Dimensions Twenty
Dimensions Twenty is printed in an edition of 2000 copies at University Lithographers, Ann Arbor, Michigan in CMYK on 80# Matte Artpaper and 100# Gloss Artpaper. The cover is printed on 100# Matte Cover with a lamination on the outside.

Typeset in Vista Sans, DIN and Minion Pro. Any other fonts should be shot on sight (wait until you see the whites of their title).

Dimensions Twenty Editors  Faculty Advisor
Zain AbuSeir  Christian Unverzagt
Sarah Faruki
Vic Huang
Daniel Jarcho
Sean Lemecha
Fco. Javier Ortiz
Soohyun Park
Rachel Rush
Andy Smith
Noah Steffes
Brian M. Taddonio

The color bars that appear on every spread establish a system of navigating through the book and are sequenced to give each project its own code.

An organizational grid establishes the text column spacing and provides anchors for aligning images, captions and text.

A baseline grid establishes the overall appearance of the text and is added to each spread.

A 1/8" margin around the perimeter allows images to bleed off the page.

The book is organized and laid out in a series of 8" x 10" spreads.

Dimensions is printed and bound in an 8" x 10" format (a convention that began with Dimensions volume 16).
Reflecting Pool

not the usual mirror, mirror...

I’m sure it’s been theorized. A reflecting pool—an alternative understanding of what we know to be the case—a contemplative mirroring, a doubling, an intensification and an inversion. In composition, reflections are a practiced reconfiguration promising neither complexity nor truth. Undeterred, we defined 2006-07, the 100th anniversary of the college, as a time for deep reflection—the kind where the blue of the sky is undifferentiated from its watered double. We marked this, our centennial year with multiple faculty dinners and conversations, a retreat, the <<Pause>> and Global Place conferences, a visit from the architecture accreditation board, a university requested, college wide, self assessment, an exhibit of alumni work, an exhibit of contemporary student life and a soon to be released book highlighting recent faculty work. Looking both inward and backward doesn’t get any more concentrated than this.

Remarkably, the defining characteristic that emerged from these many events, discussions and self-examinations was the strength of the relationship that binds students, faculty, staff and alumni in our college. Yet it is understood that these relationships are constructed and they are constructed not top down but bottom up—on trust and mutual respect. Building real communities is neither smooth nor easy. (A good thing as friction makes heat and it can get very cold here.) But it’s not just collegiality and well crafted debate that defines us. It’s also the pleasure of making, it’s working with and next to people who share a conviction for imagining a better world—no matter how that may be defined. We are after all, fully engaged in a discipline concerned with potential—both indescribable and real.

Every once in a while someone comes along that embodies the very best of who we are and who we hope we will someday become, someone whose very presence makes a difference, someone who is unrelenting, thoughtful, inquisitive and present, a provocative thinker that deploys humor as both a weapon and a shield. Last seen he was imagining Ann Arbor sans conventional transportation where a mobile network of goods and services fulfilled needs and services instantaneously—a kind of hyper-real, on demand, dream market—unreal, full of wonder and beautiful.

Sammy Muhlfelder was a graduate architecture student in his second year. The disease that claimed him did not define him.

On behalf of the staff of Dimensions 20 who has labored so diligently to chronicle the year of looking inside out, remember Sammy.
Master of Architecture Thesis
Architecture Fellows

Aaron Betsky + Douglas S. Kelbaugh
Megan Connor
Nathalie Aounalado
Channel Park
Elizabeth Byrne Knudsen Moggio
Charles Garcia
Erin Crowe
Patricia D. Gruits
Chansik Park
Sam Zeller
Ana Trandafirescu
Juan Manuel Rois
James Bassett

Nathalie Aounalado
Charles Garcia
Elizabeth Byrne Knudsen Moggio
Erin Crowe
Patricia D. Gruits
Chansik Park
Sam Zeller
Ana Trandafirescu
Juan Manuel Rois
James Bassett
Aaron Betsky: Well to answer the question of whether or not the topics of sprawl and suburbanization are dead issues, I don’t think they are. Last year three million Americans moved to the suburbs, so suburbanization is still happening. The question is, “How is it happening, and what can be done about it to help us handle this move to the suburbs?” Of course it’s not just a move to move to different parts the Second World War, migration to the West, ten years there’s been a net migration to the South as well. That means that you’re not only moving within metropolitan areas from urban cores to suburban areas, but you’re also moving from parts of the country that have larger, more established cities to areas that are fast developing and have less of an urban infrastructure. There is even a counter movement within urban areas of people—especially a very specific population—that are moving back into the city. For the first time in twenty years in some cities, inner-city cores are growing again. So it’s a question of what can and should be done about this situation. It’s not a dead issue, it’s a very live issue. We just need to figure out what to do about it.

Douglas S. Kelbaugh: I agree. I think it’s an extremely live, very topical, very pressing question. Can current tendencies continue? No. I think a lot of the unintended consequences of sprawl and suburbanization continue to mount and pose serious problems and raise serious questions; and I think it’s one of the tough questions facing America, not only because it has a big impact on us socially, environmentally, economically and culturally, but also because it tends to be exported, although somewhat inadvertently. People around the world watch our movies and TV programs and read our magazines and tend to pick up, and in many cases emulate, these suburban tendencies, for better or worse. So it’s an international question, far bigger than America.

AB: Although, of course, it’s also not necessarily something America invented, it’s been going on in some form or another since Roman days.

DK: There’ve always been the communities that live outside the wall, both in Roman days and Medieval days, but never to the extent or in the pattern that exists at the moment.

AB: That’s undoubtedly true. Of course it’s also part of an even larger global phenomenon: the mobility of capital and people. What’s interesting is that it’s a mobility concentrated especially at the very high and very low ends of the social spectrum, so you see large masses of people moving over much larger distances than you were seeing in the early days of industrialization. One of the things industrialization does is move people, we’ve known that since the early 19th century. It used to be that people moved from the basic metropolitan area of the city into the city to work in the factories, then there was a migration to the city from within regions, then a migration to the city from within larger geographic areas. Now there are large migrations of extremely poor impoverished people either towards places of employment, or to places where they feel there’s an infrastructure that could support them, even if it really can’t. At the same time, at the very upper level of the socio-economic hierarchy, there’s an astonishing mobility of people in leadership positions and highly paid positions all around the world moving to the city centers. There’s more stability. Eighteen percent of all middle-class Americans moved last year. That means almost one in every five Americans picked up and moved. That’s a huge amount of mobility.

DK: Mobility and flow have certainly increased, not only of people, but of money, information and technology. In some cases the move would be more aptly described as a diaspora. People are actually forced to flee; and it’s often the poorest people who are moving, not by choice or volition, but because they have to.

AB: I think it’s not only a mobility of people, money and technology, it’s also a mobility of goods. One of the things that is often overlooked is that possibly the most profound impact of technological developments on our physical landscape in the last fifteen years, has been the growth of distribution centers, and J. B. Jackson is the only one (in his essay, “Truck City,” written almost 30 years ago) who started to think about what that was going to do to our landscape. On one hand, the distribution center has changed the landscape on a very small level, but it’s also changed our landscape in terms of very large developments. People talk about the astonishing growth of a place like Las Vegas, and a lot of the reason Las Vegas has grown has nothing to do with the gaming industry, and has only
The big question is will people stay. There's also the movement of immigrants. Sometimes they move to the first ring suburbs. Either way, immigrants are still immigrants. Immigrants are still moving to cities, but not always to the city represents the biggest boost in urban population, the biggest factor is within the metropolitan area, density has actually decreased. Although most grow, but because they've dispersed geographically at an even faster rate, its pros and cons; but there are countervailing tendencies, which you've listed. Most of the large metropolitan areas in America saw an increase in population in the last census. Some also saw their inner-city populations grow, but because they've dispersed geographically at an even faster rate, within the metropolitan area, density has actually decreased. Although most people think the movement of young people and old people back to the city represents the biggest boost in urban population, the biggest factor is still immigrants. Immigrants are still moving to cities, but not always to the center. Sometimes they move to the first ring suburbs. Either way, immigrants are still the demographic engine of cities. There's also the movement of a lot of younger people to the city, but the cities are also attracting a lot of empty-nesters.

The big question is will people stay there when they marry and have kids, and more importantly, when those kids become of school age? Or will they then move to the suburbs where many of them grew up and to which many of their parents fled a generation or two earlier? That's not at all clear, but Sam Zell (the University of Michigan's wealthiest graduate, the founder of REITs and arguably the father of international real estate finance) said in Detroit at a conference we hosted in October, that the biggest single factor—picture the real estate development crowd waiting with baited breath for the silver bullet—is not liquidity or low interest rates or cheap land or whatever, but the fact that people are getting married and having kids at an older age! It's having a big impact because it means that his generation, which used to build suburban office parks and malls, are now investing in the city because that's where the young talent is. So, there's been a 180° swing among the cutting-edge developers, who are now trying to build a 24/7 city. Look at the Urban Land Institute, which is the professional organization of real estate developers, and 90% of their literature is about the 24/7 city. It has changed the way investment money is flowing and the way developers are spending it. Despite the continued out-migration, the cutting-edge developers are building in the cities. They may also build in the suburbs, but if they want to be where the young talent wants to be, they realize that they need to be in a different location in a mixed-use mode, as opposed to in suburbia in a single-use mode. They also realize that many older people now want to live in cities, and between the older and younger residents, there's been a fundamental shift in the market.

AB: The interesting thing is that these patterns are not necessarily recreating the cities as we knew them (nothing ever returns in the same way), but sprawl is adding to the traditional notion that an urban core is the command control center where the power is located. Whether that power is the government, the cultural capital or the proverbial downtown law firm, it's now adding an entertainment aspect to the downtown. If you can see this trend, it's astonishing how fast it's occurring. Cincinnati has a very viable downtown, it's fairly dense, well visited, well trafficked and all the retail in the last couple of years has started to move out very rapidly and is being replaced by Palomino, McCormick and Schmick's and all these other big entertainment-oriented establishments.

AB: What that also means though, is that the downtown is becoming more specialized. It's not where you go for everything and it's not necessarily where you live, and if you do live there, not everything is at your doorstep. Quite often you probably still have to get in your car to go to your job. You have to go to the Kroger or A&P to get your groceries. There are many parts of Los Angeles where reverse commutes are more prevalent than traditional commutes. So it's interesting that this pattern is becoming part of a constellation of different nodal points within a much more dispersed urban area, because at the same time you're seeing
these reverse commutes, you’re seeing traditional suburban crossroads or shopping mall areas take on more and more of the characteristics of what we used to define as a downtown, including, in some cases, people living in these suburban crossroads. You’re beginning to see these hot spots that occur in a dispersed manner around the urban landscape. It used to be that a city would be focused on whether there was a river or port or some similar geographic feature, but now it’s oriented at the intersection of major highways, or some other transportation base intersection. So there’s this new kind of geography, with cores that are dispersed and more specialized. What’s important about this is that, although I think you’re absolutely right, it does have a cleaner life and reality to it, it’s also a much more evanescent and mobile situation. There’s much less tied to bricks and mortar, so there’s not a big factory that everybody works at. Instead there’s a sense that you live in a big open loft (which itself is a much more mobile spatial experience), there are a lot less fixed walls, which I think is symbolic of the whole urban condition: you might work this year at a certain law firm, advertising agency or hospital, and the next year you’ll move to another one. There’s no sense that you live in any particular place because that’s where your job is and you have to remain in that place. There’s a sense instead that you live somewhere simply because it’s an attractive place to live. It has the kinds of entertainment facilities and other kinds of things that you might want in a city, but at the same time, you want to (or have to) use other aspects of a much larger urban landscape. So the city is coming back in a specialized and more intense (and I think you’re right, in many ways more enjoyable) way, but it’s also coming back as part of a much more fluid landscape. There isn’t the fixed monumental core anymore.

DK: Cities are more poly-nucleated than they ever have been, but they still have cores and historical centers, often containing the architectural gems, the theatres, the museums, the libraries and the other sorts of institutions associated with the public realm (including government). The core may no longer be the geographic center, within the bigger metropolitan area. So it’s a different metropolis, as well as a different downtown. The automobile has certainly had a big impact, and is one of the primary reasons for this unprecedented pattern of development, which is essentially a post WWII phenomenon that started in this country and has since been copied in other countries.

AB: I agree, one of the things the city has to offer, in a very positive sense, is the past. The central core is the keeper of the institutional, societal and cultural memory. The downtown is where the legacy that we’ve built up in terms of art, music, libraries and knowledge is located. It has also often been indicated that the skills present at the university or hospital are still located downtown. That kind of knowledge core, that kind of monumental core, both in appearance and in function, is what a downtown has to offer in relationship to all these other aspects around it. The question that I think we have to confront is that if it’s true that we have this poly-nucleated environment that’s much more mobile and people are moving around in it, how do you, from your knowledge of architecture, allow that kind of landscape to develop in a manner that is socially and environmentally more logical? Let’s not even use phrases like “just” or “a bit,” but simply say “more logical.” One of the problems with sprawl is that a lot of the infrastructure that you might want to use as an alternative to the automobile (which we all recognize is incredibly wasteful, produces huge amounts of pollution, social isolation, all kinds of horrible things) is still based, in terms of infrastructure, on the notion of a hub and spoke system. To me the most interesting question is, “How do we develop new forms of infrastructure, especially visible infrastructure, that can become the monuments of the future, and become the new membrane for this kind of a landscape?” For me that means not just designing new forms of mass transportation, but also new forms of cars. I always quote Craig Hodgetts, who said the problem with modern cities is that we need to design better cars, and I think that has to be part of the equation. In the American automotive industry there’s finally some movement in that direction. There’s also some movement in the kind of hybrids between cars and mass transportation and the mini-bus systems that we’re starting to copy from the third world, and are now beginning to appear in the larger metropolitan areas like LA, New York and Chicago.

DK: I don’t think we’re doing this subject a complete service here. Here’s where we differ: it is really a question of whether or not we want to accept and accommodate this pattern of development. There’s strong disagreement among reasonable people about whether or not that’s a good strategy. I personally think the pattern that we’ve been describing is environmentally, socially and economically unsustainable; and that it’s a naïve sort of urbanism, a big cul-de-sac, both literally and figuratively, that our economy and society has actually been trapped in for quite a while. It has a lot of unintended consequences, and is a conspiracy of good intentions. “Specialization” is a really key word. For the first time in the history of the planet we live in a specialized built environment: nothing but single zones and buildings. Single-use zoning is a relatively new idea, advanced in America, where you separate out uses and essentially connect them with automotive travel. We spend billions of dollars each year separating ourselves from each other and then we spend billions reconnecting. It’s not clear we can continue to afford that luxury. It’s all been predicated on very cheap land and very cheap energy, and I don’t think it takes a rocket scientist to understand that energy is going to get (is already getting) a lot more expensive. It’s a landscape that’s designed and developed by specialists. There are architects and engineers who do only suburban building types. It’s
financed by specialized bankers, built by specialized real estate developers. Just as importantly it's conceived by and regulated by specialists. Whether it's the fire department that wants to optimize for fire safety or the planning department that wants to optimize for parking, it's all driven by good intentions. It's all decent people trying to make a better environment; but the sum total of their specialized single efforts is an unsustainable system.

**AB:** I agree with you to a certain extent. I think specialization absolutely is a key factor in the current state of suburban development, as is the optimization and regulation of every aspect of our environment. We are controlled by codes. We live in a world of codes. Whether it's building codes, financial codes or computer codes, codes are what control more and more of what we do. I'm not sure that there is an answer to this issue of codes, so my question instead is, “How can you work with them?” The one place where I disagree with you is that I'm not sure it's only predicated on cheap land and cheap gas. If you look at Europe, where I lived the last five and a half years, gas is four times as expensive as it is in America and land is incredibly expensive, especially in the denser parts of the city, but you still get many of the same suburban patterns and much of the same dispersal as we have in America. I lived in a city where I could, if I wanted, bicycle to work, or take the metro to work, or take the train to anywhere I wanted, very, very easily, and yet the complexity of my life and the lives of everyone I knew was such that this very well-developed system of mass transportation only worked half the time, both economically and in terms of efficient use of time, because everything is so dispersed. One of the interesting things the Dutch have begun to do is to ask the question, “Can you intersect codes?” For instance, one of the things that people forget about when they look at these snazzy buildings someone like Rem Koolhaas or MVRDV does, is that (to me) the real innovation is not so much the way these buildings look, as is the notion that they see what they do as architects as a way of trying to bring a forced intersection between various specialized needs, functions, programs or materials. Quite literally in their buildings, if you think about the McCormick Tribune Campus Center or some of the other buildings that OMA has done, it's about trying to create an artificial dense node in what is seen as this atomized landscape of specialization. To me, this attempt at creating these intersections is a core thing that you can do to respond to these tendencies of sprawl and suburbanization. You can ask yourself the question, “What can architecture do to, a.) create an infrastructure that is viable and that is more logical and less wasteful, and b.) use its knowledge of function, form, all the basics of architecture, to create moments of intensity and intersection, and to create ways of bringing these kinds of different activities and people together in an urban environment?”

**DK:** Let me just add, and agree to some extent, that the automobile is a fundamental part of our culture and a fundamental part of European culture. There's no way all trips can be taken by transit, but many more trips could be taken by transit in this country. If you take New York City off the table, there are not many transit trips in this country. New York City accounts for about 40% of the transit trips in the US, and the rest of the country is almost devoid of transit. And it's because of this low density pattern of settlement with a very low F.A.R. (floor/area ratio) that simply can't support transit.

