limiting process are unclear, but there are many possible contributing factors. Pre-conceived notions of what constitutes an 'urban public park,' the most common program by which designers engage with nature, are drawn heavily from mid-19th century social-reformist typologies and ideologies of nature. Designing on, with, or around the often decaying infrastructure of 19th century industrial Modernism may unconsciously transfer its embedded ideology of nature to the designer; those hard machines must be offset by soft, 'feminine' nature. Alternatively, other prevailing ideologies of the present, such as an 'experience urbanism,'[4] constitute a new wave of nature subjugation in the form of 'green-washing,' with the express purpose of increasing land rents. Despite these inhibiting factors, we can still find evidence of the hybrid in contemporary design, and whether these shortcomings in design practice are the beginnings of integrating hybrid nature into design remains to be seen.

I now turn to evaluating the operative formulations of hybrid nature in conceptualization, design, and action, assessing how some cases may break down the imposed Modernist limits in practice and how others may produce limits in yet greater quantity, variety, or severity. From these examples, it may be possible to discover methods of resisting the delimiting project in practice, to produce a reconfigured and de-limited socio-material conceptualization of urban-nature. I examine two facets of recent practice in the cases below: design investigation that ideologically repositions a found urban landscape, in the case of the Los Angeles River, and design action that materially repositions the High Line.

Design Investigation:
Freakologies of the Los Angeles River
The Los Angeles River has long represented the frustrating confrontations between Modernist urbanization and nature, and consequently it has been one of the most fantastical experiments for dividing, siphoning and evacuating nature from the urban. David Fletcher (2009), not a social scientist but rather a designer working on a revitalization plan for the river, attempts to re-examine and re-position the nature and spaces of the river that have been produced by modernization. Through this project, he advocates for new approaches to dealing with the unforeseen elements and pressures of this environment. Fletcher begins by revisiting the long-held popular sentiment that the river is "unnatural or non-existent," pointing out its exploitation by Hollywood as a "symbol of dystopia." It is an extreme case of Modernist subjugation in which nature is not only positioned as 'outside' but also stripped of its 'nature-ness,' to become simply the 'other' (36). Fundamental to a hybrid 're-naturalization,' however, is the repositioning of the concept 'river' that Fletcher develops from material properties of the river itself: the river, "once a meshwork of meandering river, streams, arroyos, and washes," becomes a superimposition of "freeways, streets, bridges, railways, power lines, cell towers, … sewage infrastructures," as well as water flows (36). He then re-packages this conceptual repositioning, built out of material evidence, as an abstract lens for the re-conceptualization of urban ecology as a whole. But Fletcher conflates urban-nature not only as a visual metaphor for flow, but also as a re-framing of the hybrid ecology necessary for the survival of both the urban and nature. He explains that the aqueous flow managed by the storm infrastructure, vital to the river's plant growth, is dictated by the effluent of three sewage treatment plants (41). This nutrient-enriched water feeds the growth of 'the Sludge Mat', a vast area of algal growth in the lower part of the river. Combined with other advantageous human influences, such as plastic bags that accumulate as a substrate for other organic growth (42), the algae create "the most biologically productive stopover for migrating shorebirds in Southern California" (44). He therefore develops an expanded notion of ecology, "one that lives off human excess," (50) and celebrates its potential; the only obstacle, as he presents it, is the misunderstanding of the public—a problem of ideology. Though 'freakish,' he assumes a definition of ecology that is equalizing, because it expands the membership of urban-natural systems. Fletcher also tips his hat to the popular desire for 'virgin', bucolic nature, by terming those expanded members as 'freaks'. But he insists that the desire is

but a method of forced mental reconceptualization, "embracing freakology rather than bucology … to [understand] the contemporary river, its watershed, and our place within it" (46).

Despite his seemingly radical revisioning, Fletcher relies on common tropes of Modernist 'urban symmetry' in order to promote a more fluid urban-nature. Similar to the loaded term 'freak,' he refers to "non-natural factors" that must be admitted into the expanded operative urban-nature definition, which is a dynamic repositioned ecology inclusive of "urbanization, global warming, and the heat-island effect" (46). Though an argument could be made for the usefulness of 'non-natural factors' in facilitating communicability within presently prevailing ideologies in order to make a greater claim, the delimiting of an 'outside', of nature or the urban, has consequences for his repositioning project in that it is fundamentally divisive at the urban-nature interface, even if it repositions that interface. Despite his interest in redefining the concept of a 'river' by "expanding our idea of 'nature' to include the parrot, the shopping cart, the weed, the sludge mat, and the stormdrain apartment" (50), Fletcher maintains enough urban-natural ideological division that he risks replacing one limit with another, instead of erasing those limits. Fletcher recalls that in an 'unurbanized past,' the river ran intermittently with the seasons, "but now effluent and urban runoff allow it to flow more consistently, year round." As a result "it is by many definitions more of a 'river' today that it ever was" (40-41). Re-orienting our mentality of a river is not, therefore, in service of a greater project for the symbiosis of urban-nature. Rather it serves the goal of relieving our collective anxieties of the cleaving space of the viaduct and promoting a more idealized idea of a river, which suits our human preferences for consistency in nature rather than the more difficult dynamism. Despite these criticisms, Fletcher not only successfully identifies an overlooked nature in the urban and the correlate urban in the nature, but he also weaves those material realities into a larger, more abstract understanding that helps to reposition a new range of urban-natures. In effect, he makes a design contribution by way of investigation, not to advocate a hybrid design project for the river but to recognize the hybrid implications that are already evident in the design efforts of twentieth century development.

Design Action:
Natures on Display at the High Line

Few other recent projects have been so lauded as a shining success of both public support and ecological innovation as the High Line elevated park on Manhattan's Westside. The High Line's treatment of nature in an extremely dense urban environment is counted as unique and highly valuable, in both social and monetary terms, to civic, development, design, and environmental concerns. Many of the novel design intentions and aesthetics of the High Line park project[5] are well known, given its great popularity and wide press circulation. However, despite the celebration of its post-industrial past in the project's preserved, constructed, and botanic 'second nature' aesthetics, the conceptualization of nature that was embedded in the design process and that is currently displayed on the site has not been greatly scrutinized. As a site, the elevated train right-of-way and structure function as the means of production of the much celebrated nature on display,6 in the constructive sense of having been integral to the cultivation and performativity of this platform for public exhibition. While the former role of the piece of infrastructure is acknowledged, if not somewhat caricatured, in the new park design, the latter role of displaying nature is left unacknowledged. Any contemporary connection between the urban methods of producing the nature on display go unacknowledged despite celebrating those of those the past. There is an obvious parallel with the phantasmagoria of heroic early Modernist infrastructure which produced a new nature for public consumption, whether as artful displays of a fountain or the practical drinking faucet, and obfuscated its origins in the process.

While the High Line does aim at exposing the means of production of unique weed and wildflower ecologies amongst the découpage of preserved train rails, at its core it is a reification of a long historical-industrial process that has ceased to operate. In its wake, a new set of conditions for the production of nature takes over. The ecologies on display are a result of not only a history of

industrial activity but also a long process of selective disinvestment in urban infrastructure throughout the post-war period. Later, when investment opportunities became scarce elsewhere on Manhattan, the disinvestment in the High Line was reversed, and the space was re-appropriated through dispossession for expanded development, mainly in the form of speculative luxury real estate. Far removed from the teeming carloads of dry goods, this is the present means of production of the built 'second nature' and of the 'preserved' ecologies on display today. While that long process did produce unique ecologies that were bound to industrial activity and eventual abandonment, this ecology has been halted and effectively disrupted as the means that enabled it – the movement of industrial cargo and abandonment – have also been halted by a new method for the production of natures: the manicured park space of experience urbanism While those previous methods have been reified in the industrial allusions of the park's design, no mention is made of the present methods, attitudes, and technologies that operate to produce the present nature. Instead the design preserves a snapshot of a once thriving ecology, deracinating it from its once operative conditions. The designers attempt to preserve by 'freezing in place' previous ecological, or in this case industrial-ecological, processes. These attempts run parallel to the Enlightenment attitudes of the 19th century reformists like Olmsted, who carefully crafted artificial semblances of the 'primal' nature he found in upstate New York within 'frames' throughout Central Park in service of public voyeurism. The original scruffy vegetation, once fertilized randomly by falling debris from the traffic of freight cars and quenched by intermittent rain showers and polluted run-off, is today carefully manicured, protected, and funded by a dedicated force of gardeners, security, and 'friends of the High Line.' In this way, the same scruffy ecology is maintained, in a fundamentally dissimilar hybrid ecology that receives far less acknowledgement in the design. The once severe urban-nature limit is subverted, only to be re-organized in more complex ways.

We can understand this new nature, claiming no 'primal' origin, as severed from its new production process. This fetishization takes various physical forms throughout the project, forms that are direct results of the divisive operational logic governing the design process. The most notable forms are the ways in which that nature and park visitors are separated throughout the highly scripted experience of the park. The tracks, once expelled from the street onto an elevated platform, are now revived as a display pedestal that is intentionally separated from the everyday space of the street; only small treetops and dangling vines hint at the landscape above. Elevator access, in lieu of ramps, also enables a removed relationship to the park space in cross-section. The park's pavement, which fades in fingers to the planting areas, alludes to a seamlessness between the constructed and the found; however, long swaths of the path are lined simply with chain link fence, giving the impression of a zoo for 'found' nature. As the railed path narrows to the width of an amusement park queue, it rises above the landscape and periodically separates into viewing platforms, abstracting yet further that human-nature relationship to one of consumptive spectatorship, this time in section.

Regarding the consumption of the park, the inevitable questions arise: Of what? By whom? To what end? The treatment of the space as a corridor mimics that of a museum space; there is little to do and there are few spaces for activities beyond the linear flâneurie and passive enjoyment of curated ecologies. Conspicuous consumption is evident both in visitors—locals and tourists—and in the residents of the luxury hotels and condominiums hovering above. Through its abstracted, spectacularized nature, the project becomes an infrastructure again, now for speculative accumulation rather than the import-export of bulk goods: a green spine onto which real estate attaches. The separation of nature from the visitors legitimates the its consumption, which further legitimates the conspicuous consumption of luxury space. The small-scale separations between roles of the human and of nature in both the experience and the continual making of the park are evidence of the little-changed dynamics of the park as infrastructure. This infrastructure re-forms an explicitly 'other' nature functioning support of explicitly urban development, despite

the much-touted innovation of a hybrid ecology at work in the design.

Nevertheless, we can still find elements of the park that minutely subvert the guided and passive spectatorship, particularly in forms that Kaïka calls the urban uncanny. While the platform's gallery layout projects nature as spectacle, there are also periodic perversions of this framing in which the city is looked back upon, itself now the spectacle in the complementary frame of an urban-nature diptych. The most mundane streetscape scenes are framed at these points, rather than the city's heroic skylines. The uncanny may also be found in the verbose audio broadcasts at the park's drinking fountains, which create unease through their anthropomorphized speech and their criticism of wasteful water consumption. Both new urban-nature limits and criticisms are therefore produced in the obscured infrastructure of the High Line, which still operates under a delimited and delimiting urban-nature conceptualization.

Conclusion

After surveying recent discussions in geography scholarship that are critical of Modernist ideologies used to delimit urban-nature in both description and action, I suggest that oppositional framings of urban-nature, once ubiquitous, are now eroding in light of new evidence of de-limited, hybrid realities. More than abstract theoretical repositioning, these realities are manifest in the same material infrastructures that were once imposed to reinforce delimiting ideologies. As concrete as underground drainage and delivery pipelines, abstract conceptualizations are embedded into the material form of urban landscapes, whether by conscious design or accumulated individual actions. I propose that it is important to hone those reconceptualizations of hybrid or cyborg urban-natures at levels of abstract discourse, given their inevitable concretizing in physical infrastructures and city form. This debate should also be informed by the material realities of urban landscapes. Those realities, as isolated case studies, are often too focused on the material evidence (the pipelines the fountains) as well as the social structures in play (political economic organizations, socio-geographic stratification) and rarely consider the intentions of design. Given this potential expanded frame of study, a new role emerges for design as a resource for informing the theoretical framing of urban-nature conceptualizations such as the cyborg or hybrid. Meanwhile, design practice struggles to engage the material artifacts of those previous oppositional models in modern city landscapes and infrastructures, and it may thus seem out of touch with the abstract debate. In the case of the hybrid, however, designers could ask themselves what constitutes a 'de-limiting machine' or a 'de-limiting landscape' in their work. Such speculations could inform the abstract models of critical urban studies debates from as yet untested perspectives.