**AB:** It can't support current mass transit. You could think of other models that could support it.

**DK:** Well, the most viable light rail is in Europe, where the crashability standards are much more relaxed than America. I wish America would adopt more reasonable crash standards and bring the hardware cost of transit down. But even in European light transit, it still requires a certain density to work. Why don't we have density? There are a lot of reasons, but certainly you could argue that we've intensively subsidized sprawl for a long time, first by building the interstate highway system, the biggest public works project in the history of the planet; second by the veterans home mortgage program after WWII; third by the largest single subsidy in the US—the ability to write off mortgage interest payments on your annual income tax. All of these favor home ownership as opposed to rental housing, which tends to be more urban. Plus we've subsidized sprawl with cheap energy, we've subsidized it with sewer systems, we've subsidized it with lax environmental standards and with a military that's deployed to protect our oil interests abroad. And of course these external costs are barely taken into account when we pay for gasoline at the pump. We pay for all of these subsidies through our taxes, and we're given an artificial cue every time we fill up our tank with under-priced gas. We think we're paying the true cost of gasoline, but we're paying for a fraction of it. So we've been misleading ourselves for a couple of generations and the consequences are that we not only have low density, we actually have low density and congestion, which is a very difficult thing to do!

**AB:** What's very interesting to me is that those have been the standard answers for sprawl in America, but if you look at the experience I had recently in the Netherlands, where there's a very dense population, where road building is not subsidized to the same extent as here in America and where mass transit is available in the areas of high density, there is still a great deal of sprawl. Survey after survey shows that people want to live in sprawl. I don't want to live in a dense high rise with people all around me, I want to live in sprawl too. It's a romantic ideal. On the one hand, I think we should ask the question “Is there not a romantic ideal possible to the suburban condition?” One of the interesting things is that at the
core of suburbia is the Jeffersonian ideal of living out in the country. This idea of sprawl goes back way before subsidized roads. The desire to live out in nature goes back to the early 19th century, so we have to ask the question, “Is there some way that ideal can be recaptured and done right?” For me some of the key factors are indeed these notions of mass transit, and I think one of the problems with mass transit is that we have to get away from fixed transit notions, both in terms of rail and also in terms of large aggregated systems of transportation, like buses. We need to think much smaller, much more dispersed and much more on-demand. We need to think much more in terms of mini-buses, shared cars and other similar alternatives that are now being developed in Europe.

DK: All those para-transit, meta-transit ideas are good. I think we need a whole panoply, everything from heavy rail to light rail, to buses, to para-transit, to station cars, to Zipcars. We need all of those and more if we’re going to solve this problem. The automobile, though, is still the fundamental unit; and the problem with it is that it’s twenty times as big as we are, weighs twenty times as much as we do and wants to travel twenty times as fast as we walk. We can’t build a good city when everyone is tethered to a machine of that magnitude in size, weight and speed. So there’s a fundamental problem of how do we build walkable urbanity, mixed-use nodes, if we’re going to have automobiles? Transit requires a walking trip at either end, at both the origin and destination. There’s always a walking trip and therefore you have to have compact built environments at the transit stops, and they need to be mixed use, so there’s a reason to walk. If we’re going to have walkability, we have to have places worth walking to; we have to have enough density to support those places, and it has to be safe and commodious. It can’t feel dangerous (either danger from vehicles or from crime) and it has to be pleasantly scaled for the human being, who hasn’t changed physically since the origin of cities and who still feels comfortable and happy moving around on foot.

AB: That’s one place where I disagree with you because I don’t think that you can condense everything that we want or need in our lives into a series of interactive or mixed-use nodes. I think we have to realize that unless we have a revolution, we are going to have a completely dispersed system of schools, stores, facilities and workplaces, and that moving back and forth between all those different points means having to find some form of extremely mobile or flexible transportation.

DK: Yes, if we maintain this pattern of development. However, if we return to denser urban development many, by no means all the trips, but up to maybe 40-50% of them can be done by foot, by bike and by transit. There are also going to be many trips (you’re absolutely right) to specialized locations that will require vehicles, but they may not be traditional, conventional cars; there may be new versions of motorized vehicles. The motor bike and Vespa are so important in China, as is the bicycle. Unfortunately, China is starting to copy our automobile habits and giving up the wholesale use of bikes. They’re still by far the largest manufacturer and users of bicycles, but it’s fast declining and their cities are becoming extremely congested and polluted and dysfunctional in many ways. I think there is a revolution going on. You’re right to point out that it’s going to take a revolution, and I think it’s going to be led by expensive energy and by environmental issues. Global warming is a big, big deal. There’s no way we can continue this pattern, even with energy-efficient vehicles. Efficient automobility is not going to solve the global warming problem, and even if it did, there would still be the congestion problem because we have devised a system—it’s hard to believe that we’ve been able to do it—of low density, with a hierarchy of roads (a tree as opposed to a network or a grid) that results in more congestion in suburbia than in the cities. Our traffic engineers (again, specialists) are beginning to realize they made a huge mistake in the way they’ve laid out roads for the last 50 years in this country. They’re now starting to give up on the idea of the hierarchical system, which essentially goes from cul-de-sac to collector to arterial to freeway and adding more lanes. They’re realizing that a network or grid has higher capacity and shorter travel times. Even when the travel time is longer in the grid, the psychological travel time is less.

AB: I think it comes back to the Jeffersonian grid. I think that ideal is again at the heart of America, and a lot of the suburban ideal is invested in this dispersed network.

DK: The Jeffersonian grid has nothing to do with the automotive grid. It’s true that we come from a country with a great suspicion of urbanism. Jefferson loved to spend time in Paris; but he did favor an agrarian aristocracy and his anti-urban ethic for this country continues to this day. There’s no doubt about this bias. The city has been associated with sin and dissipation and squalor and disease. He did lay out a very large grid across the country, but that had nothing to do with transportation per se.

AB: And dense cities are environmental disasters. They are extremely inefficient in terms of having to move things in and out of them, and also in terms of the amount of energy they waste. Dense cities are not the answer. More efficient and saner ways of building are the answer. Networks are the answer.

DK: This is a fundamental disagreement. The greenest places on the planet, not chromatically—i.e., not in terms of grass and trees—are cities; and the denser the city, the greener they are environmentally. New York City is the
conditions, all the way from the planning level to the individual home, to
given situation of suburban sprawl, what can we do in the design of these
but we as architects and planners need to ask ourselves, in this current,
much as we need to be and we're not necessarily transportation planners;
might believe in environmentalism, we're not necessarily politicians, as
suburbs can be solved; and I think it's our charge as architects and planners
more environmentally logical suburban home. The design problems of the
with existing expectation patterns and financing patterns to produce a
system of organization. Individual homes need to have much smaller
of transportation needs to be replaced with a more open and networked
manner. I think a lot could be done. You're right, the hierarchical system
take up most of New England. But, because it's concentrated, it's
more efficient not only in terms of transportation, but also in terms
of land use, infrastructure, heating buildings and other energy flows and
resources.

AB: Well there's a lot of conflicting data about that, because you can also
look at New York and say that the amount of energy and infrastructure it
takes to move things—people and food for example—into the city, and the
amount that it takes to move sewage and waste out of it, is just enormous
and evasive. In an infrastructural sense, the congestion is incredible.

DK: Here's the fundamental problem with that logic and it's one that
environmentalists are also prey to. The environmentalists generally agree
with you. They think low density patterns are in fact greener. It's because they
don't put in the denominator. It's not a question of how much energy the city
uses, or how much garbage it produces, or how much time and resources
are consumed, in absolute terms. You need to figure it on a per-capita basis.
On average, the ecological footprint of an individual living in a dense city is
much lower than someone living in either a suburbia or exurbia. They take
fewer and shorter trips. They take many of them by transit and many by foot
and their compact buildings are more energy-efficient and resource-efficient.
Although there are certain diseconomies of scale because of tightly packed
congested areas, on a per-capita basis cities are far greener than suburbia.

AB: I think that's because we're not doing suburbia right. Just as I think
we could do much to improve the environmental footprint of cities
(and a lot is going on with the Chicago's Green Roof Initiative—planting
trees and similar interventions), we could (and need) to do much more
to make suburbia work in a more environmentally sane and logical
manner. I think a lot could be done. You're right, the hierarchical system
of transportation needs to be replaced with a more open and networked
system of organization. Individual homes need to have much smaller
energy footprints, and they can, the technology is there. We can work
with existing expectation patterns and financing patterns to produce a
more environmentally logical suburban home. The design problems of the
suburbs can be solved, and I think it's our charge as architects and planners
to solve them. We're not necessarily environmentalists, however much we
might believe in environmentalism, we're not necessarily politicians, as
much as we need to be and we're not necessarily transportation planners;
but we as architects and planners need to ask ourselves, in this current,
given situation of suburban sprawl, what can we do in the design of these
conditions, all the way from the planning level to the individual home, to
make the environment more sane? If we did that, I think we would soon
part from our specialization of this larger speculation.

You're right, the central question is whether or not we can find an
alternative to the car. My only difference in direction on that matter is that
I'm interested in questioning whether or not we can find an alternative
that allows for the kind of mobility, dispersal and freedom that is part of
our social structure, that gives us a great deal of choice and freedom, and
that creates what Frank Lloyd Wright called a “democratic landscape.” Is
there some way to find an alternative to the car that allows that to happen?

DK: Not yet.

AB: I also think that the city as a model is not necessarily evil, nor is it
the greatest good. I don't think that because, at certain times in history,
cities have provided things that we want and need, and because they can
be exciting, that they are the only good mode of urban habitation or of
human habitation in general. I think they are one in a scala of this diverse
landscape, and we have to figure out both how to make the cities work
better and how to make sprawl work better. We can't limit ourselves to one
or the other.

DK: I think people who want to live in a dispersed pattern have every
right to do so. My only request is, my only insistence is that they pay for
it. We can no longer afford to subsidize a pattern that is environmentally
deleterious in terms of habitat loss, energy use, water run-off, pollution
and global warming. We can't afford to subsidize it economically. It's also
more dangerous to live in the suburbs. If you look at automobile deaths and
injuries, the generations that fled the city and took their kids to the suburbs
actually exposed their kids to greater danger. Despite the higher crime rate
in cities, you're more likely to die living in a suburb because you take
longer and more frequent trips by automobile. There are other indices like
that that would indicate it's a less sustainable mode of living than we think.
But nonetheless, suburbia should be part of the repertoire and it should be an
available offering, if people are willing to pay the freight. The other question
is, is it really a freer lifestyle? I would argue that it's less free in many ways
because you're tethered to a vehicle. The most I berating I festy le is one
where you can walk. It's the safest, most comfortable, most enjoyable,
healthiest way to move around. Now, there are places in suburbia you can
walk, like the mall, but you give up some of your constitutional rights the
minute you walk in. You can't make a political protest for instance. It's not
the same thing as a Main Street, it's not as genuine a public realm. Also you
tend to live taking ten to twelve trips per day by vehicle, you communicate
generally by electronic mode, you spend a lot of time in front of the TV or
the computer. There isn't this sort of public realm that you get in the city,
which I think is important, because if you don’t see other people in the full range of the human condition and perhaps rub shoulders with them, you lose sight of the spectrum and cross section of humanity. You get an insulated and isolated view of the world. When we were doing solar buildings in the 60s we did a lot of passive solar buildings that were trying to make suburbia more efficient both in terms of energy, heating, cooling and lighting, as well as in the use of recyclable materials and better landscaping techniques. It wasn’t long before we realized that we were essentially enabling people to feel OK about stupid and wasteful land use patterns.

AB: That’s because you have to think of it as saner land use patterns as well as the use of saner materials.

DK: That’s right, and that’s why we started this smart growth movement, because we realized no matter how efficient those vehicles were, or how efficient those buildings were thermally, it was still an unsustainable pattern. We realized it would require denser nodes, not necessarily in the old central core, but it would require a distributed network of denser mixed-used nodes that would allow, not all trips, but a reasonable number to be taken by bike and foot and by transit. I don’t think we can have it both ways.

AB: I think we can have this smart growth movement as part of the mix, but I don’t think that we’ve fully explored, and are only now beginning to explore (again, I would use Europe as a model) some of the ways in which a dispersed settlement pattern can be done in an efficient and environmentally sane manner. And to your other point about public space, increasingly the public space of a city is not a public space that is without conditioning either. It is controlled, it’s subject to the same kind of limitations as your average shopping mall. It’s more and more watched over. It’s more and more limited. I don’t think the question any more is a choice between a shopping mall and the city, it’s a question of how much are we willing to allow ourselves to be controlled in favor of security. It comes back to a question of safety. We are designing our buildings more and more so that there’s absolutely no possibility that we can trip, fall or do anything whatsoever to hurt ourselves. This kind of paranoia or fear at every level is what’s governing more and more of the world of architecture, and I think it’s a slightly different issue (but a very important one) that we have to figure how to break out of that pattern.

Another point that’s very interesting is that in the Netherlands, where you pay for your road usage, they’re preparing a new system that will be introduced in 2010 where you will pay graduated amounts to use the road depending on where and when you use it. The Dutch have found that there’s virtually no friction there in terms of that kind of pricing. People will adjust their commuting times or distances slightly, but they see this system as part of a just use of their income. Similarly, they have started mooting the point of getting rid of mortgage deductions. In the Netherlands as well as America, mortgage deductions are one of the greatest boons to the housing industry, or so it has always been thought, because you can deduct your mortgages exactly the same as in America. Initially, the social democrats were up in arms over this and they were being debated by the right wing parties; but when they started doing studies and found out the difference in terms of what people can afford, want to pay or feel that they would be willing to afford is minimal, so now they’re thinking more in terms of how they can fine-tune this mortgage system to encourage the kinds of living patterns that they want. I think this would be a much more interesting thing to do in America rather than saying, “Let’s just get rid of mortgage deductions.” I think one of the interesting things you could do in this current state of sprawl in America is try to figure out incentives that would have subsidies for new transportation systems built in.

DK: There are lots of those ideas kicking around.

AB: The one problem I have with all of this is, I’m talking as an interested lay person, this is not my specialization. What I know a little bit about is architecture and planning, and my interest is in questioning what we can do in terms of the spatial arrangements and the way in which we develop planning and architecture tools so that we can contribute to a more logical use of the land. I think as citizens we can take one position or the other on whether or not we think that our tax structure should do this or should do that, but I think as architects and designers, we should be able to contribute our expertise in a critical manner in the design of these kinds of mobile landscapes that we all have to live and work in.

DK: There are some inverted ideas that I have to challenge. For starters, New Jersey is the same density as Holland. I think the Netherlands is fundamentally a better designed and planned place than New Jersey. So I think the fact that suburbia and suburban patterns are developing more in Europe is an unfortunate sign. It’s a sign of wealth, I think. Although the true cost of building and operating sprawl is masked by low pricing, it is more costly than cities. You have to realize, suburbia is an immensely attractive proposition for Americans because it’s priced so cheaply. You can get a bigger house at a lower price. You’ve got great schools. You’ve got lots of subsidized infrastructure. You’ve got a mortgage tax deduction. The big American project since WWII, I believe, has been suburbia. It’s been so big, no one had to write about it; no one had to speak about it; nobody had to legislate it or defend it. It was just understood after WWII that we were going to spread out, and that physical mobility and social mobility were two fundamental
people from building accessory units or building more units on their lots. It's against the zoning law! It's zoning that keeps government regulation that's insisting on single uses. You can't build a Main Street today in America. It's suburban zoning that is keeping the density low. It's sprawl is a result of market forces. In fact, if we had a true market, we would have more density. It's not a market phenomenon. It is a socially constructed environment and since it is socially constructed, it can be socially deconstructed. In fact, if we had a true market, we would have more density. It's suburban zoning that is keeping the density low. It's government regulation that's insisting on single uses. You can't build a Main Street today in America. It's against the zoning law! It's zoning that keeps people from building accessory units or building more units on their lots. It's zoning that keeps the retail and offices out. It's not a market phenomenon. It's a highly regulated intentional pattern of development that, as I said, is a result of good intentions; but unfortunately, if you add it all up, it doesn't seem to be working now, and I don't think any amount of good architecture is going to be able to bail out the system.

AB: Obviously we could keep discussing this forever. The only thing I would say is that you're right, but I'm less interested in getting on a moral high horse and more interested in trying to figure out what you can do in that situation. I don't want to live next to a factory or a highway or a train track. I don't necessarily want to live next to a loud bar or restaurant. There's a reason why zoning appeared, not just because some evil genius thought of it and said we're going to make the city disappear. There is a kind of logic to it. There is a way in which it works.

DK: The origin of zoning is a good one. We know it was established to keep “the pigs out of the parlor” and to separate noxious uses, but that's not what it's about now. It's primarily about protecting real estate values. So it is not a moral question. Every issue I have brought up is a pragmatic question of quality of life and ultimately of survival. We're talking about economic issues and environmental issues. These are not moral issues.

AB: It's not a question of survival; it's a question of trying to figure out what to do with sprawl.

DK: I mean this reference to the moral high horse. If we actually let the market do its thing we would find denser developments and more mixed use, but we haven't let the market do that and it's rather hypocritical of many Americans, not you, to talk about sprawl as a natural, inevitable phenomenon. It is a socially constructed environment and since it is socially constructed, it can be socially deconstructed.

AB: Or reconstructed.

DK: There are other options. We are not locked into this pattern of development.

AB: That's absolutely true. We need to change it and it's just a question of how.

DK: And to what?

AB: It started fifty years before that—it didn't start after the Second World War.

DK: The physical mobility started in a new way after WWII. The social mobility, thank God, has survived and still is wonderful. I think America is still the most socially mobile country, but our interest and obsession with physical mobility is starting to do us in. It's starting to come to the point where it's either too congested or too polluting or too environmentally deleterious or unsustainable. But it's understandable why people move to suburbia. It's a good deal. It's been designed to be a good deal, and the cities have of course been on the other end of this spiral of self-reinforcing consequences, both intended and unintended. Suburbia tended to depopulate, deinvest and make the cities dysfunctional. Plus there's all the news we get every night on the eleven o'clock news about urban crime and fire and social indices that aren't very positive. The city has been bashed while the suburb has been subsidized and even glorified. So I don't think it's been a level playing field. I don't think it is a free market. I don't think while the suburb has been subsidized and even glorified. So I don't think it's been a level playing field. I don't think it is a free market. I don't think it is a free market. I don't think it is a free market. I don't think it is a free market.
2006 Graduate Thesis Awards

Megan Conner
Patricia D. Gruits
David Karle
Amit Sinha
A city is comprised of many layers of narratives, intrinsic to the establishment of a collective identity. These stories serve as a source of pride, a way to place oneself in society and establish order and community within a chaotic world. Stories bind the people dwelling in the city to the city and, as Gary Snyder states in his book, A Place in Space, “direct experience, generation by generation, feeds back into the tale told.” Part of the direct experience is the group context itself, a circle of listeners who murmur the burden back or voice approval, or more. Meaning flashes from mind to mind. “Over time, persuasions may twist, exaggerate or ameliorate stories allowing them to become more logical, more comedic and more absurd, comprised of both the familiar and the unusual. Although certain stories become forgotten or lost, they remain essential to the evolution of a place.

Threshold to the Uncanny attempts to reveal these narratives through varying levels of methodologies, exposing the uncanny nature of cities and opening possibilities for how architects can re-conceive programs and spaces as constructs. At the urban scale, important catalysts for events, investigating uncovering past and present facts and folklore and creating relationships between them are a few of the many narratives that have the potential to contribute to a new way of thinking about a city for re-occupation.

The city chosen for investigation is Port Arthur, Texas, located along the Gulf Coast at the Texas/Louisiana border. Comprised of approximately 60,000 people, Port Arthur is considered an oil capital of the nation, and carries the stigma it leaves behind. Recently, despite its close proximity to such a rich industry and its destination as one of the busiest trade ports in the nation, factors such as suburbanization and overseas drilling have negatively affected the downtown business district to the point of virtual abandonment. In addition to its shocking physical condition located among the presence of acres and acres of oil refineries, contained within Port Arthur are many stories, from historical facts to fantastical folklore, which have survived and impacted the community through the years. Steven Spiers reinforces the importance of history and its impact on a city in his book, Urban Visions, by stating, “The city is a monument to itself and thus a piece of didactic theatre. Each city, even the most horrendous, is and remains a didactic formation, which tells a story, composed of its own memories...”

Process

Architecture and the concept of place (or non-place) have become prevalent discussions occurring in architecture, planning and landscape architecture schools, specifically relating to the issues of de-industrialization and suburbanization. In these discussions, suburbanization is considered, by most, a phenomenon which transforms once thriving communities into landscapes of decay and abandonment. What is the architect’s role in this scenario? Is the issue one that is considered a hindrance to a more profound set or architectural provocations, one for which we should sit back and enjoy the ride or one that opens doors to a new trend of discovering lost or buried treasures left behind in the dismal state of de-industrialization?

This project challenges how the architect can identify a new approach to architecture at the ambiguous scale of a city through redefining one’s role to be more perceptive and insightful, absorbing the context in detail from historic perspectives to future potentials. This architect is one who acts as a detective, searching for what already exists beyond the blighted exterior of the city, uncovering the surreal within the real. This architect can then be considered an imaginative creator, using these revealed realms as a catalyst for an array of options for re-occupation. Finally, this architect can use these investigative processes as a storyteller, or provider of new stories, lending insight for unique programs, fresh approaches and intelligent designs as a strategy for redevelopment. Through these processes, does a new city begin to emerge?

Architect as Detective

To address these questions, initial site explorations provided a more intimate approach than traditional site research. This series of explorations featured revealing selections of hidden local myths and resurrected significant past and present stories, both factual and fantastical, through representation of tactile experiences at the ambiguous scale of the story, exposing narratives through their inherently many scales and layers of information accumulated over time. These objects are called “story boxes.” The three-dimensional boxes perform as “windows” to another realm, a realm of the not quite fictional and not always true, where reality and fantasy are blurred.

Similar to a pilgrimage, the “story boxes” tell a story through found and/or made objects embedded with their own stigmas, stories and histories, allowing the viewer to touch, smell and interpret them through their materiality and composition, while remaining powerful in both content and insight into the significance of the story.

Cumulative “story boxes” relate to past and present cultures and associated myths and folklore, such as the once vibrant historic red light district, Mardi Gras and a new proposal for an economy based on hemp agriculture.
Similar to an exhibited work of art, each box has its own unique name describing the media and the narrative. Each name is numbered, allowing for multiple stories not covered in the exhibit to be interjected into the narrative at the viewer’s discretion.

**Architect as Imaginative Creator**

Following the investigation of existing stories within Port Arthur, hemp agriculture is introduced as a viable economic opportunity and a catalyst for re-development. Similar to current proposals of urban agriculture, the new hemp economy will territorialize the downtown, sustaining further development for revitalization. Hemp agriculture has many benefits over other crops, including the ability to grow in almost any climate without the aid of fertilizers, the ability to be grown 20 years in the same place with no depletion in soil and with the aid of little to no pesticides as well as its wide range of uses for a variety of markets. In addition to its many benefits, hemp is ironically connected to the oil industry, which ultimately helped to make it illegal. Henry Ford designed some of his first cars with hopes of running them off of hemp biodiesel, experimented with using hemp for the car bodies and even tried to open a pyrolysis plant in Upper Michigan for making biodiesel. In addition, Rudolf Diesel at one point also designed his engines to run off of hemp oil. This hemp economy, in addition to its applicability to many types of industries such as papermaking and brewing, also has the ability to take over in oil production when “dinosaur” oil has been depleted.

In the evolution of the city to a place focused on the production, harvesting and processing of hemp, a more immediate set of interventions took place, consisting of a cast of clients, or “characters.” The characters are derived from their indispensability for resettling the city, maintaining hemp and sustaining the city for further development. Characters explored include an artisan/papermaker, a farmer, a brewer and a preacher/enforcer.

How these characters occupy the city became critical. Should new spaces be created for the new occupants within a new economy, or should existing structures with embedded histories be adapted to alternative functions? The latter was chosen, creating a fresh opportunity for a defunct architecture by unearthing, reusing and renovating some of the many former gas stations in the city for working and living spaces.

The creation of characters allowed for another set of representations with a mix of fantastical and realistic elements, consisting of constructed and experiential drawings coupled with three-dimensional models. Factors shown in the hybrid representations include connections to the stories of Port Arthur, constituting the specific needs of the individual characters. The cultivation of hemp becomes the pivot point between the experiential sections, showing above-ground interventions built out from the surface, and the constructed plan, showing underground interventions carved into the surface. Unlike typical architectural drawings, the sky is framed with the ground left as ambiguous.

In reference to the story boxes, the character representations relate to the present culture, the ground and extraction, the sky and cosmology, the use of water and the effects of the moon and sun. These elements are depicted through such things as shadows that penetrate through the buildings revealing past functions, basements that uncover gas tanks and expose layers of the earth, old signs which reappear and former equipment which is exposed. These imagined spaces of what could be, still remain mysterious and reinforce the confidence one has in the known, while rendering the questionable spaces as exclusively mythological.

This method of representation demonstrates how architects can practice and form relationships with the layperson by taking into account everyday things such as the paths of the moon, its effects or potential effects on architecture and the surrounding landscape, allowing the mythical space to be blurred among the familiar, framing pragmatic space. This mythical space acts as a collective territory within which people carry on with their everyday activities. The constructs were taken enthusiastically through this method of representation. Certain elements are drawn upon by creating and/or acknowledging the everyday through the potential of the narrative. For example, what happens when there is a heavy rain? Is there a space for the water to gather or spread in an imaginative way? How does a farmer protect his/her land? What is the role of architecture in these everyday occurrences? Can a chicken be considered architecture? Through these representations, it became apparent that objects that affect architecture become architecture when they are included in the narrative, and that the everyday can become uncanny through subtle shifts in placement or taking into account potential actions and reactions.

**Architect as Storyteller**

Once new spaces and programs were provided, it became necessary to address how they connect with the existing urban fabric, allowing for a full vision of the new possibilities that hemp agriculture could procure in the re-creation of a sustainable city, from hemp agriculture to wind farms and poplar forests. Focusing on the big picture also became necessary to reconnect the grittiness of the story boxes and the dream-like character
interventions. As a result, the scalar and geographical relationships between agriculture, industry, commercial and residential zones and character interventions could then be explored.

The site, as a means of representation, emerges from an everyday object, the table. Also known as the “table of contents,” the site drawing/model is carved/drawn/drilled/painted/sanded out of the table, but all the while kept intact to maintain its embedded meaning. Similar to a map, important zones are designated through the use of different materials. The oil industry “zone” is painted with used car oil and upon close inspection of the table, one can faintly smell the gases. The agricultural zone and the main roads (to remain) are colored using tinted shoe polish, leaving visible the wood grain and streets-to-be-removed. The character interventions are shown in clear soap, appearing as subtle, somewhat dream-like forms.

An abandoned gas station with a hemp intervention in the foreground (above). Story box narrating a proposed intervention of hemp agriculture selected for its many benefits over other crops and its ironic connection to the oil industry, which ultimately helped make it illegal (below).
Hence, Threshold to the UnCanny emerged as a project that addresses a larger scale of urban revitalization, but through the process, it also became a deeper investigation of exposing lost memories and buried residues through the representation of narratives intermingled with feasible constructs. This project raises the issue of the obsolescence of architecture in current social conditions, and focuses on the concerns of the people, clients, characters and observers who act as the primary contributors to the social aspect of the architectural world. As a result, the artifacts created in this project can act as a way to ultimately question our role as architects as simply designers or architects as storytellers with the power to profoundly impact social conditions through understanding not only the immediate context, but also surrounding physical and embedded narratives.

2304.8 MILES FROM ANN ARBOR  Megan Conner is a designer in the education department at the architecture firm, NTD Stichler, in San Diego, CA. Her thesis was published at www.archinect.com, June 2006.
THE FARMER—otherwise known as a harvester, a cultivator, a giver and a groundskeeper. One who is dedicated to hard work and sustainable living and closely connected to the weather and seasons and acts as the center of production. Architectural interventions to an abandoned gas station create an ideal living and working space for the farmer include an open-air greenhouse dividing the public and private realms, a portico structure and equipment barn that runs perpendicular to the existing portico, a chicken coop, a private cabin in the trees, silos, gardens, pecan and citrus trees. The greenhouse has a sloped floor to collect rainwater for irrigation.
Throughout the project, typical forms of analysis such as the aerial, the photograph, mapping and programmatic diagrams, were substituted by the ambiguity and fantastical values of the plan and section, creating a process that focuses on the lived experience of architecture rather than its physical presence. The existing infrastructure was left to interpretation, allowing the viewer to experience the site beyond typical explorations of the surface into a deeper world where buried myths and unequivocal facts are one and the same.

Character representation of the ARTISAN/PAPERMAKER, who is described as a nomad, a pulp masher, a paper maker. One who is connected to the elements, the ground, water and the sky and utilizes hand-made skills of cultivating, shredding, blending, stirring, kneading, rolling, cutting and hanging to dry. Architectural interventions to the gas station include a skylight and gazing space located between areas of working and living, a work room with large sinks for making pulp and paper-making equipment in the garage, and water cisterns, where water is recycled and reused for making paper, located where the gas tanks were presumed to be.
01  PROPOSED IRRIGATION CANALS
02  SABINE LAKE
03  PLEASURE ISLAND: LOCATION OF THE BREWER. WAS ONCE THE LOCATION OF THE LARGEST WOODEN ROLLER COASTER
04  BREWER
05  PROPOSED WIND FARM
06  SABINE NECHES CANAL
07  PECAN TREE FOREST
08  FARMER
09  DOWNTOWN INFRASTRUCTURE TO REMAIN FOR MARDI GRAS OCCUPATION
10  PAPERMAKER
11  ENFORCER/PREACHER
12  EXISTING INDUSTRY
13  HEMP FIELDS
14  FOREST OF POPLAR TREES [TO CLEAN INDUSTRIAL AREAS FOR AGRICULTURE OR OTHER DEVELOPMENT]
15  WIND TURBINES
16  EXISTING RESIDENTIAL ZONE TO REMAIN
The table is meant to be an object with which the audience can interact, allowing the viewer to sit, touch and smell the site at an intimate and familiar scale. Despite the familiarity of the table as an everyday object, the position of the plants, the protrusion of nails and the hidden box beneath the tabletop all combine to create a new narrative of and through making use of the object.
This project is an urban quest for the
“real” that challenges its citizens to question personal inhibitions and awaken to the fascinatingly perverse reality of the city. Set in the city of Chicago, Stripped Bare provokes its urban dwellers to take a second look at something that they have never noticed in passing, but that was already there, an attempt to reveal and reaffirm what Slavoj Zizek calls “the desert of the real,” the notion that in a simulated world, reality is in actuality a desert, empty, and in light of the events of September 11, the United States’ perception remained complacent to the realities of the rest of the world. Stripped Bare gives space to these realities, a place where perverse, even perhaps comic scenes of the “real” are created to challenge the urban dweller to perform and raise awareness of larger urban and global realities. If the city’s facades and urban frontage maintain the simulacra of an unreality, then the desert of the real lives in the residue—the in-between and leftover spaces of the city, the alleyway. In a city so dense with shiny tall skyscrapers and that continues to build and fill the empty spaces of the urban fabric, the alleyway becomes an extreme example of residual space, at times many. Situated in the secrets slip and the project’s attempts to into confronting the “desert of the real,” the taboos that we know of, but have become desensitized to and refuse to acknowledge—the dirty, scary, erotic, perverse, intriguing, exciting, irresistibly delicious reality.

The “residue” is a term used by Jean Baudrillard to explain what is left of the image after the over-load of information. What is left of the real is hard to define and left to its molecular constituents. Distinguishing from the real and irreal,1 then raises the question of what is really true. Can we really believe all that we see? Jean Baudrillard and Slavoj Zizek are the main characters that question the meaning of the image and reality in contemporary time. The question of what is real is the driving force behind Stripped Bare. The project’s quest for the truth leads to a series of moments that leaves one intrigued and wanting more.

Baudrillard

Baudrillard writes, “Modernity is dominated by the expulsion of the natural order. A residue.”2 After the bombardment of images, the image in the end no longer means anything and nothing is really shocking anymore. Moreover, if the world is left with residue, then what remains with our relationship with the image? If nothing is shocking anymore, do we remain numb, idle and accept that there is no more sex? What is left of the world to shock, intrigue, desire and suffer, the drive that runs all human beings? Baudrillard offers a glimmer of hope: “What do we do after the orgy?”—what do we do after the orgy of modernity? Is simulation all we have left? With the melancholy nuance of the idea of a ‘vanishing point’ and the ‘degree Xerox of culture?’ I forgot to say that this expression—“after the orgy”—comes from a story full of hope: it is the story of a man who whispers into the ear of a woman during an orgy, ‘what are you doing after the orgy?’ There is always the hope of a new seduction.”3

Zizek

Welcome to The Desert of the Real explains that in a simulated world, reality is in actuality a desert, devoid of all those things that the simulated world tells us exist. Slavoj Zizek uses this expression to explain Americans’ perception of September 11, 2001. Hollywood cinematic portrayals of terrorist catastrophes leading to the events of September 11 like Independence Day made the seeing of the collapse of the Twin Towers surreal. What was most shocking about September 11, Zizek explains, “is that America got what it fantasized about,” that the unimaginable impossibility actually happened. The unreality in which we live in the United States keeps everyone complacent and blind to the realities of the rest of the world. Stepping out into the real means exploring outside one’s own personal space and letting go of her/his inhibitions and prejudices. As Surrealist thought and beliefs defied conventions of the norm, choosing instead to experiment with the perverse, dirty and at times disturbingly taboo, Stripped Bare gives space to the repressed and censored taboo. The real in its unedited form is a daunting but intriguing place. Perhaps it is a breath of fresh air and a reality check from the seemingly okay and simulated city.

Feed Me Chocolate

This project intends to create a series of events that will strip bare the urban dweller of her/his unconscious desires while at the same time awakening her/him to the realities of the city. The sequence of events, the quest, is an irresistibly teasing one, a full frontal exposure that at the same time can never be fully realized. The program also brings together the citizens of the city through the creation of strange and awkward approaches that create an intimate relationship with the “other.” The tensions and awkward situations created by the intimate spaces of the program further push the envelope of normal social interaction, offering intriguing yet potentially dangerous invitations to perform.

The events that occur in the program happen in the extreme voids, the extreme emptiness and in the very intense and small openings of the site. At times,
these spaces are extremely uncomfortable, but this creates moments of intrigue, shock and doses of reality.

Chicago: Alley Capital, Urban Matrix

Chicago, the featured city in the movie, The Matrix, is portrayed as a desolate landscape after a global war. Morpheus greets Neo, “Welcome to the Desert of the Real.” The deserted city is supposed to represent the real reality, the one that the matrix simulates and refuses to allow people to see.

Chicago has 1,900 miles of alleys, the largest network of alleyways in the nation. Alleys bisect over 90% of Chicago’s city blocks. The intent, then, is to transform the urban fabric by activating the extreme residual spaces of the city. The alleyways can be seen as a reversal of the figure-ground map, where the buildings begin to disappear as the alleyways seep through and reveal themselves as figure instead of ground. The maps represent how the alleyways become activated, spread, infect and grow throughout the city. Reality burns through the map, seeping through, and at times invades the private spaces of the adjacent buildings.