While the potential origin of cases of hybrid urban-nature remains unclear, whether from 'below' by concrete engagement of a contemporary urban landscape or from 'above' by transmission from other discourses, signs of hybrid urban-nature are evident in prominent design work today. Despite the seeming 'fait accompli' of enthusiasm over many large recent projects, design investigation is still more likely to overcome the destructive dichotomies embedded in early Modernist landscapes, rather than design action. Optimistically, these shortcomings may be evidence that such a transformation is still in progress. As a first phase, design investigation is extremely important in its capacity to question the present urban landscape, reposition it, and locate opportunities for the second phase of design action. These 'phases' need not be sequential and may proceed in parallel; however, any highly lauded 'success' of a hybrid aesthetic or process should be critiqued for over enthusiasm or signs of a repackaged status quo.

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Notes

1 Each of these phrases can be found ad infinitum in writing – most notably in newspaper articles - about recent urban development in Seattle, New York, Portland, Baltimore, New Orleans, Quebec City, Provincetown, and St. Louis to name only the most prominent places in just the North America.

2 Not confined to the hard infrastructural delimiting machines, see also Spirn 1996 for an equally significant example of spectacularization in ‘the urban lungs’ of Olmsted’s Central Park design.

3 Consider discussing again here an argument introduced earlier from Castree: too much emphasis is put on the congruent shaping of nature by capital and that critics “have frequently not theorized the role and importance of those produced natural environments themselves” to set up the necessity of evaluating designed natures (21).

4 In the sense of ‘the experience economy’, see Pine and Gilmore 1999.

5 The project’s design was led by landscape architects James Corner / Field Operations, Diller Scofidio + Renfro, Piet Oudolf, and Buro Happold.

6 Much of the vegetation presently seen on the High Line is said to literally be or inspired by the wild mix of plant ecologies grew over the structure after its decommissioning, grown from the decades of deposited seeds and other plant matter from the myriad train cars that passed over the railway. Photos of these unique ecologies in the 1970s were key in garnering support for the funding of the park. [citation for Corner in Recovering Landscape?]

City of Edges

Aneesha Dharwadker

Delhi is a city composed of edges that are constantly being transgressed. This condition is historically rooted in the paradigm of the walled city, multiple constructions of which spanned centuries in the city's history before British colonialism. The 'city,' as imagined by the pre-colonial Hindu and Muslim ruling classes, was defined and limited by a massive, continuous wall, a clear division between urban and non-urban and a defence mechanism against foreign invasion. For most of the second millennium CE, this paradigm appeared in multiple locations across the Delhi landscape, evolving formally and tectonically but not changing fundamentally in character. Each city in Delhi's history was conceived as an instantaneous and closed object, built by a different ruler in an attempt to render the previous city (and, by extension, empire) obsolete.

Although walls define many of the ancient cities across Europe, the Middle East, and Asia, none of these paradigms match Delhi is scope or scale. No fewer than seven, and possibly as many as fifteen, independent walled cities were built within Delhi's borders between the twelfth and seventeenth centuries (Figures 1 and 2). When British-designed New Delhi was inserted into the landscape in the early twentieth century, it signified a modern, open-plan contrast to Delhi's so-called indigenous urban imagination; however, this paper argues that this attempted negation of the 'Indian' city actually extended and amplified the paradigm of the wall. The walls of New Delhi — architectonic, vegetal, and psychological — are not relegated to the spatial periphery, but instead define roads, residential compounds, commercial zones, and tourist at-tractions in the interior of the plan. New Delhi inverts the relationship of the periphery to the interior that had been established in the walled cities, while still utilising the wall as the primary structuring element of urban form. Since the 1947 Partition, other kinds of cities have emerged in Delhi: residential neighbourhoods, sports complexes, and academic campuses, to name a few, function today to enclose particular social classes. But while the notion of empire has given way to a desire (as yet unfulfilled) for democratic cosmopolitanism, Delhi's urban logic has remained fixed in a single paradigm. The idea and form of the wall, established a thousand years ago, continues to implicitly structure the modern city through a range of materials; it is important to recognise this spatial condition as both pervasive and definitive in the face of the chaotic built environment appears to Delhi cultivate. The walls of the ancient cities of Delhi are reconstituted in the present as different types of 'edges' made of varying physical materials and scales, and the modern urban experience of Delhi is defined by the act of perpetually crossing these edges. The term 'edge' here encompasses a range of spatial thresholds: in addition to the ancient walls, Delhi's edges include highways, fences, walls around modern residential compounds, transitional zones between neighbourhoods, parks, monuments, and hedges, to name a few. Although these elements are not all realized in the same shape or material, they all function as gateways to and from each other.

Delhi has not been adequately discussed or even explored in the design disciplines, in large part because existing discursive methodologies cannot accommodate it. It is not possible to totalize it, either historically or spatially; there is no single defining plan system, as with Chandigarh,

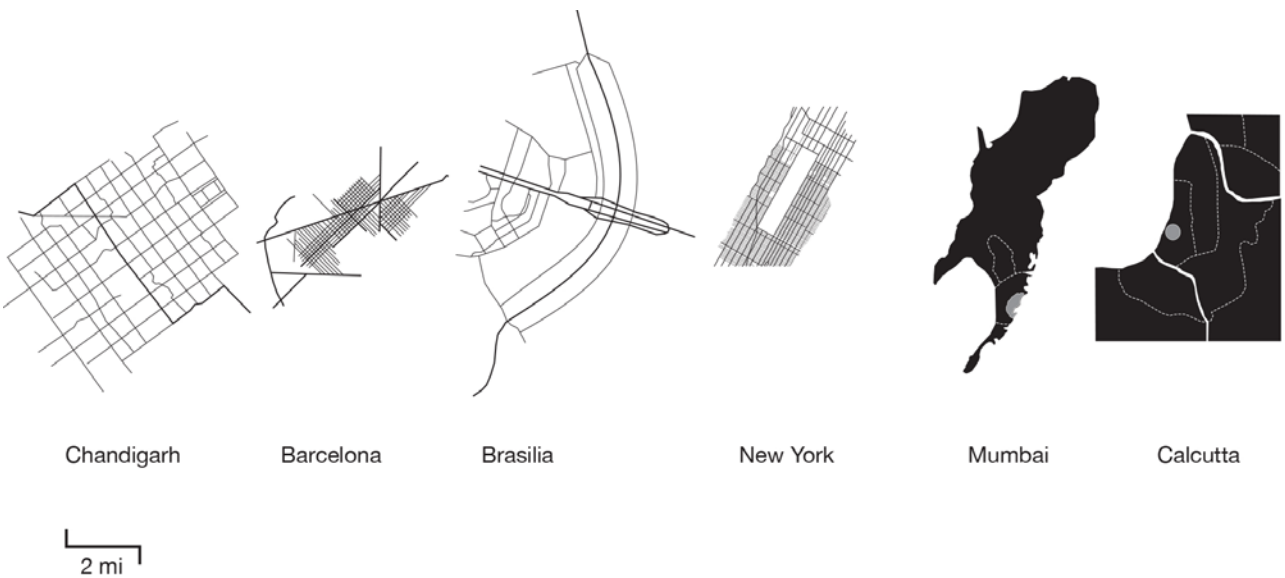


Figure 1 (top): Diagram of Delhi's walled cities.
Figure 2 (middle): Wall fragment, Delhi.
Figure 3 (bottom): Scaled plan comparison

Barcelona, Brasilia, or New York, and there is no predetermined geographical boundary, as with Mumbai or Calcutta (Figure 3). It is unproductive to expect that the kind of analysis that makes one city's character emerge (we can think here of Rome also, with its distinctive Nolli Plan) will somehow work for another place, time, and history. Solids and voids, volumes, figure-grounds, and perspectival views—concepts that have permeated western urban dialogues—are simply inapplicable to Delhi. The city is structured instead around varying densities of edges, a sectional condition (in the architectural sense) that produces an urban typology as yet unseen in our collective discourse. The elements of this new typology include the following:

- a sectional conception of edges, where their location in plan is subordinate to their vertical impact;
- the inherent permeability of these edges, despite their role as defence mechanisms;
- the continuous wiping away and rebuilding of the city center by rulers of varying religious and aesthetic histories;
- the simultaneous operation, at the urban scale, of edges from multiple eras;
- the unintended extension of the indigenous spatial paradigm into the colonial period;
- and, despite the overwhelmingly spatial and sectional qualities of city-making over the course of centuries in Delhi, the de-spatialization of the city in modern written histories

The limits of Delhi are thus embodied in a multitude of conditions. These include the historic city walls as flexible, peripheral limits; the inner workings of the modern city, which rely on the perpetual transgression of thresholds between adjacent urban spaces; and the methodological limitations of written histories, which, in order to make urban space and history equally operative in Delhi, must be overcome.

The Wall as an Urban Signifier

The image of the walled city first appeared in the epic poem Mahabharata, a myth composed c. 400 BCE-400 CE that recounts the Great War between rival lineages within one family to establish a kingdom in present-day north India. At a site on the bank of the Yamuna River — the first defining edge of Delhi — an enormous city called Indraprastha was supposedly constructed, defined by a boundary wall that dominated both ground and horizon. One translation of the epic describes the city in monumental terms:

> *...they built a beautiful city like a new heaven. Led by Dvaipayana [also known as Vyasa, the original narrator of the Mahabharata], the heroes performed the rite of appeasement on an auspicious and holy stretch of land and had the fort measured out. It was made strong by moats that were like oceans and surrounded by a wall that covered the sky, white like clouds, or like a mountain of snow....it was protected by dread-looking, double-hung gates like two-winged Garudas, with gate towers that towered like a pack of clouds...It was covered with spears and javelins of many kinds, surpassing-sharp and smoothly turned, as though with double-tongued snakes. Guarded by warriors, it was splendid with spiraling turrets and resplendent with sharp pikes and hundred-killers and movable trellises* (Van Buitenen, 388-9).

The wall described here establishes a prototype for city-building that was repeated for several centuries after the myth's composition. While there is no physical evidence that Indraprastha existed, its image offers two important formal conditions that together produce the idea of the 'city' in Delhi: the first is the wall itself, a peripheral condition that divides inside from outside, urban from non-urban, and order from disorder; the second is the gate, which allows the firmly-grounded edge to be breached. The demarcation of the boundary is simultaneous with the act of 'crossing,' inaugurating the urban edge as a form that cannot exist without some act of transgression redefining it immediately.

The wall, and its inherent permeability, continued to define both physical urbanism and the urban 'imaginary' — the concept of the city held in the collective imagination — through the seventeenth century. The first physical instantiation of the

walled city, which established Delhi as the capital of the Tomar Rajput Dynasty, occurred in c. 1060 CE with the construction of Lal Kot ("Red Fortress"). The walls of this city were made of roughly-cut beige stone blocks, and were thirty feet thick and sixty feet high in some places. The walls contained a city with Hindu citizenry and a Hindu leader; the urban scheme was focused around a palace-fortress, and then subdivided into commercial and residential zones. In 1151 this city was overtaken by Prithviraj Chauhan, the leader of the Chauhan Rajputs, who extended Lal Kot with a second wall and named the new city Qila Rai Pithora. This was the primary urban site of the Muslim conquest of 1192, registering a massive breach of the cultural boundary between the Indian subcontinent and what is now Afghanistan. For the first but not the only time, the concept of urbanism in Delhi became culturally-imported.

The Qutb complex (Figure 4), which began construction in 1206 under Qutbuddin Aibak, was the first Islamic city of Delhi and marked the establishment of the Delhi Sultanate. This complex remained the urban center of Delhi until 1303, when Alauddin Khilji of the Khilji Dynasty built the city of Siri a few kilometres to the north, a construct that perpetuated the concept of the city as an object in an otherwise undeveloped landscape. The 14th century saw a flurry of construction, with Tughlaqabad (Figure 5), a city with walls built to resemble a mountain, constructed in 1321; Jahanpanah a few short years later; and Feroz Shah Kotla in 1354 (Figure 6). Finally, under the prolific Mughal ruler Shah Jahan, the city of Shahjahanabad was built from 1639-1648. Shahjahanabad was the culmination of centuries of Mughal urban design executed in Delhi; of all the walled cities, it is the most delicate and complex, and today the only one still inhabited.

In each of these epochs, the walled city was the preferred mode for the expression of political power. Both Hindu and Muslim rulers took advantage of this particular form of construction as a place where military defence, court proceedings, commerce, leisure, and residence could overlap. As opposed to the freestanding monument, like the obelisk or column, or the palace, which was reserved for royal use, the walled city could be programmed by multiple social classes, thereby strengthening and densifying the center of empire through sheer numbers and heterogenous activities. The coexistence of multiple castes, Hindus and Muslims, royalty and citizens, and various other social distinctions made for a highly diverse and tolerant urban population. Despite rather frequent changes in leadership, the mass citizenry of Delhi remain stable (that is, unrevolutionary), a fundamentally agricultural society with a clearly stratified social structure determined by birth.

In 1912 the British began designing New Delhi, the new political centre made of wide avenues and discrete architectural forms laid out in a dia-grid framework; here, the peripheral wall signifying the city limits was no longer the primary tool of urban design. The city diametrically opposed the older forms of Delhi: whereas the walled cities were dense, labyrinthine, and impossible to police, New Delhi was open, low-density, and provided views along the main roads for several kilometres (Figures 8-9). Not only was this city an exercise in total (and garden-city inspired) British planning, it was a response to the 1857 Mutiny in which Indian soldiers first formally rebelled against British rule. Realising the correspondence between social surveillance and urban form, the British produced a city that would not allow its inhabitants to hide. On its surface, New Delhi appears to negate the more organic urban forms that developed in the previous centuries within Delhi's walled cities; however, at both the street-level and at the scale of today's Delhi Metropolitan Area, New Delhi actually could not avoid the intrinsic wall-ness of the historic cities. To see New Delhi as part of the long evolution of urban edges, rather than as a paradigm shift in urban design, it in necessary to rotate our view of the city from plan to cross-section.

New Delhi as a Walled City

Thomas Metcalfe remarks that in the 20th century it was "commonplace among historians that the British, in building their new capital at Delhi, sought to cast it in a Mughal mould"; he goes on to dispel

Figure 4 (top left): Qutb Minar
Figure 5 (middle left): Tughlaqabad
Figure 6 (bottom left): Feroz Shah Kotla

Figure 7 (top right): Shahjahanabad
Figures 8 and 9 (middle and lower right): Wide New Delhi roadways

this theory, arguing that the design of New Delhi was in fact the culmination of distinctly European colonial ideas spanning from Britain to South Africa (Metcalfe: 247). Metcalfe sees New Delhi at the scale of the building facade, where colonialism was given architectural expression through the revival of classical aesthetics. He acknowledges the perpetual tension that architects Herbert Baker and Edwin Lutyens felt during the design period, between the need to spatialise the political sentiment of colonialism at the urban scale and the British desire for the city to "be distinctly Indian" at the architectural scale (Metcalfe, 253). This aspiration, however, is not easily definable, given that what was "Indian" at the time was a result of centuries of conquest and cultural influence from present-day Afghanistan and Iran. Because he concentrates on architectural forms and details rather than larger urban patterns, Metcalfe fails to see where New Delhi *does* cite the earlier Mughal cities. It is not through symbolism or cosmology, as earlier historians have suggested, but through literal form that New Delhi becomes another in the series of walled cities.

To see how this works, we can zoom into the New Delhi street-scape, where individual streets are composed of multiple vertical layers that function as different types of edges. In this case, the urban edges are best describes as membranes, each permeable to a different degree. Lodi Road offers a typical sectional condition that allows us to identify where these different layers are located (Figures 10 and 11). Four lanes for traffic (two in each direction) are divided in the center by a row of trees that reach about twenty feet in height. These make up the central membrane of the street, and are mirrored on either sidewalk by another row of trees that reach thirty to forty feet in height. This landscape strategy leads to an 'introversion' of the street: the trees on either side of the road bend in toward the traffic and the central row of trees, creating a vegetative double-arched corridor that focuses our view in toward a single vanishing point. Set back a few feet from the trees on the side are half-height brick walls, completely opaque, which are then capped by slim bamboo screens through which fractured images of buildings can be seen. These walls circumscribe individual blocks within New Delhi. In some cases, there is a second row of trees behind the brick walls which further obscure views of the few buildings within. With the implementation of the brick wall enclosures, each block or private compound becomes a smaller walled city into itself. The overall suggestion in this spatial configuration, visible in the street section, is that architecture is secondary to urban movement. Individual buildings (on this road, mostly homes and offices) are inaccessible and visually fragmented, while streets and trees structure and dominate the interior perspectival views. Because of the pervasive traffic circle, it is possible to move through New Delhi without actually stopping—the entire city becomes a transitional zone, a literal vehicle for vehicular movement and a connector between other neighbourhoods.

Psychological walls are represented by the presence of the army and armed guards at the gates to various government buildings. The homes of Members of Parliament, for instance, are guarded by men who are visible from the street and from passing cars; each is a reminder of the impossibility of breaching the protected edges of the national center of government. Although non-architectural, this kind of wall doubles the effect of the edge, making the process of crossing an exclusive right.

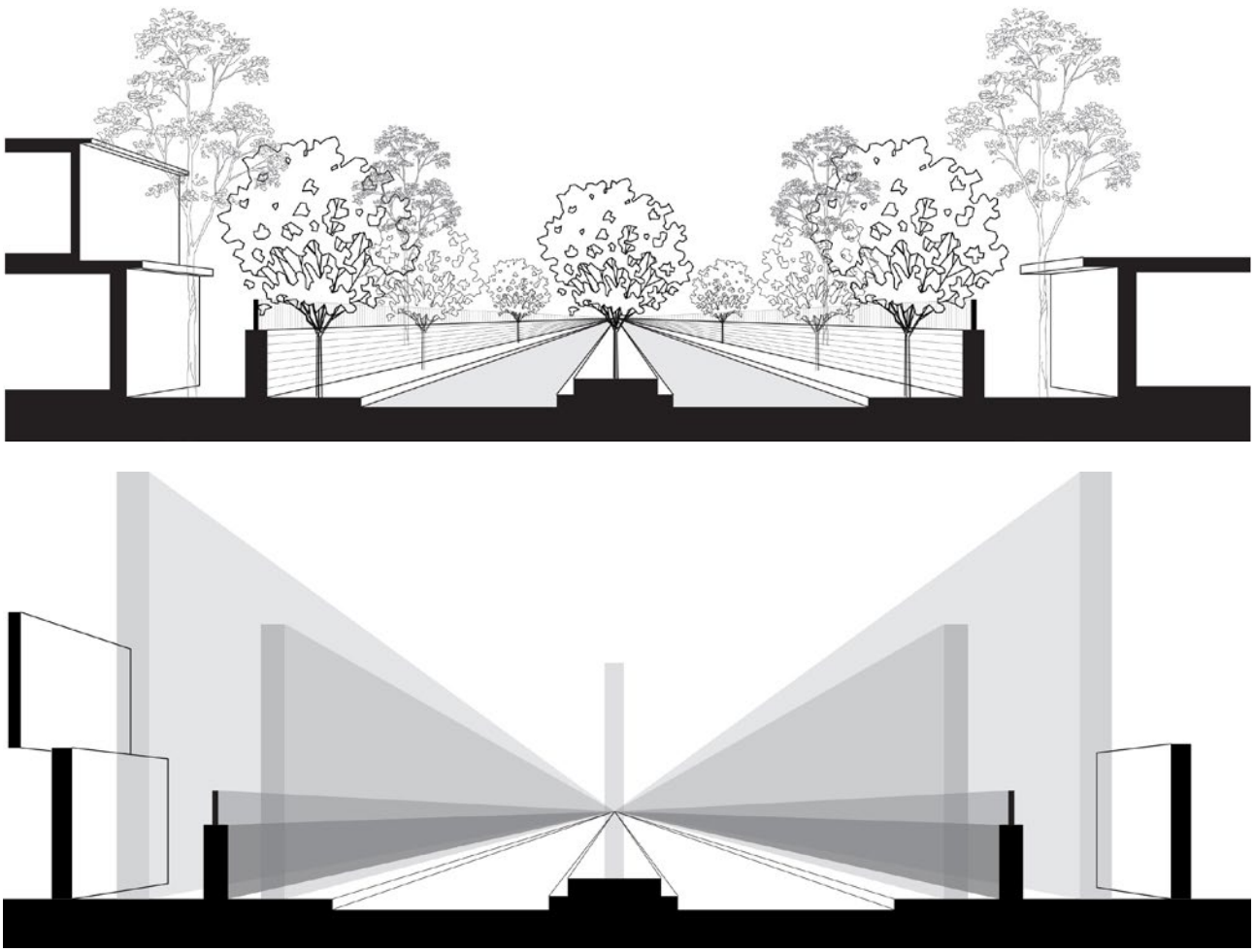
New Delhi was planned by the colonial power using principles and ideologies developed in Britain, but it unconsciously revived the principles of the walled cities built by Hindi and Muslim rulers so many centuries before. The wall, which acted as a peripheral condition in the walled cities, was scaled down to the block and neighborhood in New Delhi but performed the same set of functions: spatial definition, physical protection, and political isolation. In the older walled cities, a central fortress would house the emperor or Shah and his court; similarly, within Greater Delhi, New Delhi is the urban fortress at the heart of the city that contains its political, historical, and cultural institutions.

Urban Space and the Production of History

A crucial part of Delhi's typology is the connection between urban design and modern written history.

The spatial conditions of the city have yet to have a significant effect on the writing of history, either methodologically or in terms of content. Written histories of the city produced after 1947 are spread rather widely along a spectrum of analytical rigor, where weaker writings unfortunately succumb to nostalgia, while stronger ones, though examples of excellent scholarship, consistently divide Delhi's history into traditional chronological periods. This is not an unusual circumstance of urban histories, nor is it detrimental, but I want to make a point of it here to give context to, and offset, my following arguments. The largest frame for the analysis of Delhi's history divides time into the ancient, middle, and modern periods. Within these, further divisions—Maurya, Tomar, Rajput, Sultanate, Mughal, colonial, post-Mutiny British Raj, and postcolonial, among others—allow a more focused study of the narratives of change.[1] In general, these are event-based histories, representing the space of Delhi as a stage set where various social, economic, and political dramas unfolded in painstaking detail.

Within these texts, especially the weaker ones, the act of writing history makes the past inaccessible to the reader situated in the present moment. Works by A.K. Jain and Urmila Varma are most



Figures 10 and 11: Lodi Road sections. The diagrams illustrate the width of the roadways and the vertical layers that screen Delhi's typical streetscapes.

illustrative of this point. By reciting a narrow history of Delhi's urban development, these historians seek to reclaim their 'own' history from British colonists. This reclamation of the past is achieved through the repetition of romantic images of Delhi—for instance, two chapters in Jain's book begin with a quotation of the same line from nineteenth-century poet Ghalib, "If the world is the body, Delhi is its soul," and another two begin with the statement that "Delhi is a legend that lives" (Jain 1994). Jain presents the mere existence of these lines as factual rather than metaphorical validations of the city; other metaphors are also used throughout the text in varying degrees of eloquence, with the result that they distract from the more useful facts embedded in the narrative. Varma's work, while carefully researched and organized, presents the cities as the result of decisions and events instigated by individuals trapped in the past, and at times ambiguously in legend as well (Varma 2003). That the title of her book, A Tale of Seven Cities, recalls Charles Dickens' work from the mid-19th century when British colonialism was nearing its height, is also curious and somewhat in conflict with her apparent scholarly goal.

The desire to take hold of (or take back) a past that was co-opted and distorted by Orientalist scholars is, in the context of India's post-Partition nationalist sensibility, entirely expected. However, the method by which works like Jain's in particular enact this reclamation leads unconsciously to a 'self-orientalization': a representation of one's own past that involves the same simplification, compression, and romanticism of legend that European scholars of the Orient perpetrated in the previous century.[2] The past becomes the Other against which the Self, as historian, pushes back. A false distance between historian, reader, and subject matter emerges from this kind of representation, a distance that in Delhi, as earlier noted, does not actually exist in space. These works represent the disjuncture between design and history, which, to do justice to the complexities of a place like Delhi, must operate equally.

In contrast to these works, studies of the ancient period by Romila Thapar and Upinder Singh, and of the modern period by Percival Spear, Narayani Gupta, Jyoti Hosagrahar, and others, deeply explore Delhi's specific conditions (including but not limited to the spatial ones), but organize them into distinct eras. This model relies on the historical rupture—like the death of a ruler, an invasion, a drought or flood, or a particular policy decision—to enable larger-scale societal change. Individuals and events are the agents of history, and documenting their choices and narratives becomes the first step in producing written histories. Time is a question to which the writing of history is a response: it is a way to organize and categorize the past, to connect small-scale actors to larger evolutionary tides, and to separate and clarify 'cause' and 'effect.' I do not intend to argue against works of this nature, if only because they are so necessary to our understanding of such an old and highly complex part of the world; these are precisely the works that have enriched my own understanding of the history of Delhi. Yet, there is an implicit agreement among historians that Delhi's past is precisely that: it has passed, and is accessible only though historical analysis and not through contemporary spatial experience. But the cities of Delhi's past are not lost, and have not disappeared; they were built in political atmospheres that are no longer in existence, but have great agency in the modern spatial condition. If we isolate them discursively, we lose the richness of Delhi as a city of simultaneous cities.