Pass the Map

Playing off the idea of the Dérive, Stripped Bare maintains an unpredictable nature, as the location of a network of alleyways changes daily. There are rules that may or may not be broken. The maps of this project are to be folded up and handed out to people like the daily newspaper.

Take Daily. Begin Here.

There is a series of seven alleys that becomes activated and changes location every day. The city in time will grow exponentially in opposition to the figure-ground map as RED—reality seeps and burns through the map.

Every day there is a theme that runs through the alleyways. The maps exhibit three possibilities in which the program is then organized in a somewhat loose manner by theme. The first map, for instance, attempts to raise awareness of GLOBAL EPIDEMICS, excerpts include: “Kiss and pass it on. Sit and lounge. Meet and greet your friendly neighbors. Strangers. And now best friends.

RULES:

1. Fifty are chosen to hold the map. You are one of them.
2. Spread the word (text, word of mouth, pass the map).
3. Quest begins at 5 p.m.
4. Locations change daily and are torn down at 5 a.m.

Perforated walls and love swings allow people to interact in perverse ways. “Fetish Feet” and “Hair Shop” (give hair).
Red spreads. Red infects. Red cells. The second map takes on program that deals with IMAGE VS. REALITY, examples include: “May cause dizziness. Confusion. Deception. What do you believe? These drugs. These drugs are quick. Tear the screen and don’t forget to watch the magic show. Feed me chocolate. Get inside those shadow boxes.” The third map focuses on the theme of SHARING RESOURCES, “May cause hair loss. Be generous. Overdose. Give a part of yourself for others to survive. Don’t miss the potluck and share your favorite dish. Share your bed. Become blood brothers. Trade cards. Trade partners and dance with me (slow).”
A LIST:
TOILET
FEED ME CHOCOLATE
UNDER THE SKIRT (DRESS SHOP THAT DOES NOT SELL, ON DISPLAY)
SECRET LETTERS [ANONYMOUS DROP BOXES, LETTERS TO PARTICIPANTS/REAL MAIL BOXES]
PRECIOUS THINGS
INTERNET HUBS (TALK TO THE WORLD)
MAGIC SHOW
ON THE WALLS [OBJECTS IN SMALL CRACKS, EXHIBITION PIECES]
MAKE-UP ROOM
FETISH FEET [SHOE TRADING POSTS WALKING IN OTHERS’ SHOES]
SECRET ADMIRER
DRAW ME (FEATURING STREET ARTISTS)
FOOTPRINTS
SOUP KITCHEN
TEMPORARY SLEEPING UNITS [ALLEY-SITE FOR THE HOMELESS]
ON THE WALLS [OBJECTS IN SMALL CRACKS, EXHIBITION PIECES]
SHADOW BOX
IN THE CLOSET
TEXT MESSAGE [CALLER UNKNOWN]
PILLOW TALK
HAIR SHOP [GIVE HAIR]
PINS AND NEEDLES (NEEDLE EXCHANGE)
FILM PROJECTION (IMAGES OF POLITICAL NATURE, OF AN EROTIC NATURE, OF PARTICIPANTS)
TRADING CARDS
TELL ME A STORY [ANONYMOUS CONVERSATION BOOTH, TELLING THE STORY OF OTHERS]
PLAYING DRESS-UP (LIKE AT A CARNIVAL WITH PERIOD COSTUMES AND A STAGED BACKGROUND)
DANCE WITH ME [SLOW]
FORBIDDEN LOVE (STAIRCASE LOUNGES/WEST SIDE STORY)
WASH YOUR HANDS (AFTER CHOCOLATE)
POTLUCK

"Home" (temporary housing units) and "Secret Letters" (telling the story of others).
Get Inside Those Shadow Boxes

Stripped Bare’s small pockets of enclosure, niches that are as tight as nine square feet or as low as three feet in height talk about the spatial possibilities for the program. They are small niches that push and punch through, eating away at the bricks. They talk about the thinness of the walls and how people squeeze inside and poke their bodies through them. Like the alley staircase, the walls are perforated, you speak, hear and see through them. They force people to sit on one’s lap inside the one-chair lounges or lay inside niches meant to squeeze in several people.

There are love swings that are attached to the roof on railings that transport people through the site, swinging from the top to the bottom of the buildings. There are other structures, like the swings, that hang, sit and rest throughout the landings of staircases and are attached with cables and hooks or that plug inside the niches that punch through the adjacent buildings. The architectural intervention is one that invades private space, eats away at the walls, infects and attaches and forces people to squeeze and interact in dangerous and perverse ways.

In the end, reality slips in, grabbing the insides out and into the larger community outside. Stripped Bare is anti–the “shine,” the glamour and glitz of State Street. Rather, it is dirty and sexy at the same time. Stripped Bare forces one to change perspective. We no longer walk the streets with our heads down looking at our feet, but instead look up and around and see the world through new eyes. Up the endless staircases and landings that stretch out forever, what will remain is residue. Soon, the city will be painted in RED.
While industrialization has predominantly influenced social structure, informational and digital technologies are spearheading current changes in city structure as well as the spatial hierarchies in both the city and architecture itself. Informational and digital technologies are also the themes that have been most vigorously explored in contemporary architectural practices. In this thesis project the characteristics of “informationalization” and “digitalization” are explored and interpreted through an analysis of the process of city development; the characteristics, the changes brought by them, the possibilities of new spaces from the process of “digitalization,” and their application will be explored.

Informationalization and Digitalization (Creating “value”)
In the process of creating value, it is the characteristics of the resources that differentiate “manufacturing” of the industrial era from “processing” of the informational and digital era. While “manufacturing” does use physical resources and processes to create or add value, the resources of “processing” are not limited to physical materials. Non-physical materials such as information in sound and image—are by copying, converting, so-called “processing.” Information makes this process much easier and faster, as the digitalized information can then easily be converted into other formats. For example, a digitalized music format can be visualized in graphics while it is played. As “informationalization” and “digitalization” stretch their social influence, the physical demand for “manufacturing” of materials and space will decrease.

Generation of empty space—gap
It is natural that the spaces occupied by manufacturing factories that were exposed to change, became the “gaps” of the city, which are waiting for new program. Many industrial cities have faced this change, and the redevelopment of these cities in different locations show various results, from one extreme—stagnation of a whole city, to the other—a city that successfully transformed into a cultural city.

The city of Detroit is one extreme case of a city that went in the direction of stagnation during the process of city development. The emptied spaces of old industrial facilities take possession of the dominant portion of the city after “informationalization” and “digitalization.” From the late 19th century, Detroit grew with the expansion of the automobile industry. The whole city was shaped around, and became dependant on the development of the motor industry. As the demand for labor, space and material grew, the automobile industry moved out of Detroit. Consequently the city stopped expanding, and so it needed to bring in new programs to fill the emptied spaces. As a result, warehouses throughout the city were emptied out, and buildings torn down. However, the structure of the city was not flexible enough to embrace these major changes, so the organic city system became disconnected by these wide gaps of empty spaces, which ultimately led to its collapse.

Informationalization and Digitalization as Architectural Devices
The observation of the spatial changes caused by “informationalization” and “digitalization” raised the possibility that they could be used as devices to create the space of “informationalization” and the space of “digitalization”. In other words, the “process” which caused the vacant lots and empty spaces in the city became the device for creating the “space” resulting from this “process”; space of emptiness, space of the gap. The space has the memory of its social and contextual location that once connected it to the city, but is now being opened to new programs. In other words, it is the space that remembers the process of change, yet is full of possibilities.

For exploration of making the “space of the process,” a site under redevelopment in a typical industrial city in Wisconsin had been selected. Like other industrial cities, West Allis had formed its structure with the development of heavy industry, and is now transforming along with social changes. The site is an old pressed steel-tank company that has plans for redevelopment by the city. Currently the factory is running its facilities at minimum scale, preparing to move out. Through this condition of changing the industrial city and site, an exemplary approach to making the “space” is explored.
Spatial Experiment: Digitalization, Conversion, and Interpretation and Ambiguity of Digitalization

The term “digitalization” is often regarded as having a certain level of immaculacy, as digitalized data can be saved and retrieved without any loss. However, the data being open to any processes that may alter its characteristics, creates another value. The source of “informationalization” and “digitalization” is not limited to the physical format. For example, digital music can be expressed graphically while the data of the image is saved in text format. The immateriality of digitalized information allows for infinite possibilities in terms of the manipulation of the source, thus creating a new value. By employing different processes, the types of production could be varied despite being derived from the same source. The “ambiguousness” of digitalization begins with its infinite possibilities.

The space in the top figure on the right, is created by two different sets of poly-line loops connecting the points of numeric data, which refer to the urban structure of Detroit in its golden age to current situation. The row of warehouses along the railway were emptied out dragging the neighbors down.
to the location of the machines in one of the factory rooms in different order. Though the numeric data (from the conversion of the physical location) exists as an unchanging fact, “interpretation” of this data brings countless possibilities. The space configured within the gap (difference) of interpretation embraces the memory of the previous condition, whether it is figure-ground or not. The memory of previous conditions is a bridge between the past and present. The coexistence of new spaces and the interpretation of the past demonstrate the moment of change.

Architectural Application: Creating (Empty) Space of Flexibility

Empty space is not the only result of informationalization and digitalization. It also creates an opportunity for having additional programs, which could bring continuously positive changes to the city. These spaces are open to all types of programs and buildings, thus having infinite flexibility. The “emptiness” becomes a key characteristic for a new space of flexibility because of its marginal capacity to embrace change. “Gap” is the space within which flexibility is defined as a field of change. In order to create this “gap” as the atmospheric field of change, “converting,” “digitalizing,” and “interpreting” processes are applied to the existing pressed steel-tank company. The physical spaces, configured by architectural elements and existing machines are digitalized, and the data is processed (converted and interpreted) in different ways. The resulting product is a field that holds the atmospheric relations of a previous spatial configuration. In other words, ambiguous spatial boundaries and their relationships, which refer to previous conditions, are recreated in the process of “digitalization,” “conversion” and “interpretation.” The new surface of this atmospheric field bridges between past and future changes, while its ambiguousness leaves it open to infinite possibilities and flexibility in terms of program distribution.
Program: re-visiting city context

It is a web-like network structure that defines the current demographic society, whereas the centralized social structure of the city prior to the “informationalization” was influenced by the industrialized society. This web-like network structure manages the accelerated speed of change by moving generically through changes without letting go of the integrated structural form. The mixed programs proposed here constitute the web of programs reflecting the social structure. Small programs of residence, retail and office form a self-sustainable web that sits on the atmospheric field of emptied space. The interaction between programs solidifies the spatial tension of the surface essentially reorganizing the previous spatial relationships of the pressed steel-tank company.

Through the open configuration of the site, loosely defined in part by existing conditions such as walls and structures, the activities and interactions between programs flow out of the site and connect the web to its neighbors. The local community, emphasized by these interactions of small programs, becomes a node for that community, where the city is comprised of these nodes. Furthermore, with the help of an on-line web of networks, this pattern can expand to the world. The self-sustainable system, autonomous by nature, has the ability to overflow and interact with neighboring systems. This system can be plugged into a city full of gaps, like Detroit, and will heal the local area with its healthy internal interactions. Once any one local community grows healthy enough, the positive change should be contagious to the other communities throughout the city.
The vast interiors of the pressed steel-tank buildings are re-configured based on the spatial relationships previously established by infrastructure and machinery within the warehouses. The former spatial arrangements are digitalized and reprocessed, resulting in a field that remains true to its spatial and organizational past, yet the ambiguity of the newly configured space becomes flexible enough to accommodate an infinite number of future programmatic and organizational combinations and patterns.
Conclusion

This project sheds light on current social changes around us and explores the possibilities of flexible spaces by interpreting the cause of current social changes. This is then used as a device for creating space, and applying it back to the current social condition. Focusing on the current social movement (informationalization and digitalization), spatial experiments have been conducted. The discovery of “Ambiguousness of Digitalization” (from multiple interpretations—digital conversions), shows the possibilities for flexible spatial configurations. Additionally, the approach from emptying a space fills the chronological gap between a pre-existing condition and a new proposal. Finally, the “atmospheric field” from the process of “digitalization” is utilized with the web of programs. It would therefore be productive to implement this self-sustainable system of programs, with an over-flow of activities, into healthy contexts like the city of West Allis or into a stagnating city like Detroit.

248.4 MILES FROM

Ann Arbor Chansik Park works at HOK Chicago as a senior architectural technician. At HOK Chicago, he has worked on several hotel projects as well as the International Masterplan Project in Jeddah, Saudi Arabia.
1 **Treasure Island**—**Commissioned in 1935**, this man-made island was appropriated by amassing previously sub-marine land from the bay. Originally slated to be the site for San Francisco's airport, it was actually used for the 1939 Golden Gate International Exposition, celebrating the completion of the two bridges spanning from the San Francisco peninsula to the north and east. After the Exposition, the land was purchased by the U.S. Navy and was used as a military base, specifically chosen for its access to the Pacific Theatre of WWII. In 1994, Treasure Island was decommissioned as a military base. Currently, the island is under restoration to properly dispose of wastes left by the compound. Some parts of the island are also now sparingly populated by condominiums.

   At its creation, Treasure Island was 12' above sea level. The current elevation is only 9'.

2 **Earthquakes in SF area**—On April 18, 1906, a devastating 7.3 magnitude earthquake struck the bay area, leveling much of the city from the initial shock and ensuing fires that ravaged San Francisco. In 2003, the USGS predicted a 62% chance of an earthquake of 6.5 or greater Richter scale magnitude to strike within the next 30 years. Although many sufficient measures have been taken by builders in the area to sustain damage in such an event, it is likely that a quake of this magnitude will resettle Treasure Island to an elevation below sea level, erasing the man-made island from view, confining it to the realm of nostalgia, records, history, accessible to only those who venture below the surface.

3 **GooglePrint/Banned Books**—Currently, Google is undertaking a mega-project to digitize five of the world’s largest libraries, extrapolating an architectural question: one of the traditionally densest building typologies becomes placeless? Furthermore, what happens when the literature that is not admitted to this selected reserve? Although it can be assumed that given the porous nature of the internet, subversive tactics will allow this literature to find digital institutions, [sic] dares to manifest this haven formally, in an audacious gesture that defies the threat of failure by accepting its own (mis)fortune. In fact, it counts on it.

4 **SF-Oakland Bay Bridge**—The new eastern span of the San Francisco-Oakland Bay Bridge is currently under construction to replace the original installation that collapsed during the 1989 Loma Prieta earthquake. [sic] re-appropriates the steel members of the older bridge as the main stretch of the edifice. In the temporary antediluvian above-water existence of the library, it runs parallel to the active bridge, an alternate route to an ill-fated destination.

5 **Digitizing and Translating**—The collection is translated in a series of underwater cells at the base of the structure, an interlocking series of helices about the main foundation piles. The translation point is designed for digital and multilingual dissemination, subverting any of the obstacles found in the text’s original quarantine.

6 **Vertical transport tubes** along the central spine rise 80' to access the cantilever level. These conduits serve not only as a vehicle for readers and books, but function as antennae to transmit literature which is translated and digitized in the underwater compartments via radio and satellite frequencies. As components of the overall structure begin to collapse in the wake of the catastrophe, the tubes are designed to remain upright and attached to the base, splayed about like the snakes growing from the head of Medusa.

---

**Charles Garcia [sic]** the seditious incendiaries collection, solace in catastrophe

IN THE LIBRARY, OCCUPANTS ARE ENGAGED IN AN INTENSELY PERSONAL SPACE WHEN EMPLOYING THE BUILDING’S MEDIA. AS ELEMENTS DEEMED SEDITIOUS, INCENDIARY OR OTHERWISE IMMORAL HAVE BEEN EXEMPTED FROM COLLECTIONS AND CIRCULATION, THE CRITICAL MASS OF ‘CONTROLLED LITERATURE’ IS REVISITED IN AN AGE OF DIGITAL PROLIFERATION (REF. GOOGLEPRINT). ACCEPTING A DYNAMIC ROLE IN THE NARRATIVE, THE ARCHITECTURE IS A VISIONARY APPARATUS THAT GALLANTLY ACCEPTS OBSOLESCENCE, DISASTER, UPHEAVAL AND SOLITUDE.

**Advisors**

MIREILLE RODDIER
WILLIAM J. GLOVER

**Tempora mutantur, nos et mutamur in illis.**
The Gateway Gallery is a showcase of the 100 most popular banned books. Each of these volumes is suspended from the encasing structure—naked and vulnerable to the humidity, wind erosion and sunlight, in addition to degradation due contact with readers. These are the books that over time have come to be accepted and embraced by a greater part of the general public and already exist in the digital commonwealth. They are also the first to dissolve when the full collection is submerged.

The Grove w/ break points—The main body of the cantilever is a reassembled construct of discarded steel members of the Bay Bridge. Along the 500 foot procession, pockets of interior space are dedicated as exhibits to a growing number of incidents concerning the mass prohibition and destruction of literary works, including those from the Nazi Germany regime, Serbian destruction of Croatian literature in Bosnia, Iraqi invasion of Kuwait, Turkish destruction of Armenian texts, the Chinese Cultural Revolution and the Pol Pot regime in Cambodia. These galleries are arranged chronologically starting from the Gateway, with additional upstart exhibits finding their home further down the cantilever, closer to the Book Coffins. This logic is two-fold: first, later additions are more likely already to be digitized and translated, and second, they would be the first to shear in the event of a breakage. The potential shear points along the Grove move closer to the gallery relative to the intensity of the quake.