Broadly, histories of Delhi written after 1947 operate on two levels: they linearize the urban development of the city, and they attempt to separate the formal strategies and implications of Hindu, Muslim, and British urban design. Particularly, these writings set Hindu and Muslim cities in opposition to the British New Delhi, which appears, in my opinion erroneously, to stand alone spatially and conceptually. The division of time into political eras need not automatically partition the forms of a city along the same lines. The primary formal paradigm of Delhi—the edge—defies political ruptures; to understand how modern Delhi functions spatially, it is crucial to acknowledge that the edge is a potent, trans-historical urban apparatus.

More recently, a 2006 cover article in *Abitare* highlights the ongoing problems with the

representation of Indian cities in historical writing. The article divides Delhi's history into four distinct periods, and recounts the building of the various walled cities as dated events within larger political movements. The scant analysis reaches its climax in the discussion of New Delhi, which is described as follows:

> *Despite Lutyens' refusal to adopt the principles of Indian architecture, the develop-ment of imperial Delhi has a certain correspondence with Vedic principles: it stands on the west bank of the Yamuna, like the ancient city of Indraprastha; the palace is on a hill and faces the river; and the socio-cultural institutional core of the development is laid out at the intersection of the two main streets (today Rajpath and Janpath)* ("New Delhi/Delhi:" 43).

The focus on New Delhi's location and planimetric qualities, and its relationship to Vedic principles, is pointless; New Delhi is an urban device with three-dimensional, architectonic qualities, whose nature will be revealed not through a comparison with ancient design concepts but through a careful mapping of its present conditions. The map, in this case, is not limited to a cartography of the ground, but can graphically describe the different kinds of edges that structure and shape the city. The article continues to list strings of statistics to describe Delhi's present conditions:

> *In 2001 there were 4165 people per square kilometre in Southwest Delhi, 4908 in Delhi, 25,760 in Central Delhi, 22,637 in East Delhi and no fewer than 29,411 in the Northeast...Intensive development has taken place in the zones of Gurgaon, Noida, and Dwarka; at first planned to lighten the pressure on Delhi, they have become dormitory suburbs that weigh heavily on Delhi and its infrastructures. Transport is closely bound up with he road network, which is 1749 km long and covers an area of 100 square kilometres, making it the busiest road network in India* ("New Delhi/Delhi:" 44).

These numbers are meaningless without visualization. But this kind of writing is representative of a much larger pattern in Delhi's historiography, on that that ignores geography while inundating us with unmistakably geographic information. The chasm between these two conditions is the reason that Delhi's most palpable spatial paradigm, the edge, has yet to be articulated in writing or mapping. While currently this disconnect is ubiquitous, it can be challenged within both the disciplines of design and history. This shift begins with the identification of the unique typology of the city, as well as its overarching spatial paradigm and patterns; it evolves, then, with the recognition that design and history are equally operative in a place like this, and both can deeply affect the other. The material forms of the city have layered over centuries into a highly unique set of conditions that reside within the paradigm of the edge—if the writing of history were to methodologically employ this type of structure, it could move out of the realm of description and chronological narrative and into more complex, spatialised representations.

Writing the City

From this study, "writing" Delhi actually first requires "reading" the city, in this case seeing urban designs over the course of centuries spatial paradigm. The writing of the city then becomes the representation of this paradigm in history—a "translation" of built form into criticism. This approach is enriched by the articulation of Delhi's typology, which, in contrast to the way this term is typically treated in design discourse, moves beyond ideas of form. It encompasses form, but places it in tension with the political acts of forced obsolescence and colonisation, and the intellectual act of writing history. Delhi cannot exist without these components functioning together; ultimately, it emerges as a city of edges, both literal and conceptual, that are constantly in flux.

Notes

1 See K.M. Ashraf, Life and Conditions of the People of Hindustan, 2nd ed. (New Delhi, Munshiram Manoharlal, 1970); Narayani Gupta, Delhi Between Two Empires, 1803-1931: Society, Government, and Urban Growth (Delhi: Oxford University Press, 1981); Jyoti Hosagrahar, Indigenous Modernities: Negotiating Architecture, Urbanism, and Colonialism in Delhi (New York: Routledge, 2005); A.K. Jain, The Cities of Delhi (New Delhi: Management Publishing Company, 1994); Upinder Singh, Ancient Delhi (New Delhi and New York: Oxford University Press, 1999); Percival Spear, The Oxford History of Modern India, 1740-1975, 2nd ed. (Delhi: Oxford University Press, 1978); Romila Thapar, A History of India (Baltimore: Penguin Books, 1965-1966); Urmila Varma, Delhi: A Tale of Seven Cities (New Delhi: Smriti Books, 2001).

2 The terms 'self-orientalism' and 'self-orientalization' have been used recently to describe Chinese communities in and in relation to the west. In a November 2000 review of Aiwha Ong's Flexible Citizenship: The Cultural Logics of Transnationality published in The Journal of Asia Studies, Adam McKeown paraphrases Ong's analysis of Chinese modernity: "...it freely draws upon Western liberal ideologies through a process of 'self-orientalism' in which stereotyped images of diligence, family orientation, and uniqueness are manipulated to present a progressive East that is now surpassing a decadent West" (981). In the 2008 essay "Strategic Self-Orientalism" published in the Journal of Planning History, Greg Umbach and Dan Wisnoff argue that the same phenomenon is a conscious act on the part of New York City Chinatown community to attract tourists to the 'exotic' Chinese neighborhood. The process of self-orientalization becomes the re-presentation of space and culture by its indigenous population in the familiar language of the Orientalist.

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Liquid limit: The River Plata System

Jeannette Sordi

limit: *the terminal point or boundary of an area or movement; the furthest extent of one's physical or mental endurance.*

liquid limit: *a limit-border which is free to move while maintaining its consistency; the liquid-floating boundary of an area or the furthest extend in which an area can include diversity and change over time.*

> *Today, intervention in the existing city, in its residual spaces, in its folded interstices can no longer be either comfortable or efficacious in the manner postulated by the modern movement's efficient model of the enlightened tradition. How can architecture act in the 'terrain vague' without becoming an aggressive instrument of power and abstract reason? Undoubtedly, through attention to continuity: not the continuity of the planned, efficient, and legitimized city, but of the flows, the energies, the rhythms established by the passing of time and the loss of limits... we should treat the residual city with a contradictory complicity that will not shatter the elements that maintain its continuity in time and space.*
> (Ignasi de Solà-Morales, 1995)

Liquid modernity and liminal spaces.
Zygmunt Bauman notably defined the floating condition of contemporary living as "liquid." Instead of talking about a "post" modernity, he prefers to call it liquid modernity, referring to the increasing flexibility and fragmentation to which the modern paradigm of progress and consumption led us (Bauman, 2000). Liquid modernity's relationships, identities, and global economies are constantly moving and changing, impacting everyday life and space. Barriers are constantly treaded down in order to make new connections, reach new destinations, and find new opportunities. Barriers often appear in immaterial form that are, such as social and economic differences. Modernity has always tried to accelerate the speed of movement, but now the "natural" limit has been reached. With the diffusion of electronic communication systems and the internet, not only time but also space has lost its primacy as the means to measure and control territory.

Modern attempts to control the form and extension of urbanization have failed. As early as in the 1960s, architects started to explore in between spaces as the most relevant places for urban interventions, the true place of urban relationships.[1] This is even more evident now. As the geographer Franco Farinelli points out, if it is true that we do not need space to move and communicate anymore, we will increasingly need landscapes in which to live and recognize ourselves.[2] Thus, in the liquid modernity, it is not possible to define limits to urbanization but its liminal spaces become crucial. Voids between buildings, filters between inside and outside, leftovers, residual spaces, boundaries between different ecologies, and social groups, are the ultimate place for architecture and urban design intervention.

Richard Sennett claimed that open space is a matter of boundaries and urbanists should design "weak borders instead of strong walls" (Sennett 1990). Boundaries segregate and establish closure, while borders facilitate selective but active social exchange. Architects and urbanists should emulate the properties of borders and create urban conditions that encourage dialectical

and dialogical relationship between different community groups.[3] Limits – whether borders or boundaries, material or immaterial – constitute the edge where both porosity and resistance can be experienced. Liminal spaces, in the liquid modernity, may become liquid themselves and encourage adaptation, transmission, and change in space and time.

Liquid limit

The river is an example of a liquid limit. It is both a border and a boundary. Rivers traditionally have been physical and political borders, but also a natural way of connection and transportation among countries and cities. They constitute natural boundaries, where the confrontation between different ecological and social systems is intensified by the presence of water. Rivers express contraposition, encourage multiplicity, require indeterminacy, and involve space and time. In a natural environment, where the water meets the land, there is the greatest speed of evolutionary change. Shores, ecologically speaking, are places of complex exchange. Waterways divide lands but also connect them, working as infrastructure. Rivers are liquid and unpredictable. The multiplicity of activities and overlapping interests exacerbate their limit qualities.

In the last decades, in Europe and North America, urbanists have increasing viewed rivers as urban regenerators. Reclaimed from their industrial function and rediscovered by contemporary real estate developers, riverfronts are now playing a central role in most of the cities. They are increasingly becoming “monuments” and recreational landscapes for tourists and citizens and their infrastructural role has often become irrelevant. The problem is that many riparian environments have been transformed to such a point that they have lost their rich ecological diversity, ceasing to constitute a resource for the populations living along them. Besides, when rivers are not strongly transformed and artificialized, tides change the landscape daily and seasonally; phenomenon that is now often evident only when major floods occur, causing “natural” disasters.

In less urbanized contexts, the potential of rivers in working as natural and social infrastructure, connecting and integrating different realities, may be more evident and relevant. The following paragraphs explore the River Plata system as such, investigating the relationship between cities and water along its shores. River Plata is the second largest fluvial system in South America after the Amazon River, and it played

Figure 1: The Riverfront of Asuncion. Between the modern city and the water, the informal city develops.

a fundamental role in the colonization and urbanization of the region. The major cities of Buenos Aires, Rosario, Santa Fe, Sao Paulo, and Asuncion were colonized sequentially, following the river path. Through the centuries each city has developed its own particular relationship with the water. It is in this tenuous limit between the city and the water that the crucial natural, social, and infrastructural struggles and transformations continue to take place, driving different stages of urban development along the riverfronts. This is particularly evident in Asuncion where, for historical, political and geographical reasons, two cities can still be distinguished: one of the water, informal and uncertain; and one of the land, where the modern city was developed. River Plata constitutes the framework for investigating riverfronts as liquid limits, connecting and confronting different realities. The relationship between the city and the river, the land and the water, the natural and the artificial, the formal and the informal, constitutes the leitmotiv of the narration.

The River Plata system[4]

River Plata is the second largest fluvial system in South America. The extension of its basin is over 3.1 millions squared km and it includes the North of Argentina, the South of Bolivia and Brazil, most of Uruguay, and Paraguay in its entirety. Over 100 million people live in the Plata Basin area, which corresponds to half of the population of the five countries; around 70% of the countries' cumulative GDP is produced in this area and most of their electricity need is provided by hydroelectric power plants along Paranà River (United Nations Water, 2007). River Plata is also one of the largest inland waterways network in the world. Formed by the rivers Plata, Paranà, Paraguay and Uruguay, it provides an outlet to the Atlantic Ocean to major parts of Argentina and Southern Brazil and to the internal States of Bolivia and Paraguay.