Book Coffins represent the final resting place for the physical relics of banned literature. After being digitized and translated, the book-forms find themselves here. Cells of double-loaded corridors bifurcating stocked shelves contain the original pieces of the collection. At the end of this walkway is a single windowpane that admits natural light to the interior. It is rumored that fated authors have made their way to these shelves in search of inspiration. In addition, they yearn for the chance to join the realm of the collection by producing a work that can be slipped in alongside those already recorded. These spaces have been dubbed “Faust Chambers” due to proliferation of such myths. As it is understood with the forgone books that make their way here, the authors must acknowledge the implicit destiny associated with beholding this collection first-hand.

Originally, the Faust Chambers hung precariously over the water of the Bay, cantilevered 400 feet from landfall at Treasure Island and 1000 feet from downtown San Francisco. After the initial shock of the earthquake, the Chambers broke from the structure falling into the Bay, the initial impact driving the piles into the seabed. Finding temporary foundations, the Chambers form a diaspora of printed seditious matter periodically visible from under the cold, tumultuous waves. Subsequent aftershocks cause additional deterioration of the structures, and further scatter the Chambers throughout the Bay.

Atlantis. The lost city. The lost forbidden city. Elements of the once contiguous structure now require a mental reassembly by the reader. Now dispersed throughout the site, they are pockets of curiosity for the adventurer gliding through the notably cold water of the bay. Occasionally, glimpses of the waterlogged pages are legible to the observer, confronting the individual in the traditional reader-print relationship. However, due to the advanced stamina, attention and equipment required to engage this connection, these encounters are inherently short-lived. As the printed matter erodes and eventually dissolves, only the mythology of the collection is certain, until another cache of the sunken library is discovered.

Book Coffins

The individual spaces were conceived with undersea diffusion in mind, a fitting mode of circulation below the surface. The form of each compartment either resembles a spoon or fork, dictating the nature and frequency of continuous movement throughout the bay. The narrative ends without finality; a set of utensils dumped into ocean. Ultimately, all that remains is a pile of tarnished silverware.

Charles Garcia

Charles Garcia works at Kennedy + Violich Architecture in Boston, MA. Following graduation, he designed a publication titled Mapping Mumbai with Rahul Mehrotra, an Associate Professor of Architecture at the Taubman College of Architecture and Urban Planning. The book was recently published in India and will be distributed to elected officials and community leaders in Mumbai.
For architects, builders and homeowners, arranging and rearranging the same set of rooms (kitchen, living room, bedroom ...) drives the design of most residential spaces. As a result, in traditional suburban housing, there is always a space to eat dinner, but not an opening that invites us to jump off the roof, a room for when we find out we have cancer or a passage for when we want to draw on the walls. Current housing types rarely makes room for the inevitable moments and spatial needs outside of the normal activities of daily life. This project evolved as a way to tap into the very human capacity for dwelling in an imperfect system. Great emphasis was given to the possibilities for re-

imagine the architectural representation of intimate residential spaces, spaces to be inhabited both mentally and physically. Through a more playful approach to design and representation, architects can enter the current system of residential design and construction to provide spaces that encourage a new way of dwelling within the existing housing stock, possibly reaching a larger number of people and, hopefully, offering a way to change the dialogue between client and architect.

Through our drawings and models, we can and should invite our readers to entertain the possibility for architecture to bring together the worlds of fantasy and reality. Though there is a deep history to the drawing and understanding of an architectural section, it remains one of the most powerful ways for architectural proposals and analyses to be described and understood quickly while simultaneously allowing for revelations about what lies just beneath the skin, the exterior or inside the cover of the book. To architectural sections, sections were drawn and a conversation about the design of residential architecture. The author mined her own memories (and those of willing accomplices) for stories to work from. In these drawings, the perceived boundaries, simple details and materials of a dwelling space rarely appear as an architect would expect, but instead are supported by and saturated with dream and memory. A shelf becomes a BOOK CAVE, a bed frame becomes a MAP ROOM, and the space between floors becomes a HIDING HOLE.

CLAIM: Home is a mental construct as much as it is a tangible reality ... What is so dangerous about the current system of housing is that it requires a large population of clients, and gives back little in return beyond shelter for its inhabitants and storage for our growing number of possessions. Houses, like many of those in suburban America, are built based on market standards that fail to stimulate our desire to interact in a connected society that accepts all dreams and opinions. This circumstance welcomes architectural proposals that can support imagination and play in a way that the building industry, based on these standards, cannot or does not care to do.

In response, multiple impulsive architectural interventions were developed to be quickly added to or carved out of the existing framework. These interventions might accommodate the times that we suddenly find we need a small space to store stolen food or human ashes, or to feel enclosed at a time when the last thing we want is to feel the vastness of an empty room around us.

Architecture can provide for difference by looking to the moments we normally avoid discussing. What if instead of adding a sun room or a porch to the typical suburban home, architects could provide a series of fantastically purchasable interventions like a CLIMBING WALL, a HIDDING HOLE or a ROOM FOR IMAGINARY FRIENDS? The public desire for interventions like these can be encouraged by architects who understand that some of the most potent architectural moments are not found in the exterior form or architectural plan, but in the corners and margins of the section. If we can remove from the design table the handful of standard rooms we push around when designing homes, we could instead be providing human-scaled, discrete interventions that would start to support the connections and contradictions between perceived and constructed boundaries.

Exploration #1—PROGRAMS IN PLAY

These program and section cards are designed to engage the individual in a quick, playful way. 143 section cuts through a single consciousness reveal the most interesting, deviant and imaginative truths about her. They have no prescribed sequence as the exploration continues to expand, change scale and fold back on itself. Thus, the cards remain loose and easy to digest individually or as a group. [If we are ever to change the dialogue between client and architect, we must engage the task of imagining new programs and new spaces in a more playful way.]
Exploration #2—DRAWING ON THE PERSONAL

In this set of composite drawings, the section is approached as a fantastical type of representation that can illustrate possible architectural interventions and programs. These sections also explore the dual role of the architect as detective and narrator—a person who uncovers and exposes stories as a way to engage the reader in a playful way. [By revealing private recollections and secret obsessions, the narrator attempts to seduce the reader and make her an accomplice by privileging her with intimate confidences.]
CLAIM: Though architecture has the capacity to convey the invisible, we often focus, sometimes obsessively, on the visible ...

Traditional discussions of how to create form have become increasingly less important in schools of architecture as debate within the profession has shifted instead to confront and respond to social issues, material exploration, globalization and consumer culture. A more subtle discussion of mood, feeling and atmosphere is replacing past interest in the discussion of form itself. The use of visual and sensory cues in design today indicates a growing interest in a more implicit mode of communication that may have a direct emotional and sensory effect on the occupant. Using these techniques, maybe the invisible can be conveyed through architecture without sacrificing our need to delineate space or construct rooms, passages and openings. A deeper understanding of the relationship between mental and physical constructs might also open up the possibility for architects to re-claim the way we draw and represent architectural designs.

Unfortunately, our drawings and models in architecture schools are often produced solely for the critique, and students are often more concerned with the construction of the image or object than the relationship between their proposed design and the resulting connection to the earth and sky. Architecture students, in an attempt to get a “money shot” photo often give a little too much away, making it too easy for the reader to develop their own impression or understanding of what the space itself would be like. The way in which our drawings are read by the general public, and how the translation from drawing to building will occur, is usually left unaddressed. Recognizing this, we can try to re-define the way architects interact with clients and even builders through new modes of representing our ideas verbally and through drawing.

To explore how we can best orchestrate the infiltration of architectural ideas into the existing system, each one of the proposed interventions is set against the boundaries that our profession takes for granted—the 24x36 drawing page, the construction set, the ever-familiar layout of studs headers and plates in wood frame construction—to ground the fantastical in the conventional or realistic.

CLAIM: Specifications can be a description of process and assembly, a recipe for the construction of thought or matter ...

Though the “audience” of this 16 page set is “the builder”, the development of a construction set for one of the interventions, a CLIMBING WALL + ESCAPE HATCH is most interesting as a tool with which to study the way architects can organize and link ideas, arguments and concepts in a new way. A construction set, and the specifications therein, can also tell a story, one that leaves room for people to imagine deviating from the norm.

These detailed sections demonstrate the possibilities within the standard Construction Document set to make room for multiple readings of “paths of escape or egress,” construction of space and small rooms and passages. Without developing a whole new system to communicate

NOTE: The intent of this project was never to vilify suburban housing, as is often the case, even if it is true that 75 percent of construction in the U.S. takes place in the suburbs where architects currently have little or no influence over what is being built. Of greater concern was the rethinking of pre-approved, standard aggregations of rooms, walls, doors and windows, which form the majority of housing in cities, towns and suburbs of the United States.
HIDE ME—the hiding hole is the safest location in the house. It smells hot and sweet. If we aren't careful, we might fight for a position inside...
to builders and clients, if we are careful, we can layer our drawings with stories that invite playful, imaginative moments.

The back of each page acts like an x-ray. When you turn a page in the set, you see the text and rigid lines of the technical information fading into the background, while new information, poetry and instructions for construction are squeezed into the margins and leftover spaces of the page. The poetic narrative and illustrations on the flip side explore the way that even in the section and details that usually offer architects the most control, we can incorporate information that invites the mental construction of space, and the development of new perceptions of what it takes to build these Realms of Dwelling.

“It is not down on any map. True places never are.”—Herman Melville

Architects can easily find room for imaginative solutions within the existing boundaries if we expand some of the terms and representational strategies we use to describe our designs. Why can't our models represent both the perceptions and realities of a designed space? Why don't we layer our models with real and imagined experiences by rendering shadows, overheard secrets or projected images?

During the course of this project, several interventions were modeled (at doll-house scale) within the framework of a traditional house to invite a playful discussion of scale and context, as well as the role of the

Through subtle shifts in scale and detail the steps wind and change size and shape to allow for freedom of movement, freedom to pass time or just to pass through …

These spaces remind the willing reader of old memories (or dream-memories) of jumping off the roof of their childhood home, escaping into a thickened wall to feel enclosed at a time of loneliness, or peeking into nearby rooms from the cover of a hidden space.
physical model in our representation of designs. In these models, elements normally constructed as physical boundaries (studs, floors, foundations) were rendered as invisible with soldered wire frames and Plexiglas. What is normally considered mentally-constructed space (created by dreaming, escaping and hiding) was instead literally built with material, color and shadow. Just as the construction document set looked to exploit, through drawing, the practical issues of emergency egress and passage between stories, as well as the more intangible idea of mental and physical escape, one of the interventions, a DREAM COLLECTOR + SPACE FOR PAUSE makes room for unusual occupations like scaling, climbing and occupying the boundaries we normally consider permanent in a home. Through an unusual approach to building the model itself, one must actively participate in the reading of the designed space that can never be viewed directly, only seen in reflections from mirrors placed below or by lifting the roof and peering inside.

CLAIM: We can’t all grow up to be cowboys and firemen …

Most people think they have to choose between fantasy and reality. For the sake of maintaining the status quo, our educational and social institutions impress rationality, order and purpose upon us even as children, with the goal that we will some day be able to rationally discuss our goals and thoughts in the light of day, not ponder them in the dark of night. Consequently, the process of growing up and becoming a member of society becomes paired with the slow and painful separation of individuals from their dreams. In fact, our society offers few options for people who refuse to leave their dreams behind.

As a way of emerging from the world of dream and memory without leaving it behind, finding our ability to make connections between that world and our accepted reality is essential. Dwelling spaces seem to be a logical place for an architect to begin to explore and support those connections, because they are integral to our daily lives, and most often occur at a small enough scale to make a serious attempt at addressing both symbolic and realized space.

This project, Realms of Dwelling, provided a framework in which to study how architecture can guide and support imagination, play and living in the margins in a way that the speculative building industry will not attempt. As designers, we should strive to provide flexible, multi-dimensional solutions that, in multiple ways, can fit into the context in which we choose to study and work, and provide solutions that allow many occupations and alternative uses. By literally or symbolically expanding the boundaries of residential architecture, we can look beyond its relative insignificance in the urban landscape to create new spaces that allow one to imagine the possibility of being more than someone living in a house; someone with the right to deviate from the common categories that life makes available.
GENERAL NOTES:

1. THERE MUST BE A FRAMEWORK OF ASSUMED STANDARD SIZED MEMBERS TO PROPERLY BUILD THE STRUCTURE.

2. IN PLACE OF ARBITRARY SYSTEMS OF MEASUREMENT, IT IS CRUCIAL THAT THERE BE ROOM FOR THE OWNER INSIDE, SO A SYSTEM MORE ACCOMMODATING OF THE REALITIES OF THE HUMAN BODY WILL BE EMPLOYED. CONTRACTOR OR OWNER-BUILDER SHOULD USE MEASUREMENTS FOR STUD LAYOUT FROM SHEET A1.1.

3. THOUGH IT IS NOT SHOWN HERE (SEE SHEETS A4.2-4.4) FURTHER STUD SUPPORT AND BLOCKING WILL BE USED WITHIN THIS FRAMEWORK TO SUPPORT THE NEW CONSTRUCTION.

Building Constructs—
DREAM COLLECTOR + SPACE FOR PAUSE
climb + pause
dream + spy
This model also addresses the scale of the street, as deviant occupations (climbing in the wall, eavesdropping, peeping, sitting on the roof) begin to leak out to the neighborhood. Several windows ensure that one is neither completely visible or invisible to the exterior of the house or the interior of the rooms through which one passes. The intervention peeks out the roof with dimensions similar to a traditional chimney, so that new relations between collecting light, mental and physical escape and spaces for rest would be camouflaged and revealed only upon closer look from the street.
THE FLIP SIDE
The back of each page in the construction set acts like an x-ray. Technical information fades away while poetic narratives and instructions for construction emerge. This new information invites new perceptions of what it takes to build these Realms of Dwelling. This detail looks at the use of the word “story” to delineate passage from one floor to the next, and the word “passage” as indicating a small written section or a place to pass through, pass time or maybe pass away…

I have very convincing dreams … I even have memories from my childhood that I know are the product of fantasy and dreams, but my brain has so intricately woven them into my real memories that I do not even know what is real anymore.
Our culture, our environment and our beliefs shape our perspective of the world that surrounds us. While each person has his own version of this reality, shared perspectives bond people together to create a shared culture. In America, we experience a reality projected onto us by mass media. Each culture uses a unique lens to see their projected reality. These different fabricated perspectives are why societies will always view the same event in different ways. The misregistration between various projected realities allows for the exploration and investigation of what is real and how a change of position creates a potentially different reality.

Orthographic drawings objectify the building, and place the viewer in a position of power. Perspective drawings remove the control the viewer has with plans or sections. In perspectives, the scene engulfs the viewer and provides no context outside of the immediate environment. Also, a perspective can be stealthily manipulated to create a scene that seems true but is, in fact, only a partial reality. Similar to walls in a house, our cultural context allows us to view the world from a single vantage-point and reveals only a sliver of the complete picture. The Perception House, subjected to multiple pressures or intensities from pop-culture, unveils a series of skewed spaces and perspectives that expose the visitor to scenes that lay outside of our shared projected reality.

The single-family suburban home is a material artifact of the American cultural experience. A large component of American culture is the idea of the dream home. It is inconsequential whether one lived the home or experienced movies and other culture. Our culture exists materially in our buildings and perhaps most intensely in our idea of the home. Our homes—real or media-created—are products of our ideas on gender, race, religion, family, security and community. Conversely, our homes evolve and reinforce these ideas. This project capitalizes on the shared ideal of the American home with a material investigation that reveals how popular culture warps the house. The Perception House, the result of popular culture manipulation, allows one to see behind our projected reality.

The American dream home is situated at the end of a quiet, tree-lined street in a residential neighborhood separated from industrial and commercial structures. The idea of the neighborhood, characterized in contemporary American media as the subdivision and gated neighborhood, can be traced back to 19th century London, when the density of urban apartment buildings was seen as evil. Popular culture brims with examples of the seemingly perfect suburb that conceals quirks, crime and other unmentionables. Such examples as Blue Velvet, American Beauty and Desperate Housewives portray what may occur anywhere without one’s knowledge. The Perception House fissures open the shell of calm that contains our cultural perspectives.
The hearth seen from the threshold (above); looking back at the hearth to the threshold beyond. An anamorphic image reinforces the warped perspectives (below).
Exploring the house
Our cultural context reforms the house until it fissures apart under the strain of maintaining the cultural norm. These breaks allow one to see in, around and through the projected reality of the American home, and the American cultural view, to experience another perspective. Outside pressures mold the house while fissures originate from key psychological elements of the home: the hearth, the kitchen, the threshold and the main staircase.

The experience of the house begins on the approach from the street. This house invades the buffer between public and private by protruding into the space of the front lawn, traditionally a mediator between public and private space. The visitor abruptly encounters the corner house at the edge of the yard. The façade, traditionally the public existence of the home, here disorients the visitor. The illusion of a proper façade presents itself to the oncoming visitor, but as one passes the home, one realizes that the façade is projected like an image on the skewed front. What one imagines as the front plane of the structure instead extends back in the lot.

A front door acts both to include and exclude. It opens to welcome people into the home and closes out the outside world. It secures the family from the unwelcome and the foreign. In contemporary society, the familiar and the foreign blur together in a constant shifting of roles. The house responds with a large fissure that forces visitors to slip behind the threshold and blurs any distinction between public and private. The foyer is not a grand or impressive space. As one steps over the threshold, she must immediately choose between proceeding up the grand staircase or walking under another stair. In a reversal of the imagined, one of the most hidden, secretive areas of the home is presented for public consumption to every political activist and Girl Scout on the block. The grand 25’ wide staircase appears to the visitor’s right and appears to invite the guest up to the private second floor. Instead, however, the stair cuts through the house and ends outside the other side of the structure. The uselessness of the grand staircase forces the house to accommodate a second, intertwining set of utilitarian stairs that occupy the third fissure.
The hearth, once considered the spiritual center of the house, now replaced by the television, wedges into the main living space and creates the third fissure. The break pushes the formal living room tight against the front wall, creating an unusable space that receives maximum exposure to the public street. The formal living room today is more a stage set for public consumption than the center of family life. The more casual living area explodes into the backyard.