The close relationship between the mainland and water dates back to the first indigenous settlements. While the Pre-Columbian civilizations were settled on the heights, the native Guaraní

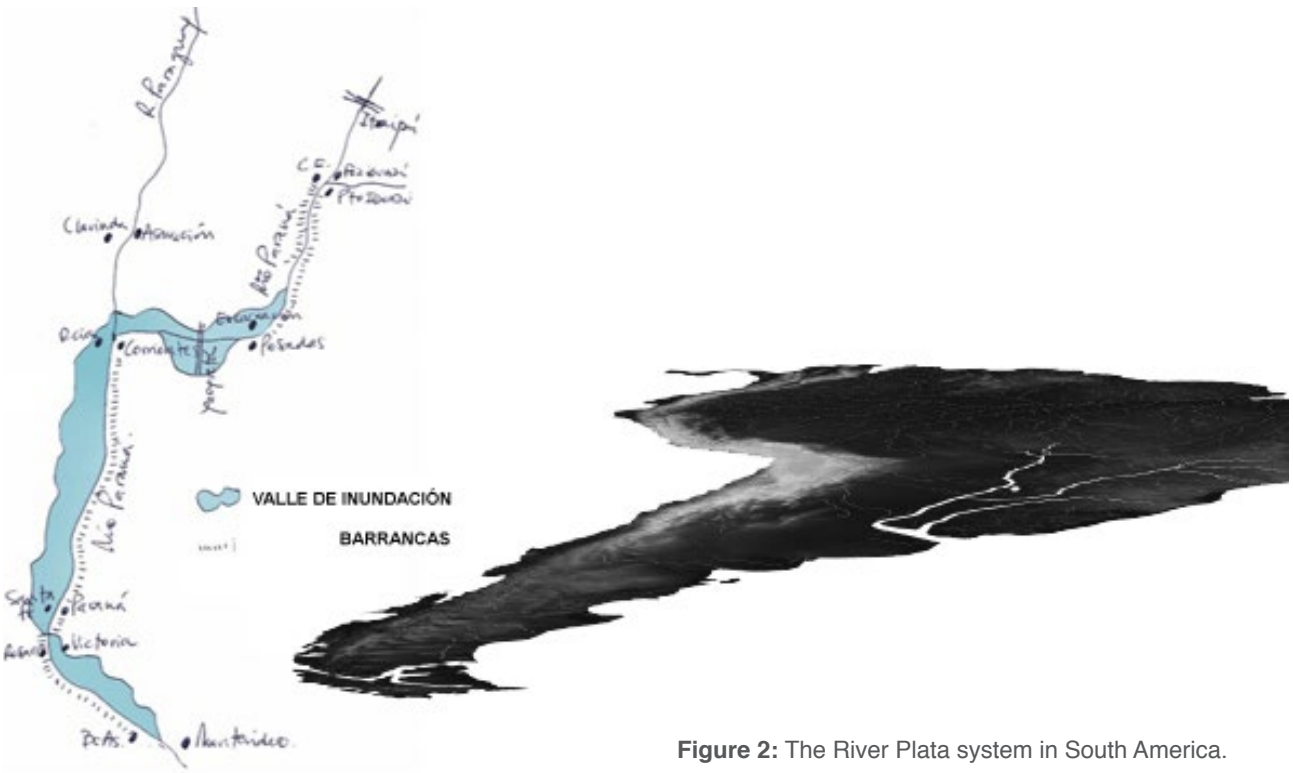

Figure 2: The River Plata system in South America.

population developed along the River's banks[5]. Water linked the Guaraní villages to one another, allowing a slow but very capillary movement of people and goods. Water provided the main sustenance and was the medium of communication. These pre-colombian patterns of river use were disrupted by the Europeans, who transformed the river into a more efficient transport system. The Spanish and Portuguese colonies were indeed located by defining the points of embarkation along the river. Areas of agriculture and livestock inland were connected to river ports through the railway; exports then converged at the mouth of the river on the Atlantic Ocean to be shipped to Europe. The geographical conditions of being at the river's mouth determined the future of the cities within the system. Their strategic location vis-à-vis the river drove their economic development and urban transformation.

After the independence from Spain and Portugal, more developed countries, particularly the US, maintained a high degree of influence over the region's commerce, finance, and industrial production. These economic and political power relations are also evident in the processes of urbanization. The Spanish foundation is still visible in the strong connection between city and harbor, the inland railway connections, and the typical 45° oriented squared plot (las cuadras). The post World War II "imperialistic domain" appears in the astonishing growth of the metropolis, in the increase of contradictions, and marginal spaces. Local governments fostered myriad social inequalities by protecting the trade of the elite in the global market, and leaving the urban realm largely unregulated and in the hands of the capitalist market (Castells, 1973). Harbors often became separated from the cities. Cities expanded inland where they were more easily developed and protected from floods. The river became a limit to urban development, a wall that had to be strengthened, a shore to be fixed in place, or an uncertainty to be left unconsidered.

Currently, cities along the river have not fully explored its potential. Ecological thinking suggests reconsideration of the River Plata as a system of communication, in which every city is connected to the other through the water. Recent interest of international organizations pushes towards this solution for sustainable development of the region. Infrastructural projects such as the Hidrovia waterway, planning to transform the Paraguay-Paranà-Uruguay-Plata rivers into a 3,400-kilometer long industrial shipping channel, would make the system more secure and reliable for navigation[6]. Regulating the river flow could increase the river's accessibility and stabilize adjacent settlement. It would also provide possibilities for economic investments in luxury neighborhoods. Nevertheless, ecologists from the five nations involved are opposing the project, arguing that the increased flow of the Paraguay river could reduce the water level of the Mato Grosso Pantanal, one of the world largest fresh water reservoirs, situated at the source of the Paraguay River. Urbanists and architects are also concerned about the effects that such transformations of the water flow may have on the cities crossed by the channel. Indeed, climate changes and meteorological phenomena such as el Niño periodically show how fragile the river ecosystem is, especially along the rivers of Paranà and Uruguay. Devastating floods along Rio Paranà in 1982, 1992, and 1998 showed the limits of the modern expansion of urbanization and the importance of establishing a mutual relationship between population and water, city and landscape.

An incident in Santa Fe, Argentina, is an example of the environmental risks related to urban development along riverbanks. The city of Santa Fe was originally founded at the nearby site of Cayastá in 1573. In 1653 the settlement was moved to the present site due to the constant flooding of the Cayastá River. The city soon became the commercial and transportation hub for a rich agricultural area that produces grain, vegetable oils, and meats but it is not immune to flooding. In the last decades, the increase of impermeable surface due to urbanization led to an increase in flooding which has repeatedly destroyed large parts of the urban settlements. The most devastating effects happened when, in 1982, the city decided to defend itself strengthening the borders against the water raising the Yrigoyen dam, a 7 km long floodwall. In 2003, an exceptionally intense flow surpassed the dam,

which was incomplete at the time. Over 100,000 people had to be evacuated, and large sections of the city remained under water more than a week later. The flood caused more deaths and destruction than any previous flood.

The beautiful promenade built by Cabrera, Saus, Torquati, Sartori, Morahan in 2002-04 across the river, in the city of Paranà, reminds us how flood water can inspire design suggesting the potential of waterscapes for urban regeneration. Built on the northern shore of the Paranà river, the promenade is completely permeable to water and, besides changing its spatial configuration seasonally and over the course of the day according to changes in water level, it functions as a catchment basin whenever the river rises. Approaching the River Plata as natural infrastructure for the region would support more sustainable development, save money and resources that are now expended in stormwater management, and potentially reduce the damage of future floods. The waterfront could be a tool for increasing urban sustainability through the creation of dynamic and multipurpose public spaces. This approach to waterfront design requires understanding patterns of the river, even if they are not central to any given project.

Rosario, 170 km downstream Santa Fe, boasts a long tradition of significant urban plans that consider the city's relationship with the river. Founded by the Spanish in the mid XVIII century, Rosario became a hub for the export of agricultural and industrial production. In 1875 the Plan for the City of Rosario (Plano de la Ciudad de Rosario) organized urban space into inner city, periphery, and suburbs, all expanding away from the river but connected to it through a system of streets and railways. Sixty years later, in the early 1935, the railways were closed and the role of the city as an export hub was changing. The city took the opportunity to rethink the waterfront as open recreational space; 11% of the whole municipal territory was transformed into green space.
A system of parks and public spaces has been continually improved by innovative urban plans and projects. But, this is not without contradictions. The Giros national social movement, defending the right to the land of the farmers, underlines how the riverfront has actually become like many other gated communities in Rosario[7]. They claim that municipal investments are only directed to embellish the parks for the pleasure of tourists and upper classes, while excluding everyone else. Members of the movement seek laws against the privatization of land and neighborhoods.
The question of gated communities, marginalization, and social contrasts is recurring in South American cities. As aforementioned, riversides – rejected by real estate markets for their instability – are a typical place where informal settlements develop. Light stilts allow residents to adapt their houses to the steep topography and the floods. The river may constitute a source of

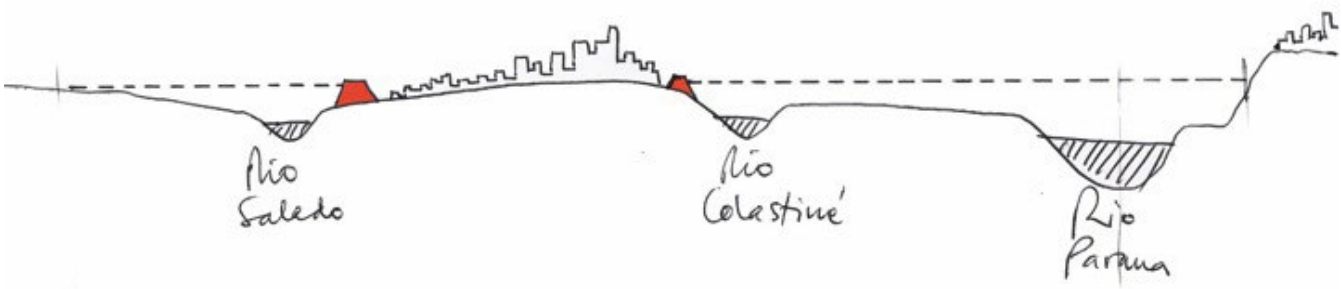

Figure 4: Section of the Paranà river and the facing cities of Santa Fe and Paranà.

income. As the interest in waterfronts increases, these populations have been moved to peripheral places while new expensive neighborhoods develop in their place. This was the case in Buenos Aires for instance. The capital of Argentina was founded by Spanish colonists at the end of the XVI century, strategically positioned on the mouth of the River Plata. Buenos Aires rapidly developed as a result of trade between South America and Europe. Although the richness of the capital depended on the harbor, the city expanded in the opposite direction, incorporating smaller towns in the countryside. In 1938 Le Corbusier designed a plan that aimed to drive the development towards the river, but it was not implemented. The recent renewal of Puerto Madero, with the destination pieces signed by Santiago Calatrava, Norman Foster, César Pelli, and Philippe Starck, has been an isolated attempt to connect the city to the river. Starting from the 1990s local and foreign investment led to a massive regeneration effort, recycling and refurbishing the west side warehouses into offices, lofts, private universities, luxurious hotels, and restaurants, transforming it into one of the trendiest boroughs in Buenos Aires. Nevertheless, the exclusive presence of commercial activities and luxurious apartments makes the area more similar to a shopping mall or a tourist resort than to a lively urban neighborhood. Lina Bo Bardi's transformation of Pompeia factory in Sao Paulo constitutes an exemplary reference project for social inclusion and a simultaneous and unexpected relationship to water. Sao Paulo was founded by Portuguese colonists at the beginning of the sixteenth century on the sediments of the Guarani villages settled on the shores of the tributaries of Rio Tiete and Rio Paranà. The city was not founded at the mouth of the river, but at its source: the distance of the city from the sea meant it became first an industrial center and then later a business center. Alexandre Delijacov depicts Sao Paulo as a city made of bridges and canals,[8] though this depiction is unrecognizable in the city today. The massive urban agglomeration is built on creeks and streams but they are denied in the urban landscape: they are used as open-air sewers or are covered by roads and highways.

For decades the municipality has invested in a private transport system, burying waterways under roads, and constructing high-rise parking lots. Instead of being a limit to urbanization, Delijacov suggests, the four kilometers of rivers and canals could become an efficient urban infrastructure, accommodating light transport systems and public spaces. The region of Sao Paulo originally consisted of Guaranì villages of fishers and traders located at the river confluences. Today the remaining streams are used as wastewater canals and the remaining natives are living in the slums uphill. Six miles of potential shores are unreachable for the inhabitants.

Lina Bo Bardi's SESC Pompeia project started

Figure 3: Paranà River Promenade, Cabrera, Saus, Torquati, Sartori, Morahan, Paranà-Costanera, 2002-04.

in 1977, adapting and reprogramming a former factory as part of the SESC (transl. Social Services for Commerce) socio-cultural development scheme initiated by the Commercial Employers Association, and co-financed by private funds and payroll taxes alike. The four-acre community facility includes spaces for arts, swimming, sports, and leisure activities and was set up as a site of critical social experimentation engaging local stakeholders and residents in a communal and collaborative construction process. Inside the preserved industrial brick buildings, interior walls have been removed and replaced with a series of sculptural albeit functional spaces and a shallow pond intended as an allusion to the São Francisco River. The additional constructions are divided into a wider tower, housing a swimming pool and four gyms, and a smaller complementary tower for staircases and locker rooms.

The two volumes are separated by a deck-solarium that covers the wastewater canal and they are connected through exposed bridges. Because Sao Paulo is indeed built upon water, digging is very risky and expensive. The deck upon the canal reminds building occupants of the flow of water and transforms this void into public open space. The bridges that cross it establish a spatial, bodily, and mental passage between the different functions and activities. As Lina Bo Bardi claimed, the objective of the sport and cultural center Sesc Pompeia, the so called “Cidadela de Liberdade,” was to make physical and intellectual activities coexist, as it was embedded in the Brazilian culture, with the ultimate goal of creating a mediation between its extreme social and economic differences.[9]

In developing countries, such as Brazil and Paraguay, the shift from totalitarian or colonial governance to democracy highly influenced by globalization was sudden, and it the shift has increased social and economic differences.[11] It is not clear if or how these differences will be

Figure 5: Parque Dom Pedro II and Tamanduatei River, Sao Paulo.

addressed, but certainly projects like this can make a difference, at least at a local scale. The increasing number of gated communities shows that the trend of building boundaries is not over. In Asuncion, the capital of Paraguay, racial, social, and economic differences are very strong and often coincide. Young people from rich families drive black SUVs with black windows so that no one can see when they are driving alone. At night they do not stop at traffic lights. The only way they can imagine reaching the riverfront, where the informal city is today, is by car via an "elevated" highway. Indeed, in many cases, riverfronts have become interstitial spaces of the modern city where informal settlements rise. Waterfronts are considered to be risky and unpredictable and therefore are not taken into consideration for urban development plans. Thus, people survive by settling on the only free, untitled land that is left which is, by definition, the land nobody wants and which has no market value — on steep, unstable hillsides, along a polluted river or in dangerous

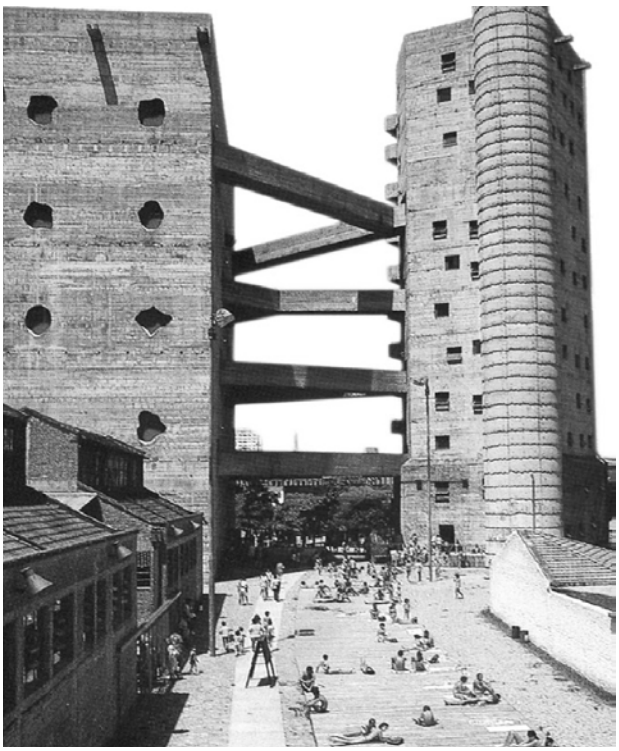

Figure 6: Lina Bo Bardi, SESC Pompeia, sport center, 1977.

flood plains (Davis, 2007). People adapt their buildings to this changing and unpredictable landscape. Very often the river becomes a source of income and survival and a way of life. This condition is still evident in many South American cities and very relevant in Asuncion, the capital of Paraguay, founded by Spanish colonists in the mid XVI century on the banks of the Paraguay River.[11]

In the urban settlement of Asuncion, it is still possible to recognize two cities: a "water-city," linked to the banks of the river, and a "terrestrial-city," placed above the height of 54 meters above sea level. This topographic curve and the water's level define a variable, dynamic, unstable, and changeable edge. The two hypothetical cities abut each other, but coexist without interacting. The city on the land is legitimated and structured by a grid of squared homogenous blocks, the Spanish typical cuadras; the one on the water is almost underground, informal, rural, and "natural." In the last century, the dictatorships have manned the riverfront with coastal military bases, strengthening and protecting coastlines from flooding. In this way the occupied areas have been controlled while the rest of the territory along the river has become a no man's land; these riparian lands are the only place in which the native Guaraní populations are still living,[12] in close relationship with the river's resources and its flood cycles. City and water, formal and informal, contemporary and native, have thus lost the historical thread of interaction and identity. All that remains is a weak visual connection.

The dismantling of large military outposts on the riverbanks of Asuncion in 2008 represented an opportunity to overcome the tension between water and land, formal and informal. In 2010, the municipality proposed to construct a highway along the riverside that would reduce the inner-city traffic but also dismantle the riverside Guaranì settlements[13]. In fact, currently the shores of the Paraguay River recall what Gilles Clement calls the "third landscape." The Third Landscape (Clement, 2003) designates the sum of the space left over by man to landscape evolution. Included in this category are left behind urban or rural sites, transitional spaces, neglected land, swamps,

1869 1900-1930 1940-1960

Figure 7 (top): Development of the city of Asuncion from the river (1869) to the inner lands (today).
Figures 8-9 (middle): Asuncion. Views from the river.

Figure 10 (bottom): Asuncion. Informal settlements and decadent modern neighbourhoods on the river. The Downtown is visible in the back.

but also roadsides, railroad embankments, and shores.

Compared to the territories submitted to the control and exploitation by man, the Third Landscape forms a privileged area of receptivity to biological diversity. The variety of species in a field, cultivated land, or managed forest is low in comparison to that of a neighboring "unattended" space (Clement, 2003).

From this point of view, the Third Landscape can be considered as the genetic reservoir of the planet and should therefore be assumed as a responsibility by the political body tantamount the concern for the future (Clement, 2003).

Although informal settlements cannot be considered "natural" environments, the biodiversity of these limit conditions, the coexistence of different ecosystems, ethnic groups, and lifestyles constitute a richness that urban design and planning projects may exploit. In 2008, an innovative proposal for the riverfront of Asuncion was developed by an international group of South American architects that included, among others, the Paraguayans Javier Corvalan and Solano Benitez.[14] Assuming the existence of the Hidrovia connecting Asuncion to the major cities downstream, their proposal is to develop a few access points in strategic location along the riverside. These would connect, in a low impact way, the city of Asuncion to "its" river, respecting the informal settlements and the natural environment in between. Different programs working on multiple scales and objectives overlay in the limit between city and water.

Figure 11: Asuncion. The line between formal and informal is even stronger than the one between land and water.

Recently, in August 2014, the Spanish architectural office Ecosistema Urbano won the competition for the development of the Master Plan proposal for the revitalization of the Historic Downtown District of Asunción, Paraguay (Plan Maestro del Centro Histórico de Asunción).[15] The project proposes the design of a "master process" which incorporates tools able to deal with complexity, conflicts and changes, and which will be supported by the diagnoses, plans, and projects already realized in the city during the last decades. The "process" project links an extensive research on institutional (top-down) and citizen (bottom-up) initiatives that, based on a different way of understanding the city, have already successfully led to a new concept of quality of life for its inhabitants. And in accordance with the 2008 study, they included large-scale strategies aiming to connect the development of the Historic Downtown district to the riverfront.

The increasing interest in riverfronts as construction sites and recreational spaces is often transforming the relationship between cities and water into something rigid, exclusive, and predictable. Sites devoted to tourism, leisure, business or market are supposed to encourage diversity but often totally exclude it. Along River Plata the process is still ongoing. Different environmental and social ecologies, ways of living, are confronting themselves in a tenuous and fluctuating limit. In their instability, informal settlements articulate a new culture of living that other communities in seemingly more stable environments can learn from in the search for a sustainable existence. Relationships among people are fluid. Infrastructures are often temporary and immaterial; community spaces usually replace the "legal" classification of private and public.[16] The cities of Santa Fe, Rosario, Buenos Aires, and Sao Paulo may offer suggestions for the development of Asuncion's waterfront, but at the end, it is this last one, still suspended in its transformation, that offers the most interesting opportunity for investigating the possibility of creating unpredictable, undetermined, liquid limits.

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Notes

1 In the 1960s architects and urban designers – most notably Aldo Rossi, Vittorio Gregotti, Gordon Cullen, Kevin Lynch, Alice and Peter Smithson - recognized in open space the place of relationship of the city (Rossi, 1966). This attitude, that made open and inbetween spaces more relevant than architecture itself, arrived all the way to recent years with hybrid interdisciplinary approaches, such as landscape urbanism. According to Charles Waldheim, in the past decades landscape has emerged as the basic building block for organizing the contemporary city, whose shape is the result of temporary, provisional and continuously revised articulation of property ownership, speculative development and mobile capital (Waldheim, 2006).

2 Italian geographer Franco Farinelli (2009) claims that in the communication era space lost its meaning as an entity to measure space; the quality of the landscapes we live in might remain the only relevant category.

3 Richard Sennett, "The Architecture of cooperation," public lecture at the Harvard Graduate School of Design, February, 28th, 2012.

4 The following reflections on the River Plata as natural, social and communication infrastructure, as well as the study of the relationship between the River and the cities of San Paulo, Asuncion, Santa Fe, Rosario, Buenos Aires and Montevideo, have been developed by me and Anna Varaldo as masters degree thesis. The research project, called "Agua y Ciudad in Sud America. Asuncion la città smarrita", was supervised by Mosè Ricci (Genoa, Italy), Javier Corvalan (Asuncion) and Sergio Ruggeri (Asuncion) and followed a one month long international workshop in the Plata Region that I took part in.

5 Guaraní is the name of the native populatition of the River Plata area. The traditional range of the Guaraní people is in what is now Paraguay between the Uruguay River and lower Paraguay River, the

Corrientes and Entre Ríos Provinces of Argentina, southern Brazil, and parts of Uruguay and Bolivia.

6 The Hidrovia waterway, planned for the Paraguay-Parana rivers of the Southern Cone, has been qualified as the largest engineering project in the frame of the integration process of MERCOSUR. The Hidrovia waterway would connect Caceres, in Bolivia, to Nueva Palmira, in Uruguay. For a review of the project and the debate concerning its construction see: http://www.chasque.net/rmartine/hidrovia/Envxtrad.html [Accessed 08-19-2013]

7 www.girosrosario.org; in particular see 'La guerra por la tierra in el siglo XXI' http://www.girosrosario.org/guerra_por_la_tierra.html [Accessed 08-16-2013]

8 Alexandre Delijacov, lecture at Universidade de Sao Paulo, 08-27-2008

9 Lina Bo Bardi's description of "SESC – Fabrica da Pompeia" in Lina Bo Bardi, Instituto Lina Bo e P.M. Bardi, Imprensa Official, Sao Paulo, 2008 [third edition]

10 Bauman, in his preface to the third edition of Liquid Modernity, argues that democracy cannot be maintained under globalization in general; if there was to be a "new" democracy it also has to be on a global scale (Bauman, Z., 2011. 3rd ed. Modernità liquida. Roma-Bari: Laterza).

11 With a length of 2,621 km, Paraguay River is the second major river of the Rio de la Plata Basin, after the Paraná River. Its basin covers major portions of northern Argentina, southern Brazil, parts of Bolivia, and the entire country of Paraguay.

12 Although the Guarani's demographic dominance of the region has been reduced by European colonization there are contemporary Guaraní populations in these areas. The Guaraní language is still widely spoken across traditional Guaraní homelands and is one of the two official languages in Paraguay, the other one being Spanish.

13 Project presented in the itinerary exhibition "Reinventando Ciudades - Asunciòn" organized in 2010 for the 200 years anniversary of the State of Paraguay. Among the other places, it was exhibited in Palazzo del Cabildo, Genoa, Italy, starting from 25 novembre 2010.

14 Aim of the research group is to develop projects that can increase the relationship and collaboration among the countries of the River Plata system and between the cities and the water. The many architects and professors involved in the Asuncion-Clorinda project (2008) are: Pablo Beita and Rafael Iglesia from Argentina; Alvaro Puntoni, Angelo Bucci, Carlos Barossi, Fernando de Melho and Milton Braga from Brazil; Alejandro Aravena from Chile; Gonzalo Garay Javier Corvalan, Rossana Delpino, Solano Benitez and Violeta Perez from Paraguay; Julio Gaeta from Uruguay.

15 See the official website of the Plan CHA Centro Historico de Asuncion: http://asuncioncentrohistorico.com/alianza-para-la-revitalizacion-del-centro-historico-da-a-conocer-propuestas-ganadoras-del-concurso-de-ideas-0/ and Ecosistema Urbano, Jose Valleja and Belinda Tato's, website: http://ecosistemaurbano.org/english/ecosistema-urbano-wins-the-master-plan-competition-for-the-historic-downtown-in-asuncion-paraguay/

16 Marjetica Potrč, "A Vision of the Future City and the Artist's Role as Mediator: Learning from Projects in Caracas and Amsterdam" public lecture at the Harvard Graduate School of Design, April 16, 2012.