Modern lifestyle eroded the family dinner, another highlight in America's cultural fable, in a way analogous to how the fourth fissure squished the dining table into the same cramped position of the formal living room—a show for the neighbors, but relegated useless by the pace of our culture. The new expression of the dining room reverberates in the long, narrow dining room table, where staggered seating inhibits conversation. The other fissures create similar affects throughout the house.

Using a suburban home manipulated by contemporary popular culture, The Refracted Lens exposes our ingrained ideas to what the home is and how our shared experiences have shaped these views. This project materially explores the cultural lens created by our shared ideas of house and home. Firmly established, we view all world events and developments through this distorted lens. Through an analysis of the seemingly normal, this project proposes that a mundane and seemingly logical situation is merely a fabricated reality, built upon our cultural foundation.

**588.1 MILES**

FROM ANN ARBOR Erin Crowe works for MGA Partners in Philadelphia.
The elongation and fissuring of the home allow unobstructed views through the projected reality typically presented by the American home. Previously masked visual and cultural perspectives are revealed.
Wallpaper, a reality projected onto paper, skins the house and also acts as the landscaped yard.
This century has seen a drastic expansion of mobility, including tourism, migrant labour, immigration and urban sprawl. More and more people “dwell” with the help of mass transit, automobiles, airplanes. One no longer leaves home confident of finding something radically new. Difference is encountered in the adjoining neighborhood, the familiar turns up at the ends of the earth.1

Migration and settlement typically form (and are formed by) patterns that are visible and palpable as we experience the built environment. Lines mark spatial territory and mediate human experience. Resultant patterns reflect political, cultural, social and environmental practices, often revealing fixed patterns of occupation. Migrant Traces combines and overlays these patterns to produce a spatial field approximating the dynamic smoothness of everyday practice.

Emergent Networks: Fixed vs. Flux

Contemporary dwelling involves the negotiation of increasingly intense flows of ideas, images, capital, technology and people. Constant movement and communication is producing emergent, bottom-up networks in sharp contrast to traditional hierarchies or fixed modes of occupation. Emergent patterns exist when the collective exhibits properties that are unpredictable by examining the properties of its isolated parts. Consider Flashmob.com, a website made popular in 2003 which provides users a format to propose spontaneous mobs to proposals occur in the site of the event. The ease of quick communication increases the surface area of human interaction allowing alternate trajectories or patterns to emerge. Migrant populations, such as immigrants, refugees and other diasporic groups also exhibit evidence of emergent behavior. Unpredicted movement patterns enabled through dispersed social networks disregard traditional boundaries and alter the process of assimilation. These boundaries fail to respond to dynamic systems producing a contradiction between the path of the migrant and the built environments they negotiate.

Deleuze and Guattari provide a description of fixed and fluid phenomenon in their essay, “The Smooth and the Striated.” “Smooth” space exists in contrast, though in constant interrelation, to an organized, hierarchical and static space that they call “striated.” Striated space is sedentary, fixed, ordered, hierarchical. Smooth space is nomadic, sprawling, continually expanding, amorphous, heterogeneous and without clear boundaries. Fabric, for example, is described as striated due to the direction and order of its weave. It is limited in one dimension by the size of the loom. Felt is the smooth counterpart to fabric, made by rubbing together fibers. It has no specific direction or grain, and can continue infinitely in all directions. The ocean is described as the ultimate smooth space. It is in constant flux, moving in response to other dynamic systems. As soon as we begin to describe the ocean using latitude and longitude, we are imposing the striated. These phenomenon cannot exist independently. The interdependence of Deleuze and Guattari’s smooth and striated systems informs this project’s investigation into spatial implications of static order and flux.

Existing Patterns: The Grid

Thomas Jefferson’s grid, drafted in The Land Ordinance of 1785, created a prototype for the pattern of American settlement. The system was initially designed to allow for incredible flexibility in the use of space which translated into opportunity for the settler. The grid has been subjected to changing flows of influence which have realigned its use and occupation. The railroad and streetcar introduced axial concentrations within the patchworked grid. Additional lines of transportation now enable decentralization, pushing community space from the town square to transfer points along roads or highways. The visible dominance of the grid remains a stabilizing point in many American urban areas. A sharp contrast exists between the permanence and protected political order promoted in the town square and its antithesis found in the quickly constructed developments at the outskirts of town. So much of the American landscape reflects a desire for mobility and impermanence, yet these flows of movement seldom infiltrate the core of the American town in the way they did at its inception.

Migrant Traces explores the potential to express shifting orders within a constant system. It challenges the existing dominant patterns to respond to the paths of the migrant. The aim is not to destroy the grid, but to infuse it with another order, one that does not grant authority to a single pattern. This design overlays multiple flows of human interest, reshuffling hierarchies within the prototypical American condition rather than only at its outskirts and transfer points. Realigning modes of occupation within the grid allows cultural values such as flexibility and diversity to be established within the existing prototypical landscape.

Prototype: The Somalis of Lewiston

The insertion of a migrant population into a small New England town is the circumstance used to explore the goals of this project. In 2001, Lewiston, Maine was the site of secondary migration for 1200 Somali refugees. Through word of mouth communication, the individual decisions of Somali refugees throughout the United States amounted to a large scale movement to resettle in Lewiston. The mayor of Lewiston responded to this influx by publishing a letter to the Somali community in the local newspaper asking them to

MIGRANT TRACES CHALLENGES

THE PROCESS BY WHICH
TRADITIONAL PATTERNS OF THE
BUILT ENVIRONMENT RESPOND
TO THE PATHS OF THE MIGRANT.
THE SECONDARY MIGRATION
OF 1200 SOMALI REFUGEES
TO LEWISTON, MAINE (2001) IS
EXPLORED AS A PROTOTYPICAL
COLLISION OF EMERGENT
CULTURE AND ESTABLISHED
INFRASTRUCTURE. MIGRANT
TRACES INVESTIGATES DESIGN
AS AN INTEGRATION OF
EXISTING ORDERS WITH THE
DESIRE FOR FLUID INTERACTION
AND MUTABILITY.

ADVISORS
CRAIG BORUM
JASON YOUNG
WILLIAM J. GLOVER

In 2001, through word of mouth communication, a large scale secondary migration of Somali refugees arrived in Lewiston, ME.

Prototype: The Somalis of Lewiston

The insertion of a migrant population into a small New England town is the circumstance used to explore the goals of this project. In 2001, Lewiston, Maine was the site of secondary migration for 1200 Somali refugees. Through word of mouth communication, the individual decisions of Somali refugees throughout the United States amounted to a large scale movement to resettle in Lewiston. The mayor of Lewiston responded to this influx by publishing a letter to the Somali community in the local newspaper asking them to
Site analysis of Lewiston, ME; examining flows of commerce, hierarchies of government and commercial establishments, zones of activity and the influence of the town square and regular grid structure on the built environment.
tell friends and relatives to stop coming. The existing infrastructure was not equipped to accept this dynamic flow. The resulting uproar turned the story into national news and raised questions of refugee and immigration policy.

This project proposes a cultural and community center at the site of a current parking lot and bus station in Lewiston. The bus is the point of arrival for the Somali community. Routes provide a connection between Lewiston, Portland and Auburn, ME. It continues to function as a connection point between services and jobs located downtown and subsidized housing communities extending outside the downtown area.

**Hybrid Patterns: Programmatic Projections**

The movement of the Somalis to Lewiston, ME is viewed as a prototypical condition of fluid movement inserted into a static infrastructure. Migrant Traces seeks a method of design integrating the tradition of the existing with the desire for interaction and mutability. A series of programmatic projections were produced to analyze various spatial configurations. The elements of program are chosen based on two criteria. The first aim was to provide services for both mainstream and migrant communities. Second, the program is considered in cycles of evolution. In a single day, market space may become an athletic field and later a celebration space. Temporary family shelters may transition into office space over several months or even years.

Programmatic proposals include athletic fields, market spaces, parking, gas stations, offices, concert stages, celebration space, kitchens, day-care, remittance services, job training facilities, classrooms, libraries, gallery space, medical facilities and temporary family shelters. The proposals project locations for more permanent program in the surrounding area such as apartment complexes, restaurants and small businesses. These facilities would potentially grow from the presence of the community center while reinforcing its continued use. The projection of these potential uses and changes over time allowed the development of criteria by which to analyze various spatial configurations. Each model was analyzed according to axes of movement into and through the site, juxtaposition of program and spaces, and the scale and natural light of interior spaces.
The movement of the Somalis to Lewiston, Maine is a prototypical condition of fluid movement inserted into a static infrastructure.
Existing patterns of occupation on the site become the material of re-invention. Parking lines are realigned to demarcate a path connecting the town square and high-density housing. Infrastructure for athletic courts, open-air market booths and celebration/concert spaces are distributed over and through parking patterns. This pattern is extended to parking and planting patterns on surrounding sites continuing to draw alternate connections through the downtown grid. Exterior space folds over and into interior spaces designed to house both large-scale group spaces and individual spaces sized for dorm-like shelters or classrooms and office space. All spaces are designed to vary in their modes of occupation.

The design of the community and cultural center allows multiple programmatic trajectories to overlap and increase the surface area of interaction.

---

**Notes**


**596.4 MILES FROM ANN ARBOR** Jeana D’Agostino Ripple is a lecturer at the University of Virginia School of Architecture. She teaches undergraduate design studios and graduate courses in digital media and fabrication.
These investigations build on the use of existing modules in the creation of overlapping patterns of occupation. Using a single base element, each system produces spaces of varied scale, enclosure and topography with the potential for fluid overlap of activity.
The Lewiston bus station functions as a connection point between services and jobs located downtown and in subsidized housing communities. The bus station also provides parking for many of the surrounding businesses.
Programmatic proposal and analysis scheme 1 (left and right). Fluid movement diagrams (below).
A textile is a construction of fibers, combined through various techniques, which allow a complex form to be created from a single material. Through weaving, looping, knotting and pressing, varying degrees of strength and texture are achieved. An experimentation in woven construction leads to the development of an architecture that reacts to elements of program and context while challenging a new understanding of materiality and spatial relationships.

The intelligence of woven construction, the interlocking of warp and weft, creates an inherent structural matrix within the textile. The manner in which these components are interlocked and interlaced affect the depth, flexibility, translucency, breathability, rigidity and strength of a continuous surface. Traditional weaving techniques such as plain, twill or satin, or advanced techniques such as the leno or double weave, are all established systems of construction.

The plain weave for example is the same textile technique taught to us as children: “one over, one under.” It is the interlacing of two perpendicular sets of threads that are even, repetitive and the same on both sides. Through manipulations of the warp and weft, however, one can take the traditional repetitive system and transform it into a system that is dynamic. This transformation creates moments along a surface that are soft, active, expandable, distorted or broken, allowing multiple performance criteria to exist on the same plane. It is in this spirit that we can begin to program a surface to possess specific architectural characteristics and to relate the woven construction literally to how we make formal moves such as cuts, pinches, flaps, edges and apertures.

The technique of the double weave takes this a step further to manipulate not only a single plane, but two or more. In this sense, two parallel planes are woven simultaneously and through an exchange on the loom, the two planes intersect, creating pockets of space and dense seams of material. It is the intersection of these two surfaces that allows for the programs of the space to blur—the ceiling becomes the wall, the wall becomes floor, the floor becomes the blanket. By rethinking the traditional notion of weaving, one can create surfaces and volumes with complex shapes, spaces and applications from a single construction and challenge the potentials in architecture. In this project, weaving is the process and the loom is the tool that drives the manipulation of the system. It is the potentials of the construction that powers the investigation. It is the interaction between the material and the process that exposes new opportunities for understanding surface, space and form.

**Terms**

Warp: The stationary thread that is pulled into tension across the loom.
Weft: Thread that is in motion, filling the warp in a perpendicular manner.

**A TEXTILE IS A CONSTRUCTION OF FIBERS. PRODUCING VARIABLE AND SEQUENTIAL COMBINATIONS OF WARP AND WEFT, A TEXTILE CAN BECOME A COMPLEX FORM. ITS INTERLOCKING AND INTERLACING COMPONENTS AFFECT THE DEPTH, FLEXIBILITY, TRANSLUCENCY, BREATHABILITY, RIGIDITY AND STRENGTH OF A CONTINUOUS SURFACE. EXPERIMENTATION IN WOVEN CONSTRUCTION LEADS TO THE DEVELOPMENT OF AN ARCHITECTURE THAT REACTS TO ELEMENTS OF SITE AND CONTEXT WHILE CHALLENGING A NEW UNDERSTANDING OF MATERIALITY AND SPATIAL RELATIONSHIPS.**

**ADVISORS**

CRAIG BORUM
STEVEN MANKOUCHE
ABIGAIL MURRAY

FROM ANN ARBOR Patricia D. Gruits works as a Project Designer for Kennedy Violich Architecture in Boston, MA.
Sectional interior perspective inside woven construction.
Dj turntablist deal directly with the 
products of modern proliferation: ubiquitous sounds, copies, versions, access, identity codes, data flows, loops and castoffs. These items take recognizable form in their translation through media devices, and it is with these devices that the creative process has recently been redefined. In response to the overwhelming excess of pre-made media, the artist’s product has become method, or technique. This work (or play) involves a situated response to these factors of a preexisting structure, one that is now swimming in representations. The DJ culture is, in a sense, the capitalism of the street—it seeks out availability within the construct of the city, shifting to take advantage of those things that are typically ignored when they are not necessary. Most of these activities are direct contradictions to a system of organization, which is why they are so effective.

In popular music, the concept of the “original” has been replaced by the act of reconfiguration, essentially speeding the loop from inspiration to generation through acts of intellectual thievery, distillation and repetition. The prevailing attitude presupposes that works of art are not precious, but are significant as the building blocks of a secondary or tertiary construct: the remix. Remixing and the relevant ancillary methods of musical reassembly carry high stakes. “Sampling” straddles the boundary between blatant copying and homage, generally measured in regards to the fidelity of the sample to the original work. This scale involves distortion through various changes in speed, tone, clarity or completeness. At the same time, the artist must reassemble these pieces into a new “whole”, identifiable and unique, with governing characteristics of tempo, pitch and balance.

Cities in different locations show various results, from one extreme—stagnation of a whole city, to the other—a city successfully transformed into a cultural city.

People in urban areas are bombarded with cultural input. Maneuvering tactical approach, forms of expressive creation that implement themselves in previously unanticipated ways. These tactics are shared by terrorists, teenagers, vagrants, video makers, rappers, poets, martial artists, chopper builders and thieves. Essentially, the work of the DJ is a gratuitous display of what defines human production: appropriation and reassembly. There is no “new”, so by extrapolation, everything is new. Focusing on the DJ as producer gives a certain conceptual standing to the work as follows: everything we need for production is already here, appropriation is appropriate—plagiarism is to be encouraged and relied upon; there is no sacred context. Rather, content drives discovery and method. In the music world, disk jockeys embody the empowerment of manipulation and media. It is not surprising that the remix has become an unavoidably popular facet of contemporary production. Furthermore, DJs are eager to swim in the ocean of representations that litter old record stores and swap meets, unburdened by the weighty proposition of damaging the aura of original products, excited by the prospects of taking these concentrations of major work as a simple starting point.

Michel De Certeau, drawing upon the distinction made by the military theorist Carl von Clausewitz between strategies and tactics, suggests that reactions to imperfect scenarios offer valuable lessons in practice. De Certeau uses the term bricolage, translated roughly as “making do,” to imply the situated nature of creative acts. The implication is, that in our very act of understanding and processing things, we are in a state of constant production, of throwing together. It is easy to fall into the trap of jujitsu logic, to label bricolage as the path of least resistance, but that would discredit the element of true creative risk and active decision making that skateboarders, MCs, DJs and graffiti artists take in the act of producing. This creative risk is actively ignored by those who have attempted over the years to discredit these forms of expression as

As the DJ has developed a productive methodology for practice in a media saturated world, so too must the architect investigate the potential for these techniques and attitudes. 100 years after they were founded, the cities of Gary, In and Las Vegas, NV offer their rationalized outgrowths as sites of constructive manifestation—analogue documents that are the basis for derivative constructs. Remixing these vectors essentially re-constructs space through reductive-productive play and intellectual thievery.

Advisor Perry Kulper
are pretty much it) sets up an ever growing barrage of tactical responses, each growing from an ease of previous practice. At this stage, concerns of intellectual property and the synthesis of rhythmic and tonal factors give way to a transcendent expression through the media, which invites a response. To be a player in this milieu is the goal of the architecture of the tactics described here—an essential placeness that drives a reexamination of the role of creative individual methods of practice.

In the music video for Lauryn Hill’s “Everything is Everything,” director Sanji imagines the city as a record on a turntable, where streets are literal grooves, burrowed into by a giant needle. The image implies an urban condition that is waiting to be released through technical mediation, a forgotten record dusty with age. While “site” would be the term to denote the placeness of an architecture, the rule of this project is to approach sites as situations, records of what Henri Lefebvre called the “social production of space.” As situations, the component aspects of
any site can be disengaged and set loose on other given conditions, and 
ultimately other sites. I chose the two particular situations of Gary, Indiana 
and Las Vegas, NV for their relative simplicity in generative terms, and for 
the freakish severity of their relentless direction.

In 2006 Gary, IN will celebrate the centennial of its creation by the 
United States Steel Corporation as the largest steel plant in the world, 
halfway between the Minnesota ore fields and southern coal mines. In 
its early years, the city of Gary became a major intermediary node for 
urban production in the form of steel, as well as a model of the atrophied 
Midwestern rust belt city as company towns lost their major source 
of revenue. Sited at the bottom extremity of Lake Michigan, Gary is 
experienced primarily while passing through on major highways I-80/94, 
1-90 (the skyway toll road), and the Amtrak lines between Chicago and 
Detroit. From this vantage point, Gary is a series of passing images of 
smokestacks, tollbooths and the nondescript odors of industry. It is 
regularly referred to as “the armpit of America.” The importance of the 
steel industry to Gary cannot be overstated. In all stages of its life, the 
city has been unilaterally formed by the market forces that drive big 
steel. The city’s shifting placeness is accompanied by an outgoing flow 
of materials to other, more economically diverse 
cities. The people, labor and energy of Gary exist 
in the frameworks and infrastructures of other places more presciently 
than in the place they were forged. At the same time, Gary’s furnaces have 
reconstituted the detritus of these other places in a constant state of 
remixing. For a place of such constant re-making and combination, Gary 
is rigidly incongruous by comparison. As in many factory towns, urban 
organization parallels the manufacturing mindset (Gary’s public school 
district was the first in the country to implement bells at the beginning 
and end of classes). The systemic rationale of Gary gives the site enormous 
potential for deviant tactics that are situated and invested in the city’s 
overwhelming history of productivity.

The cities of Gary and Las Vegas are manifestations of singular, 
capitalist visions. Both follow the model of the “factory town,” though 
Gary relies on a manufacturing—and material-based economy, while 
Vegas produces entertainment, mystique and image in the service of 
the gambling industry. The cities are studies in the building of an urban 
condition in almost detached, scientific terms. Both sites were originally 
chosen for their relative use value to their respective industries. Both were 
founded at the same moment in history, marking centennial anniversaries 
in 2005 and 2006. From that point on, Gary and Las Vegas acted like twins 
separated at birth. Gary’s dependence on the steel industry made it one of 
the biggest boom towns in the early 20th century. It was called “the Magic 
City” for its apparently magical appearance from deserted marshland on 
Lake Michigan’s south shore. Las Vegas, also founded on nearly deserted 
land, is currently the fastest growing city in the United States, while the 
population in Gary has dwindled consistently since the 1960s.

The fabulousness of Vegas and the straightforward 
sublimity of Gary are borne of the same type of 
stubborn growth impulses. It is in the nature of these 
forces that the work of mixing, remixing, mashup and 
scratch can begin. In the same manner that beat matching allows for 
dissimilar music styles to be amalgamated, so too can aspects of these 
disparate situations be aligned on the terms of their parallelism. The result 
is neither a blind newness nor revisionist history, but a formulation of new 
architectural process, a basis for situational, situationist architecture. The 
process takes on traditional modes of practice in that the architecture is 
driven not simply by physical/social site features, programmatic concerns 
or aesthetic direction. Specific, constituent factors of each situation exist 
as breaks, which are looped into a new situation. Essentially, they are 
influential forces of a much less predictable, but no less powerful nature.
STRUCTURAL PARAMETERS
forces that shape the city

PARAMETRIC MATRIX
re-production of space

TACTICAL IMPLEMENTATION
productive architectural play
(bringing it home)
Strip-split house (global steel market remix featuring Hi Limit).
High Limit Breakbeat (Gary break-in mix).

Offstage control (ubermorphology break mix).
GRAFTED BREAKS: VEGAS THROW-UP GARY

The highly governed space of the casino interior is sold as a place to roam free, the open floor where anything can happen. In Gary a different kind of freedom exists in the space of the abandoned Post Office building (below), where vagrants can enter and freely rearrange the once formulaic space. When these spatial determinations are sampled into one another, break-in demolition becomes at once both indeterminate and precise. The random influence of casual, aided decay couples with imposed limits through sampling, looping and recombination.

Note
As archetypal outgrowths of singular forces, both cities provide clear “vectors”—the driving influences or situated trends that fostered the architecture of that place. The focus of this project was to identify these vectors and use them to generate a hybrid of diagrammatic and tectonic proposals for possible architectures. Sampled vectors from Gary (manufactured time, opposing terrains of production/life, gangrenous excess, “rational” structures, dependant economy, etc.) meet those of Las Vegas (metered engagements / atemporal zones, play = work, invisible off-limits, house odds, highly governed “free” space). Conflating these vectors requires a delicacy in the legibility of translation. For the DJ there is an unmarked fine line between the credible use of samples and “biting” a song, which simply replicates without true creative reassembly.

In tectonic terms, the remix was both applied and re-looped in various scenarios. In one example, vectors of physical specificity are drawn from both cities as another “break,” or crucial structure (from Gary, the now-abandoned, factory-rigid Post Office building; from Vegas, the LED canopy spanning the Freemont Street Experience). The remix could be understood as resurrecting Gary’s rigid structure as a diurnal subterfuge, where the constant flow of Las Vegas’ non-temporal spectacle is played out in an ever growing buildup of repercussive moves. In another example, diagrammatic remixes of vectors are seeded on a strip of scrub forest along the M-14 highway in Michigan. In all cases, vectors from each urban context become a palimpsest of governing situations, distilling the modernist faith in building to receive inevitable growth as well as the radical epitomes of unilateral economic predestination.

Behind Gary was an agenda. Behind Las Vegas was an opportunity. Behind both was twentieth century hubris, or put more bluntly, the blind belief that success was dialed in. All that was required was a little elbow grease. There is no architecture without intent. Architecture can exist to restructure shattered, war torn cities, to house surfers at the edge of mavericks, to receive the dead in their own cities, to give a plenum for dialogue, to give meaning to sculptural, formal intensity. Disk Jockeys in the old school (and I will paraphrase much more qualified voices here) stole the intent of their predecessors much like their predecessors stole the musical scales and intonations and standards of their forbears. Where a radical restructuring of Pachelbel’s Canon in D (Brian Eno’s work) pulls our ear from a wedding processional and throws it further into doubt and delight through dissonant re-timings, DJ Shadow pulls an entire studio recording (replete with the hopes and dreams of record producers, executives and exploited talent) out of the miasma of pressed data and shoves the grainy disk into the machine to be projected at large scale. Again and again.

0.0 MILES FROM ANN ARBOR. Sam Zeller teaches at the Taubman College of Architecture and Urban Planning and is co-coordinator of the Digital Fabrication Lab. This spring, he will join the practice of John Ronan Architect in Chicago, IL.
Fellows spend one academic year at the University of Michigan. Appointed as lecturers in architecture, they are given teaching responsibilities and time to devote to other creative activities, scholarship and design work. Fellows exhibit their work to the College at the end of their tenure.
William Muschenheim
The William Muschenheim Fellowship supports and encourages individuals who show promise as design instructors and are at or near the beginning of their professional or academic career.

William A. Oberdick
The William A. Oberdick Fellowship supports and encourages individuals who show promise in building science, information technologies and design. Candidates should be at or near the beginning of their professional or academic career.

Walter B. Sanders
The Walter B. Sanders Fellowship supports and encourages experienced practitioners who are interested in architectural design and education and provides them with the opportunity to pursue research or other creative activities.
I am not a collector. I am, though, enchanted with collecting. Any act of collecting and every collection itself can hold me in sway. Show me the collection of objects dredged out of sites that became the Athens metro, or tell me about your aunt whose wall is covered in china plates, or say the words Beanie Babies, and my attention is piqued. And this interest has not always been architectural. No, this came some time before all of that.
In fact, I have just always wanted to be a collector. It all started when I inherited a stamp collection. Two small albums full of stamps were given to me by a relative who had either tired of the activity or perhaps had died. I can’t entirely remember. The books were typical. They had neat rows of separate stamps, each a tiny, colorful depiction of buildings or important folks. Whatever their value, for me the albums were precious. Not because of the stamps themselves, I had no interest in stamps whatsoever. Rather, the albums represented devotion. I wanted this too. I took the albums, added a few stamps in the blank pages at the end, and then quickly tired of it. I put it aside. I decided that those were someone else’s books, someone else’s interests. I would find my own. A couple of years later, I made another attempt at collecting. My cousin surprised me on a summer vacation with a large box filled with napkins that she had collected over the previous two or three years. She had hundreds of them. These were paper napkins collected from friends’ homes or fast food restaurants, road-side ice cream stands or fancy weddings. You know the type. They were not precious—just the usual fare—mass produced and disposable. Oh, but how her collection transformed them.

There were vivid colors, pales and many, many whites. Some were printed with place names and addresses, others had drawn images or patterns. Most marvelous of all were the papers and textures. I had never taken more than a cursory glance at a napkin before wiping the grease off my lips, yet there I stood entranced by the multitudes of ribbing styles and quilting patterns now possible in the lowly paper napkin. How had this universe escaped me? And how had she found it? “Nevermind,” I thought, and then I too became a napkin collector. We spent the summer scouring napkin holders and wiping our hands on our pants. We built our collections piece by piece; she carrying out her passion, I, obsessed more with catching up. One night at a restaurant on the Black Sea, while having dinner with a large group and making sure not to touch my napkin, someone asked me what I wanted to study at university. I still had a year to decide, but spoke for the first time the word “architecture.” The utterance surprised me as much as the rest, but only in its spoken form. I had been thinking about it for a while, and after all, I couldn’t rightly say “napkin collecting.” Right after, I started using napkins again to wipe my hands. And soon, I was using napkins to sketch out ideas for building projects, that is to say, I became an architect.

Identity and collecting go hand in hand. Every collection, by its definition, defines foremost its collector. Baudrillard talks about the passionate devotion to objects as the grounds on which an identity of the subject (me) is formed. My objects “become the things of which I am the meaning, they become
Collected images from 18 September, 21 September, 27 October, 14 November and 12 December.
Central copying station on the third floor of the Art and Architecture building.
my property and my passion.” No one else would have this particular collection of objects, etc. And identity was exactly what was on my mind as I moved across the country to take a new post as the Muschenheim Fellow at the University of Michigan. Regardless of who I had become, the point was to become someone or something else. I was imagining myself, or re-imagining myself in this new place. Almost immediately, then, the question of personal identity gets wrapped in the question of context. Not just who am I now, but also, who am I now that I am here? I had been an architect in Oregon, but what am I here?

So, what was here? How could I understand here? I looked, I asked, I prodded, I listened. The question of identity, it seems, was also the question of here (not to mention, the question here). The project I pursued while here was the question of here. How would I get here, I wondered. This is when I turned to stealing. I saw no other way. It began at night. I would come to the architecture building after hours and search. What were people interested in here? What were they producing here? How could I respond to here? I read studio briefs, I looked at student work, I read the posters and flyers on the walls. Then, I transgressed. One night I carefully pulled a paper from the wall, with my university-issued copy card I duplicated it, and then carefully re-stapled it to the wall in its exact location. One object. Mine.

In the Art and Architecture building at the University of Michigan, on the third floor of the Architecture Department, there is a central copying station where most of the students and faculty do their photocopying. This station point is the location of a vast amount of communication taking place in the school, not only by virtue of the copying that takes place there, but also because it is a central recycling station. On September 18, 2005, I began collecting the information that passes through this point and gets left behind. I thought of my collection as a growing archive—representative of a body of knowledge being constructed on the third floor. It may seem pointless to collect garbage, but this was not merely waste. This was
21 SEPT 05
An architectural work is not experienced as a collection of isolated pictures. A work of architecture incorporates both physical and mental structures. Images of one sensory realm feed further images of another modality. Images of presence give rise to images of imagination.
waste that someone had seen as worthy of printing and copying (sometimes multiply), but for any number of reasons had chosen to discard. Of course, the information was partial, sometimes literally partial, but my interest in it laid in the fact that it was unselfconscious. I wanted an unadulterated view of the school, unmediated by desire (the school’s or mine) and filtered by a mechanical process of routine. It was valueless information in its original intention. (In fact, I could hardly even read it all as it was increasing quickly—I was collecting Mondays, Wednesdays, Thursdays, Fridays and Saturdays at about 6:00 p.m.) But in its material form each paper I amassed was beginning to take on characteristics of “pure object, devoid of any function or completely abstracted from its use [which] takes on a completely subjective status.” In other words, the original use value for each paper that entered the archive was abandoned in favor of becoming part of a body that would constitute some form of understanding and devotion. Eventually, I stopped even trying to read the papers and allowed myself only cursory glances at whatever caught my eye.

“Because the collection replaces origin with classification, thereby making temporality a spatial and material phenomenon, its existence is dependent upon principles of organization and categorization.”

Imagine then, a stack of papers about two feet tall. That’s what it was by December 18th when I stopped. I’m guessing it was about 3000 sheets of paper by then. I could have gone on, but the end of the school semester was a simple boundary that imposed a stop. The papers were organized solely by the date of collection, physically camouflaged into the other stacks of papers on my shelves, ready to be trained. I began devising elaborate systems to classify the information contained in the archive with Nayara Islam, my assistant at the time. We tried color codes to designate authors, types of authors,

[opposite] Drawing of collected items, 27 October.
[Bottom left] Stack of Originals, detail.
audiences, places of origin, un-decipherability. We had ideas about constructing charts and maps or graphs and tables. We talked about different means of examination, extrapolation, revelation. We wanted to wrestle this beast to the ground not to kill it, but to pin its limbs and show it off whole, at once a docile and conquered specimen, but fully alive and continually growing beyond its containment.

"How should we proceed so that documents (observations, objects, photographs), whose value is tied to the fact that they are things taken from life, may retain some freshness once confined ...? An entire technique of presentation must intervene as a follow up to the techniques of collecting, if we want to keep the documents from becoming merely materials for weighty erudition."4

The archive is displayed three times: organized, classified and reclassified. The originals sit stacked on a stand, the originary mass that was accumulated daily for four months. The only embellishments are the colored strips with dates printed on them to reveal the physical breakdown of the mass itself by date and to add a bit of a haze to the mass. The card catalog expands the physical mass, but keeps the number of originals intact, a 1:1 catalog. The cards are organized by date with additional coded classification information printed on them. The images (textual and otherwise) are reproduced from the originals and edited down to the essential points. Lastly, the drawings are constructed from the visual and textual information present in the originals. Each drawing encapsulates one day of collecting. They mean to present each day as a complete hermetic moment here using only the essential elements of here. Mine.

"Hierarchical systems ... are being superseded by a self-organizing ‘liveliness’ (without a plan, without an ideology, without all the world designs and world pictures that never work)."5

Notes
2. Ibid., p. 86.
If one sees two or more figures overlapping one another and each insists for itself the overlapped part, one is confronted with a contradiction of spatial dimensions.

To resolve this contradiction, one must assume the presence of a non-physical quality. The figures are endowed with transparency that is further compounded without their interaction.

Transparency means a simultaneous perception of different spatial locations. Space not only recedes but fluctuates in a continuous activity.

The position of the transparent figure has equivocal meaning as one sees each figure.
In Detroit, there is a city within the city. As a striking catalogue of landscapes of disinvestment, there is a Detroit that has been left behind to its own devices of decay and entropy. If Detroit has a future, it is going to be decided within these landscapes. The series of maps published here intend to catalogue the contemporary territories of disinvestment present in the city of Detroit. The research was made with the suspicion that there is a plan under development awaiting the disappearance of the last traces of the city, to transform the urban landscape into undifferentiated sprawl. Presumably, market forces are waiting for the tipping point atop the curve of disinvestment, before returning full-force to reclaim the territory by way of gentrification.

This research proposes a counterargument to the notion of the Shrinking City, which is in my opinion a poorly chosen visual metaphor that veils our understanding of the processes currently at play in American metropolitan regions. Instead, under the pressure of suburban expansion, rapid horizontal urbanization renders a thin and overstretched urban tissue that in failing creates multiple interstitial areas.

The intention of mapping the consolidation of these areas in Detroit is to discover the critical mass: at what density of aggregation would these constellations of interstitial spaces begin to work as a new infrastructural condition? Moreover, can a broader strategy that escapes the lot-by-lot assumption render these derelict spaces as assets for the possibility of imagining a new kind of urban structure?

Defining Drosscapes
In his last book, Drosscape: Wasting Land in Urban America, Alan Berger defines Drosscapes as the wasted sites within urbanized regions. They emerge out of two primary processes: rapid horizontal urbanization and the abandonment of land and detritus after economic and production regimes have ended.

Despite their necessary role in urban evolution, the urban thinkers undervalue these “in-between” landscapes. The interstitial dissuades close inspection. However, they are crucial transitional landscapes: decommissioned railroad yards, former industrial-manufacturing corridors, vacant lots, derelict buildings and parking lots. Many are urbanized areas associated with a past economic or industrial status, falling between cycles of investment.

Berger claims that there is a rising interest in the reclamation of many types of terrain vague. For him, this trend suggests a change in the way American society values the interstitial urban landscape as potentially transformable into infill development.

It is important to understand how capital diversion operates in cyclical fluctuations across time and scales in order to understand the spurts of urban and regional growth or shrinkage. Disinvestment triggers decline that increasingly renders once viable landscapes derelict and nonviable. Relocation of investment is often cast as “efficient.” Therefore, value free and once productive landscapes are left behind as profits are pursued elsewhere. The irony is that the level of disinvestment will determine the degree to which a region will rebound in the future insomuch that severe property devaluation creates the necessary conditions for future rounds of investment. The next wave of investment in Detroit is one of suburbanization and de-densification.

In Suburbia
Jerry Herron proposes the image of Detroit as the most relevant city in the United States. Naming Detroit as the most modern of American cities, he demonstrates how many people used the city to get to where they wanted to go, which was somewhere else. Not everybody went along for the ride, and a population that has been excluded from the entitlements of modernity now inhabits the remnants of the infrastructural apparatus left behind.

Everybody drove away from Detroit (on the freeways), and something has been left behind. The prosperity of the metropolitan region surely depends on the ignorant waste for which nobody is taking responsibility. Detroit is nobody’s problem. We are all not from Detroit. In Herron’s opinion: to our peril.