The Walls-Race:
Splintered Urbanism in Port au Prince, Haiti

Aviva Rubin and Daniel Arthur Weissman

In a society where individuals have tenuous capacity to control their environments, the wall presents the most tangible method to delimit physical territory. In Port au Prince, Haiti, the inclination to sequester personal space and externalize the undesirable - years of corruption, neglect, and effects of the 2010 earthquake that struck the country - have instigated a walls-race. Motivated by security, homes, businesses, and institutions have raced to construct walls that exert control over territory, splintering the urban fabric into an abundance of discrete cells.[1]

The wall is typically understood as a separator - defining territory and controlling spaces, lands, and movement between. The wall physicalizes restrictions, classifications, containments, and divisions in its form, as well as in its thresholds, gates, and checkpoints. In its scalar manifestations, the wall shapes individual property, urban, national, and transnational territories, and associated flows. But, the wall has also been appropriated by informal activity in Port au Prince, emerging as the backdrop of urban experience. Though serving as a barrier, the wall becomes the very spine on which a robust and resilient informal architecture and economy is hinged.

This paper outlines meanings and uses of walls in the urban environment of Port au Prince, examining their ecological, social, and political implications. Through field analysis in 2011-12, we find three predominant wall types across the city that delimit the private from the public: the invisible edge, the building as edge, and the enclave edge (Figure 1). Although the first two are present, the third type serves as the focal point of this paper, due to its nature as a non-structural and non-shelter-producing element. The walls-race is an urban phenomenon that demonstrates a gradual and emergent construction of individually-claimed enclave edges. However, in response to this walls-race, an unsolicited informality has grown to challenge the notion of 'wall as separator.' Here, we put forth a new lens through which to consider this cellularized urban condition. In outlining this condition, we hope to reveal the implications, and opportunities, of the walls-race.

Experiencing Haiti[2]

From 2011-2012, one of the authors had the privilege to experience the reconstruction process in Port au Prince, Haiti after the devastating earthquake in January 2010. Working with a multi-disciplinary team of designers and planners from Harvard Graduate School of Design and Massachusetts Institute of Technology's School of

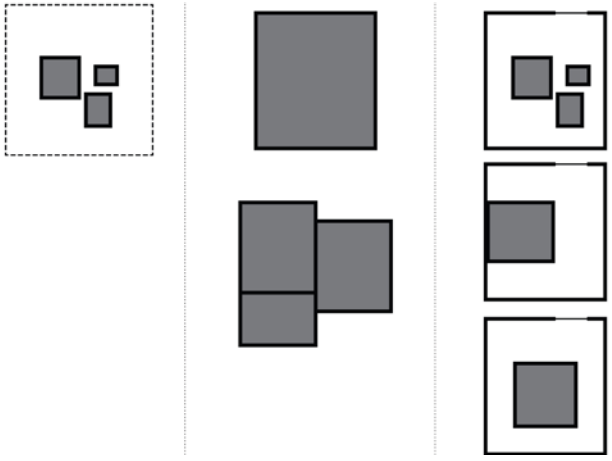

Figure 1: The three predominant wall types across the city of Port au Prince: The invisible edge (left), the building as edge (middle), and the enclave edge (right)

Architecture and Planning, our team worked on a series of design and urban planning projects across the urban region. Our first project in Zoranje, a community 10km north of the city, consisted of an existing settlement of 300 families; it was the site of a Building Expo in 2011, and 525 houses were constructed soon after. Our design work sought to recast the project not as the construction of houses, but the creation of a community. It was widely accepted as an alternative approach but was ultimately unsuited to the speed and demands of politics.[3] After Zoranje's failures, hoping to facilitate more resilient strategies for reconstruction and future urbanization, we drew on our research to collaborate with other NGOs and institutions working in Port au Prince.

Over six trips to the city, Dan became increasingly aware of how physical limits impeded movement. Dan's daily activities within the city, as a contracted employee of various NGOs, characterizes a particular experience - one of an international visitor or wealthy resident. Each entrance and exit from a meeting, hotel, or residence required the same procedure: a honk or knock to inform an armed guard that the contractors would like to pass through the security wall's massive steel door(s); a look through a little peep hole or glare through the gate; asking the driver a question in Kreyòl; passing through the threshold into the enclave; a possible showing of IDs; and receiving a visitor's pass to proceed into the building. This experience of moving through Port au Prince reveals the 'walls-race'--a nuanced phenomenon that is steeped in historical realities and manifested in multiple scales of walls.

Wallness

The wall is hardly a new phenomenon; it is an essential architectural unit of spatial separation, building construction, and earth retention. Looking closer to 'the wall' itself as an abstract element of form-making, the notion of 'wallness' suggests an intentional use of 'the wall' beyond its functional purposes of shelter, structure, and enclosure. As neutral artifact and medium, the wall takes on the significance of its proprietor's desire. Architect and theorist Peter Eisenman explains the concept of 'wallness' through his theory of materiality and interiority in architecture. Contrasting 'wallness' and 'planeness,' Eisenman differentiates architecture from the arts, painting, and sculpture by suggesting that 'wallness' embodies "both substance and act."[4] The wall takes on meaning beyond mere functionality; it projects ideas and intentions, which all architecture ultimately employs.

The meaning-laden wall materializes at multiple scales. As a vertical extrusion of a line drawn over territory, the wall defines a basic boundary. At architectural scale, the wall occurs around and within homes, schools, churches, hospitals, prisons, and cultural institutions. At a macro scale, the wall can delimit entire communities, public spaces, compounds, and state boundaries, becoming a political mechanism. Officiated systems of control, like the Great Wall of China, the Berlin wall, the 'Green-Line' between Israel and the West Bank, and the border between the United States and Mexico, predominantly aim to keep conditions – whether people, ecologies, or structures – from crossing between adjacent territories. Its broad impact produces walls of isolation or community, exclusion or inclusion, fortification, contestation, differentiation, transition, and control.

Fundamentally, urban environments necessitate a hierarchy of spaces and divisions, mapping social classes, political systems, and their protection onto the city.[5] Property holders use walls to externalize unwanted ecologies, peoples, and institutions. Within its secured boundaries, the proprietors, often those in the position of privilege, strive for purified space – their utopia. Their idealized territory attempts to equalize access to all its privileged users. But this 'flattening' of territory conditions its own limits; utopic efforts require a boundary and an edge where controlled spaces end.[6] The urban wall acts as a signifier in the vocabulary of urbanism, re-presenting the Eisenmanian conception of 'wallness' as a social, ecological, and political regulator across multiple scales in a city. As Nezar Alsayyad and Ananya Roy note in their article, *Medieval Modernity: On Citizenship and Urbanism in a Global Era*:

> *In cities, from Los Angeles to Manila, the most common paradigm of spatial organization is today the gated enclave, one that is maintained through elaborate techniques of surveillance,*

> *policing and architectural design. Not only are these residential spaces walled and gated, but they are also linked to other spaces of exclusion such as urban mega-projects and leisure developments. It is this bundling of urban spaces of seduction and safety that Graham and Marvin (2001) designate as splintering urbanism: secessionary network spaces held together through premium networked infrastructure and that quite literally 'secede' from surrounding urban environments.*[7]

In Port au Prince, the secessionary network condition is slightly different from that noted by Alsayyad and Roy. Here, instead of communal enclaves, individual enclaves are the norm, producing more staggered networks, such as SUVs trucking through the city delivering the rich from one gated enclave to the next. This form of splintering trickles down to affect all Haitian classes. In its various territorial scales, the wall endures as a fundamental source of contention. At the scale of the state, imposed and architecturalized power by singular sources may be removed under changing political conditions, such as the fall of the Berlin Wall in 1990. However, following Alsayyad and Roy, the emergent creation of walls by individual citizens in a complex urban system creates a far more pervasive urban condition not easily reversed by a singular political act.

Types of 'Wallness' in Port au Prince

> *The urban wall has long been breached by an infinitude of openings and rupture enclosures*[8]

In Port au Prince, ecological, social, and political barriers, which may or may not be physical, reinforce the environment of control. Some walls split territories of human activity and the unknown of wilderness, disrupting critical ecological flows. Others reinforce class boundaries between the haves and the have-nots, buttressing social hierarchy through all levels of society. For example, language barriers: Kreyòl speakers, the majority of Haitian citizens, find themselves linguistically separated from formalized modes of business and government, where French remains the language of governance and English the language of commerce.

Looking more closely at the production of physical walls by citizens, three types of perimeters rise to the surface: the 'invisible edge,' the 'building as edge,' and the 'enclave edge,' as limits between Port au Prince's public and private conditions. The first, the 'invisible edge,' consists of a territory (either public or private) that lacks hard demarcation from the fully public, urban space of the street (Figure 2). Rare in Port au Prince, the invisible edge creates an uncontrolled, or minimally controlled boundary between public space and private ownership. Major civic buildings such as the city's Cathedral or Iron Market contain minimal physical barriers at their territorial limits, while more banal structures like gas stations contain almost no demarcation between privately owned land and the public zone. Indeed due to this unique condition, many gas stations become activated for other purposes such as Tap Tap stops.[9]

The second, the 'building as edge,' is more common. Here, the building footprint is the perimeter of the territory, engendering a 'publicness,' or privateness, to the building. Not dissimilar to full block skyscrapers in midtown Manhattan, in the blunt transition of building wall to urban space, the 'building as edge' takes form in Port au Prince's numerous informal settlements, where one's territory is only as big as its walls (Figure 3). The tremendous constraints on available space force home perimeters to be erected at maximum capacity, ranging from 15 to 30 square meters on the ground, regardless of resident's ability to complete the compound in one building session.

The third perimeter condition, the 'enclave edge,' represents the most pervasive and instrumental wall condition in Port au Prince, visible by even the most cursory drive through the city. Employed as a means of exclusion, this condition serves the sole purpose of social security. The 'enclave edge,' most often a two to three meter high concrete block wall, separates public space from the enclave, which may include a series of outdoor private spaces and one or more buildings (Figure 4). Lacking load-bearing requirements, the wall delimits the enclave, resulting in explicitly blocking social interaction. Marking property perimeters with concrete block and a layer of cement plaster atop, this wall type

frequently includes broken glass or barbed/razor wire crowning to deter climbing (Figure 5). Further deepening the boundary, flowering plants or trees are often placed on one or both sides of the walls, and goats may be seen grazing on small strips of grass alongside. Solid metal doors that slide or swing open commonly provide the transition through the wall, with the aid of a security guard presence. In certain conditions, guards wielding either batons or shotguns at control points make their purpose clear. This 'enclave edge' presents the most aggressive urban wall condition.[10]

Movement through such walls is plainly prohibited, obliging attempters to confront a series of hostile layers. As a result, the exterior surface of the wall inevitably becomes the public face for the enclave, obscuring the architecture behind it (Figure 6). The wall defines the visual character of the street (Figure 7).

These three perimeter conditions explicate a broad array of interventions. The first describes a soft edge, creating a disciplinary and self-conscious urban environment. It places focus on the architecture. The second offers a more public edge, where building functions are displayed and visible. The third isolates, obstructs, and overtly blocks architecture from its wider context. But this third condition, the 'enclave edge,' also enables and supports the potential for the informal (Figure 8). Considering the concept of borders versus boundaries as found in ecological systems thinking and explained by Richard Sennett, the third wall condition seeks to produce boundaries, where potential encounters are staved off. He notes:

> *In natural ecologies, borders are the zones in a habitat where organisms become more interactive, due to the meeting of different species or physical conditions. The boundary is a limit; a territory beyond [which] a particular species does [not] stray.*[11]

Where the first two wall types passively interact with the urban environment, enclave edges often enable the opposite: boundaries become border conditions where activity can convene and develop. Both scenarios, borders and

Figure 2: The Invisible Edge

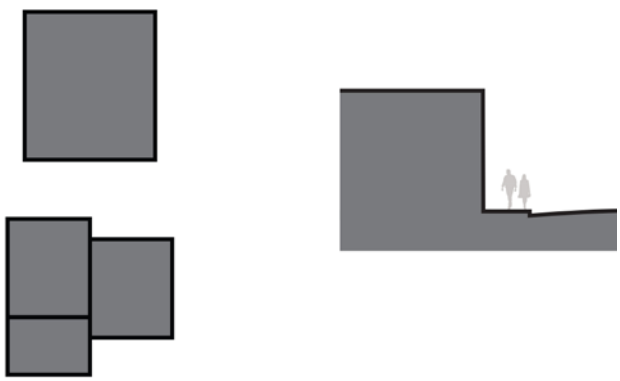

Figure 3: The Building as Edge

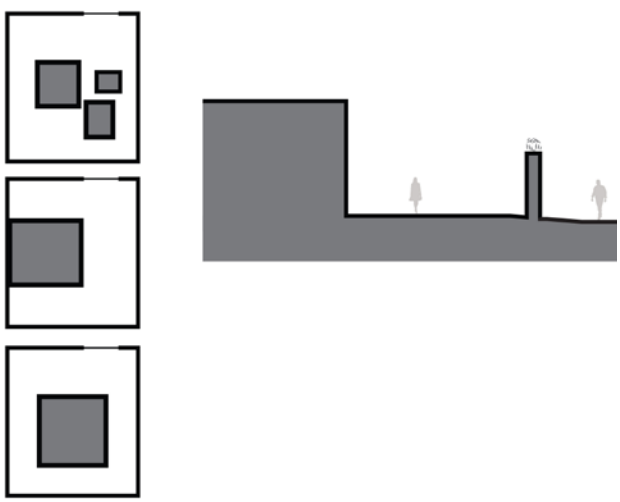

Figure 4: The Enclave Edge

boundaries, materialize throughout Port au Prince in various locations along enclave edges. While the wall as boundary hinders the possibility of rich urban experiences (the static), the wall as border acts as a spine onto which informal urban forms are mapped (the dynamic). Typologically, the appearance of the wall itself may be exactly the same in either condition. It is only through interaction with the complexity of urban space that a wall may take on its dynamic or static condition.

The Walls-Race in Port au Prince, Haiti

> *Port-au-Prince is a city of high walls, all of which came down. At first glance, the city seemed prettier in the fading light of day as all over Port-au-Prince secret gardens and hidden terraces covered in flowers and lawn furniture emerged from behind the collapsed walls. Inside these clandestine gardens, security guards fingered their guns and householders sat on curbsides.*[12]

The proliferation of enclave walls in cities like Port au Prince, Haiti, has generated a walls-race.[13] In an effort to protect against political corruption, social disorder, and urban dilapidation, the creation of urban walls propels the creation of more walls. This emergent accumulation of disaster constitutes a walls-race. Not merely homes of the rich, but all residential, commercial, and institutional functions of both formal and informal cities employ walls and their many variations to regulate and monitor parcels of land.

Within Haiti, enclave walls have proliferated for two parallel reasons. First, the quickly expanding population of Port au Prince has encroached upon privately held land throughout the city, requiring new defense mechanisms. Like many developing countries, the process of urbanization in Port au Prince has burgeoned over the past 40 years, generating extreme urban congestion and fostering impoverishment. As Peter Hallward notes, a "relentless neoliberal assault on Haiti's agrarian economy...[has] forced tens of thousands of small farmers into overcrowded urban slums."[14] Priced out of their land, or impoverished after losses in the globalized marketplace, rural populations have been forced to migrate to the city, seeking

Figures 5-7: Enclave edges in Port au Prince as hostile limits.

work. Through this urbanization, the city's built environment has expanded more rapidly than the municipalities could handle, creating a city of informality.

Secondly, continuous political upheaval and oppression throughout the country has fostered the atmosphere of unmanageable insecurity.[15] Although existent throughout Haiti's history, this trend was exacerbated after the fall of 'baby doc' Duvalier in 1986, and the subsequent bumpy path towards democracy. Since that time, any family, business and institution with the means to do so heightened their process of securing, or at least provided the 'image of security' to their property. Yet this trend actually holds roots from far earlier. As Patti Stouter notes in her document *Haitian Wisdom for Aid Buildings*:

> *The Haitian yard is shaped by a very African lifestyle. Although rural houses lack the compound walls so basic in Africa, in all other respects they resemble those of their African ancestors.*[16]

Multiple centuries of corruption and colonialism embedded in Haiti's history have impeded the possibility for democratic urban space. Colonization by the French brought conflicting methods of land-use governance, creating a complex system of land ownership. The urbanized region of Port au Prince, like other post-colonial cities, has struggled to resolve this plurality of influences, generating persistent fragmentation in the built environment.

The 2010 earthquake exacerbated this walls-race. Though the extent of looting after the earthquake remains disputed, the introduction of American and UN 'security,' or military forces reinforced a perception of insecurity across Port au Prince.[17] The earthquake destroyed poorly-constructed buildings and infrastructures, killed over 300,000 people, and displaced over a million people, creating tent camps throughout the city.[18] As these post-disaster realities are managed and life returns to a new normal, the earthquake's long-term effects persist. The enduring status of Haiti as security state manifests in the imposing physicality of 'the wall.'

Figures 8-10: Enclave edges in Port au Prince as generators of informal interaction

Conclusion: Challenging the Wall as Separator

The road is the living room of the people[19]

So, what becomes of this concept of the 'wall as separator'? And how does Port au Prince's informal and splintered urbanism test its limits and potentials? As illustrated, walls are characteristic of the built and visual environment in Haiti. The 'invisible edge,' the 'building as edge,' and the 'enclave edge' all exemplify basic relationships between private and public space. Though one can read urban walls as splintering dynamic informal life and forcing it into increasingly tighter spaces, we argue that in Port au Prince, urban walls also form the backbone to robust informal life.

At certain 'enclave edges', energetic and creative urban spaces are bolstered, along with crumbled buildings, offering a backdrop to informal markets until rebuilding processes can re-erect new walls. The non-loadbearing and seemingly independent walls of the 'enclave edge' present an anonymous environment for informal activity to develop. Here, street businesses organize to sell everything from furniture to art, chickens, or cleaning supplies (Figure 9). Some hang t-shirts, others are home to photocopy machines, women selling produce or shoes, or contain a hair salon (Figure 10). The bustle of Haitian culture braves the guarded realm of the 'enclave edge' boundary and challenges its status, becoming borders and activating edge conditions.

How then do we engage this as architects and planners? Is it even appropriate to anticipate future practices and propose alternative forms in conditions of informal occupation? Following Rahul Mehrotra's studies of informal business practices in India, or Estudio Teddy Cruz's work around the US-Mexico border, architects could legitimize and officiate such informal practices. Or, engagement could involve the co-construction of new apparatuses in service of informality, like programmed cultural events, architecture, or product design supporting appropriation and alternative usage. Or, conversely, designers could work alongside urban planning institutions to strategize the removal of the most imposing security walls, opening up new spaces for urban interaction. Recognizing that all is more complex and nuanced than one clear path of execution, there is not one 'best' role for architects. Much is contingent upon the specific splintered site and its histories, cultures, hegemonies, etc. We aim to pose questions and conditions with this paper, not cursory answers.

Although at times imposing, the 'enclave edge' walls of Port au Prince have multiplied to create borders of the Richard Sennett kind. In their extrusion of land divisions and separation from the inhabitable architecture, these walls also offer a backbone to stabilize dynamic informal activities (Figure 11). Challenging the conception of 'wall as separator,' the wall becomes a facilitator of informal growth. "The space of unofficial and informal architecture of fences and locks, of nondescript maintenance buildings - [these] no man's lands bear a patina of repressed history."[20] But their history is not just of repression. Between the walls, fences, guards, and restrictions, new life and culture continues to grow.

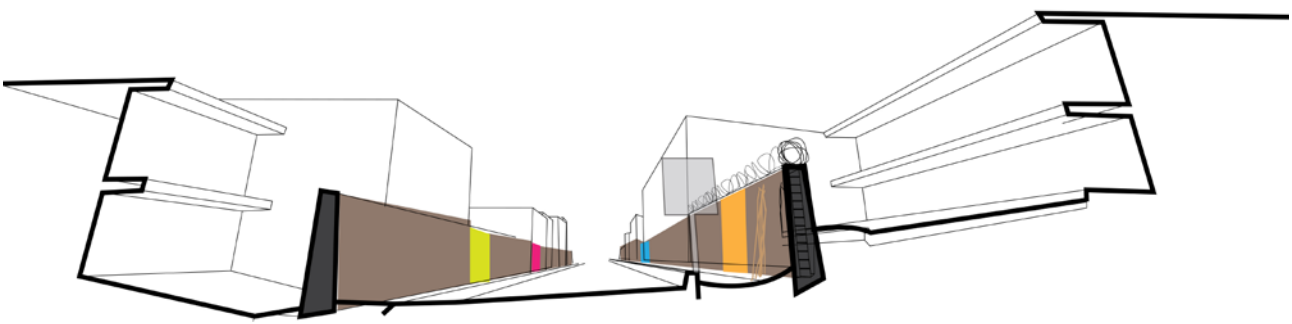

Figure 11: Perspective Section of the 'enclave edge' walls of Port au Prince

Notes

1 The notion of the splintered urban fabric presents the need for further research as to whether the walls are the signifier of the splintering or merely a symptom of larger societal conditions.
2 Due to Dan's unique experiences in Haiti, this section is told from his point of view in the first person.
3 The development at Zoranje has received significant press since completion, as it was the first, and as of 2013, is still the largest reconstruction project in the Port au Prince region following the 2010 earthquake. Among the criticism, the Huffington Post in particular revealed the many shortcomings of this constructed community: http://www.huffingtonpost.com/jane-regan/haiti-housing-exposition-_b_1911898.html?utm_hp_ref=haiti-
4 Peter Eisenman, "Chapter 9: Aspects of Modernism: Maison Domino and the Self-Referential Sign," *Eisenman Inside Out: Selected Writings,* 1963-1988 (New Haven, CT: Yale University Press, 2004), 120.
5 Paul Hirst, *Space and Power: Politics, War, and Architecture* (Cambridge, UK: Polity Press, 2005).
6 For more on internalized utopias in urban conditions, Koolhaas makes a similar observation on Manhattan in *Delirious New York*: "The sub-utopian fragments are all the more seductive for having no territorial ambitions beyond filling their interior allotments with a hyperdensity of private meanings. By leaving intact the illusions of a traditional urban landscape on the outside, this revolution insures its acceptance through its inconspicuousness." Rem Koolhaus, *Delirious New York: A Retroactive Manifesto for Manhattan* (New York: Monacelli Press, 1994), 87.
7 Nezar Alsayyad and Ananya Roy, "Medieval Modernity: On Citizenship and Urbanism in a Global Era," *Space and Polity* 10, no. 1 (April 2006): 5.
8 Paul Virilio, "The Overexposed City," in *Rethinking Architecture: A Reader in Critical Theory*, ed. by Neil Leach (London: Routledge, 1997), 384.
9 Tap Taps are the informal taxi/bus service throughout Haiti; highly adorned buses with elaborate painted exteriors, often with orange as a primary color. The name derives from the way in which riders ask the driver to stop - tap twice on the roof.
10 This 'enclave edge' condition deserves further study through GIS mapping and analysis.
11 Richard Sennett, "The Public Realm," essay for BMW Herbert Quant Foundation, date unknown <www.richardsennett.com> (16 April 2012).
12 Berlinski, Mischa; "Port-au-Prince: The Moment" New York Times Review of Books, 25 February, 2010. http://www.nybooks.com/articles/archives/2010/feb/25/port-au-prince-the-moment/?pagination=false
13 This concept has been addressed under different terms across urban environments in Latin America, Asia, and Africa. For example see Lemanski, Charlotte. 2004. "A New Apartheid? The Spatial Implications of Fear of Crime in Cape Town, South Africa." *Environment and Urbanization* 16(2): 101-112.
14 Peter Hallward, *Damming the Flood: Haiti, Aristide, and the Politics of Containment* (London: Verso Books, 2007), 37.
15 For example, the US Embassy considers Port au Prince a considerably unsafe travel destination, noting that "U.S. citizens have been victims of violent crime, including murder and kidnapping, predominantly in the Port-au-Prince area." http://haiti.usembassy.gov/service/us-citizen-services/travel-warning.html. While this refers to Americans traveling to the country, it offers a lens for understanding the class-based discrepancies of experience within Haiti.
16 Patti Stouter, "Haitian Wisdom for Aid Buildings," *Haiti Rewired*, 15 March 2010, <http://haitirewired.wired.com/profile/PattiStouter> (8 January 2012), 5.
17 As Paul Sherlock, a senior humanitarian representative for Oxfam, noted, "Security now in this particular crisis has already been raised as a major, major issue...Over the last 10, 15, 20 years, the gangs and the drug culture have taken hold of Haiti, and that is why over the last four to five years, the United Nations has been trying to administer security in the capital and all the provincial cities as well." Richard Allen Greene, "Aid workers heading to Haiti fear for their safety" CNN, January 14, 2010.
18 Janet Reitman, "Beyond Relief: How the World Failed Haiti," *Rolling Stone*, 4 August 2011 <http://www.rollingstone.com/politics/news/how-the-world-failed-haiti-20110804> (16 April 2012).
19 Government of Haiti: Inter-Ministerial Committee For Territorial Development [CIAT], "Haiti Tomorrow: Objectives And Strategies For Reconstructing The Country" March 2010 <http://www.scribd.com/doc/38650492/Haiti-Tomorrow-English-version> (16 April 2012), 55.
20 Svetlana Boym "Ruins of the Avant-Garde: From Tatlin's Tower to the Paper Architecture," in *Ruins of Modernity*, ed. by Julia Hell and Andreas Schönle (Durham, NC: Duke University Press Books, 2010), 75.

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