We are all in Suburbia now.

In suburbia, Architecture will always arrive late to the scene to give instructions as to how the world should be. It is like that old philosophical owl, who spreads its wings only at the falling of dusk.

In suburbia, Architecture will always be compliant (often delightedly so) or will be reduced to fabricate post-facto rationalizations.

In suburbia, Architecture follows the money, from far behind. There is no solution for suburbia; nothing new can be said about it. Suburbia should no longer be the subject of critical inquiry. It is time for Architecture as a discipline to abandon suburbia.

We have a responsibility to reclaim the epic tone that once permeated the architectural discourse. There was a time in which architecture had as the subject of its imagination systems of territorial organization and infrastructural decisions that impacted social formations. We should, once and for all, return to the city.

Back in Detroit
In Detroit’s interstitial disinvested areas, there is an open territory in front of us. We should break through the discouraging images of decay and abandonment in order to imagine possible alternative landscapes. If one of the most pressing issues facing contemporary designers is the relationship between natural environments and processes of urbanization, then in these disinvested areas, we have potential laboratories for natural processes and urban development to be integrated into more sustainable artificial ecologies.

Because the natural is no longer natural, we should escape old dialectic oppositions between nature and city. In doing so, we will better understand how our contemporary metropolitan condition is one where architecture, infrastructure and landscape are interwoven and transformed to form a new hybrid condition where everything is relational.

An unprejudiced way of looking can have far-reaching effects. By avoiding oppositions between environmental and infrastructural systems, we open new perspectives and take full responsibility for the transformation of reality. Our architectural baggage can only carry us so far; we should join forces with landscape architects, urban designers and planners, or at least invade with impunity their disciplinary boundaries.

Years from now, when the market decides to abandon sprawl to lay claim again on the city, we will be ready, with plans laid out, and a very interesting conversation will ensue.
As the result of an aggressive process of de-urbanization, some neighborhoods in Detroit render visible an abandoned city. A sense of empty open space reinforces the present low density condition and allows for otherwise impossible long diagonal views across what used to be one of the most cohesive housing stocks in the nation. The physical evidence of the urban grid exists no longer. The streets that used to unify the community by providing the necessary distribution network remain today as obsolete and redundant infrastructure, dividing what wants to be one single open space. If this is the real urban identity of Detroit, can we signify it as a moment of opportunity? If we let go of nostalgic notions of what the city used to be, can we imagine possibilities already latent in those unclaimed spaces? Can we imagine alternative ways of envisioning public space?
“One way in which we account for something that is missing is to say that something is absent, it was never here. Another way to express this is to say that something is lost, it was once here and it is here no longer. It is very important to distinguish between the two.”

Architecture is generally destroyed in order to convey an absence, to convey a sense that it was never there in the first place. Loss is converted into absence. Therefore, we do not know what it is that we no longer have. Detroit is erasing itself at an unprecedented rate for a city in a time of peace. When reconstruction does in fact take place it is like business as usual. Suburban-looking developments, as if we were in the exurbs of the metro region, replace what used to be functional urban neighborhoods, blocks from downtown. Is the price to pay to save Detroit, its complete erasure?

In Detroit, there is a city within the city. A city that no one wants to see, probably because the image in the mirror is too sharp to acknowledge. Accommodating life in the remaining functional spaces of the city, Detroiters cross multiple degraded territories everyday, oblivious to the on-going diverse strategies of disinvestment that on a day-by-day basis claim more urban space. Despite some heartbreaking heroic acts of hope, naive lot-by-lot interventions will not address the prevailing infrastructural condition.

What if architecture is not enough? What if urban planning is not enough? What if instead of concentrating our efforts on the built environment, we focus on the un-built, the abandoned and the ignored? Without the pressures of the market on our shoulders, we can use these territories of disinvestment as laboratories for wild experimentations of territorial organization and even social change.
The inversion of the figure, in which the abandoned is shown in full force, is an act of protest and hope. No longer ignored, the figure returns as an image for a possible infrastructural reinvention of the city. By consolidating the unused train corridors with the abandoned industrial areas, the un-maintained right-of-ways of highways with disinvested commercial strips and the myriad of vacant housing lots with the redundant road grid, the resulting figure becomes an infrastructural substrate.

Can this be the backbone of a new urbanism? Can we imagine here innovative ways of moving across this newly defined landscape? Can we see here a more intertwined and porous boundary between open and built, collective and individual? Market forces will reclaim these territories sooner or later, privatizing possibilities on their way. Can we use the time we have until then to imagine sustainable alternatives for our metropolitan regions?
In the 50s, two million people lived in Detroit. They all left. Another million have since moved in. As a result, today we are faced with an unprecedented 50% reduction in population density; does this mean that we have twice the Detroit really needed, a collapsed city that attempts to maintain twice the urban infrastructure it requires?

We should make a clear distinction: A process of de-densification should not be equated with a process of de-urbanization. Suburbanization should not be the default image we project as the solution. A less dense articulation of spaces can actually be an empowering opportunity for re-thinking the urban landscape. By strategically decommissioning redundant road infrastructure, consolidated pockets of open space can be created. This action would define interstitial common grounds around which bottom-up urban redevelopment strategies can be conceived. There are new urban typologies to be explored.
"A Klee painting named 'Angelus Novus' shows an angel looking as though he is about to move away from something he is fixedly contemplating. His eyes are staring, his mouth is open and his wings are spread. This is how one pictures the angel of history. His face is turned toward the past. Where we perceive a chain of events, he sees one single catastrophe which keeps piling wreckage and hurls it in front of his feet. The angel would like to stay, awaken the dead and make whole what has been smashed. But a storm is blowing in from Paradise; it has got caught in his wings with such violence that the angel can no longer close them. The storm irresistibly propels him into the future to which his back is turned, while the pile of debris before him grows skyward. This storm is what we call progress."  

Does Britannia, when she sleeps, dream? Is America her dream—in which all that cannot pass in the metropolis Wakefulness is allow'd Expression away in the restless Slumber of these Provinces, and on westward, wherever 'tis not yet mapp'd, nor written down, nor ever, by the majority of Mankind, seen,—serving as a very Rubbish-Tip for subjunctive Hopes, for all that may not yet be true:—Earthly Paradise, Fountain of Youth, Realms of Prester John, Christ's Kingdom, ever behind the sunset, safe till the next Territory to the West be seen and recorded, measured and tied in, back into the Net-Work of Points already known, that slowly triangulates its Way into the Continent, changing all from subjunctive to declarative, reducing Possibilities to Simplicities that serve the ends of Governments,—winning away from the realm of the Sacred, its Borderlands one by one, and ascending them onto the bare mortal World that is our home, and our Despair.
A live, all that is seen and unseen can be characterized by change. Alive, the earth (and life on earth) can be understood as process. Looking closely and slowly, at higher resolutions, simple unfolds into multilayered. Imagine a waterfall or a whirlpool in a river, water tumbling and rushing at times, or gently, quietly passing through, the whirlpool or waterfall remains. Its essence Remains while its constitution Changes. At multiple scales pattern remains the same. The earth is not so different than this, we are not so different than this (earth-waterfall-individual). It is from this context that the FRAGMENTS from a Natural History of the Line come.

The FRAGMENTS point to the true and elusive nature of the line. One moment it is this, another moment it is that. To say ‘fragments’ of a natural history could be misleading—it is accepted here that ‘history’ is by definition incomplete, both in its quality of emergence and its re-telling. If there remains fragmentation, it is our consciousness that is fragmented. The essence of the line lies in its destiny to ‘water-mark’ relationship, both visibly and invisibly. Its ability to challenge the preconception of ‘the separateness of things’ is often confused by difference and transformation. The line carries information. Its constitution changes. Its form changes. It stops and starts as visible, while as concept and effect it moves out into a constant emergence connecting all.

**FORMATVS VNICVS VNA**

In 1649, the French artist Claude Mellan captures something of the essence of the line. One of many such depictions, the engraving illustrates the myth of Christ’s passage to Calvary. Along the pathway, a torturous line, St. Veronica wiped Christ’s face of blood and sweat. The image of Christ was transferred to the cloth, the Sudarium. In a single, spiraling line originating at the tip of Christ’s nose, Mellan creates not only contours of space and light with the variation of width and depth, but a whole and expansive mythology, a spiraling galaxy of stories and beliefs, both originating with the line and being drawn in by the line. The inscription at the bottom of the engraving, FORMATVS VNICVS VNA, “The One formed in One”, succinctly merges form and content. The line tells a story, a theme returned to throughout the FRAGMENTS.
MAKING LINES:
ON CHOOSING THE RIGHT LINE TYPE

Lines carry information. Does the nature of a line imply/ create a particular space, does a ‘transmissional line’ imply or create a transmissional space, maybe any space it passes through by definition has some characteristic of the line and the characteristics of the space. Slick lines and rough lines, lines that rub off on the spaces that they pass through or pick up data or have embedded in them a metadata space affects line, line affects space.

OBJECT LINE
The object line aligns itself with substance. It avoids the uncomfortable conversations about a purely speculative future or off-the-nostalgia for the past. Its future it takes as certain and its present absolute.

CENTER LINE
The center line boasts of its knowledge but does not credit its informer, the construction line. Seeing two worlds at once, the centerline presupposes the divisibility of the world. Therefore it boasts of its own consciousness. It is kin to the section line.

HIDDEN LINE
The hidden line (perhaps appropriately and with just irony) conceals its true task in a misnomer. The hidden line reveals its secrets. Its plan is to subvert the certainty of and belief in an immutable world put forth righteously by the object line. The hidden line searches behind the scenes, revealing in drops and starts. Sometimes reluctantly or with ambivalence, it prefers allusion to clearly stated intention.

CONSTRUCTION LINE
The construction line works quietly in the background, propping up and calling out the order of all others. It moves silently out into the field, beyond even the limits of the perceived field and carries its information back, giving it away with total equanimity.

SECTION LINE
There is a story of a Zen butcher who, due to his great skill never needed to sharpen his knives. Without fail he could guide an infinitely thin blade through the infinitely thin canyons between bone and flesh. Unlike the butcher, the section line works with brute force and surprise attacks, connecting ground and sky in a single, certain gesture.

What exists in the space of the line?
If there is a metadata of the line, the line must be itself some kind of container. Can we think of the line as a container for attributes of space? The line is the space of imagination, a space of action and process. The line is the space of thought and ideas. How big is an idea? Placing it beyond (or before) a notion of space, which is limited by the world of nouns, it transcends the pejorative ‘nothingness’ of space. Not merely that which is nothing or that which is between objects, the space of the line itself contains the idea.

Through the line there is this potential to redefine or re-language space—a notion of space, which is free from preconceptions. In an extension beyond a definition of space as belonging to objects, of being inherently linked to objects, space becomes the conditions for something to happen, and making space is the act of creating the conditions for something to happen. What is invested, what comes of this re-imagining of the line? The answer lies within the carefulness of wonder, of the reflection and maturation of the maker. Line and maker merge in the awareness of a history weighing and measuring lines, enabling them to soar or grounding them with intention. There is no complete history, it is always expanding. In that spirit these fragments seek not to delimit, to define the line, but to propose a mindful, individual meditation on the power and transformation of one’s own line.

What precedes the line?
(or, “There is no nature outside of culture.”)
In the ‘simplified’ Chinese star map, lines connect points of ancient light—a ‘Rorschach’, a divining reflecting the diver—in-10,000 reflections mirror the territories of an earth bound world into the celestial sphere. The line is employed in geometric traces of longing for a connection between the heavenly realms and earthly realms. Drawn out by the gaze of the viewer (and believer) is a map with affinity for the Sudarium of St. Veronica. The line carries information between realms.

MAKING LINES:
ON CHOOSING THE RIGHT INK

‘The ancient tradition that the world will be consumed in fire at the end of six thousand years is true, as I have heard from Hell. For the cherub with his flaming sword is hereby commanded to leave his guard at the tree of life, and when he does, the whole creation will be consumed, and appear infinite, and holy whereas it now appears finite & corrupt.

This will come to pass by an improvement of sensual enjoyment. But first the notion that man has a body distinct from his soul, is to be expanded; this I shall do, by printing in the infernal method, by corrosives, which in Hell are salutary and medicinal, melting apparent surfaces away, and displaying the infinite which was hid.

If the doors of perception were cleansed every thing would appear to man as it is: infinite.

For man has closed himself up till he sees all things thro’ narrow chinks of his cavern."

‘No longer to imitate, but signify nature. By

strokes, darts, dashes.

Actions of the immediate,

of the lightning bolt.

The sign in Chinese, today, which is no longer in any way mimetic, has the grace of its own impatience. It has drawn from nature its flight, its diversity, its immaterial way of knowing how to bend, rebound, redress itself. Like nature, the Chinese language does not draw any conclusions of its own, but lets itself be read.

Its meager syntax leaves room for

guesswork, for creativity, leaves space for

poetry. Out of the multiple issues the idea."

---

MAY
Simplified Chinese Seasonal Star Map
latitude 22.5° N

Form of crossroads.

Form of branch.

Form of horizon.
As the line points to form, the line carries information of its origin. Relationship in the form of CONCEPT TO DESIGNATED

As the line moves from line to edge, from abstraction to form and space, the form of relationship as concept and designated is considered. What is the space (Site) of this transformation? It is the site of production, of creation. It is the birthplace of the folds, the incisions and the reflections, all traces of an action.

There exist cultures for whom language does not separate the named from the name. Within this space of thought, a vision of the world is created that is dynamic, interrelated, inchoate, as are verbs. People, places and things are alive and thus unpredictable. The word for deer is the same as the deer, or deer-ness. If the word for deer is spoken, all deer that have ever been and will ever be are manifest in that sound. The ‘spirit’ of the deer is that which does not die. It lives through all mutable form via both directions of the same force; life and death.

The deer skull is both a symbol and a reality. It points to a life interrupted. In life it is seen as the keeper of consciousness, the eyes and ears being sense doors—a threshold of beginning and ending for fragments of consciousness . . . but where does consciousness begin and end? Knowledge is always incomplete.
It is dangerous to imagine that the line is always in service of something ‘outside of’ the line, that the line is about something, representing something and not the thing itself. Invariably, the line or mark registers an action (force) now gone—‘what has happened.’ Could it be that the embedded reference to the past negates the projection of a future?

In the creation of architecture, there is a moment when the drawing is the thing in itself and the computer or paper is the site of making. If it is speculative, that towards which it规格ulates is the abstract, and the drawing real. As that object of speculation begins to emerge, the drawing then becomes abstract, ‘a map which preceded the territory.’ There is an ambiguous space that the content of each passes through, reversing roles as signifier and signified.

There is a space here, between concept and designated. Architecture emerges in this space, is produced in this space. It is the space of the imagination—it is the original site of architecture. In this space, at this site, is great potential. Unbound by time, concept and designated might switch identities or become tangled and difficult to distinguish—the line is not a line and the line is not an edge; the edge is not a line and the edge is not an edge: there is no line. Representation is always incomplete.

It is at this moment that the line manifests itself in drawing and in building becomes free. Like the ideogram, it has embedded some quality of its maker and some quality of that which it represents, but beyond that it has embedded within it the potential to take a life of its own, to resist the abstraction, to reveal things as they are—emergent and alive.
I read, some days past, that the man who ordered the erection of the almost infinite wall of China was that first Emperor, Shih Huang Ti, who decreed that all books prior to him be burned. That these two vast operations—the five to six hundred leagues of stone opposing the barbarians, the rigorous abolition of history, that is, of the past—should originate in one person and be in some way his attributes inexplicably satisfied and, at the same time, disturbed me....

Perhaps the wall was a metaphor, perhaps Shih Huang Ti sentenced those who worshipped the past to a task as immense, as gross and as useless as the past itself. Perhaps the wall was a challenge and Shih Huang Ti thought: ‘Men love the past and neither I nor my executioners can do anything against that love, but someday there will be a man who feels as I do and he will efface my memory and be my mirror and not know it.’ Perhaps Shih Huang Ti walled in his empire because he knew it was perishable and destroyed the books because he understood they were sacred books, in other words, books that teach what the entire universe or the mind of every man teaches. Perhaps the burning of the libraries and the erection of the wall are operations, which in some secret way cancel each other.”

“Through a study of the Great Wall(s), relationship in the form of PART TO WHOLE is considered. For many, the walls exist as some singular entity, monolithic and very, very long. It is of course a symbol—its power being the ability to unify. It does this through embedded details, hidden enough to make the symbol consumable, and substantial enough to power (project) and uphold the symbol.

The walls contain, like all lines, this metadata—accumulated layers of physical, social and cultural history. For all of this metadata, only at moments can the depth of information be revealed. What has come to be seen as singular and homogenous is, in fact, complex, heterogeneous. The line carries information. Built in fragments by several different kingdoms and dynasties from the 4th century BCE to the mid 1600s, the walls cut across not only a range of material earth, but also evolving technologies. The transformation of building, military and reconstruction technologies are all indexed by the changing nature of the line.

2. Tourist Maps of China: TravelChinaGuide.com
Alluviums Silts Loess

Though their emergence was slow, at the speed of empires, the walls ‘move’ at even slower time scales, those of geologic time. As the Wall(s) cut across the North China Craton, they reveal and reconfigure ancient information embedded in the ground. The line is manifest in stone of many types, of bricks fired of local clays and loess, all telling a precise and ancient history of the earth, reflecting the regions through which they pass—local and global data. In places, the material was extracted immediately adjacent, leaving a weathered parallel trench. In other places, the material is quarried locally, or in the case of the bricks, locally collected clays are reconfigured; fired into heavy but manageable units.

The effects of geologic time should not be underestimated. Slow but unwavering, the results are extraordinary.

“When two continental masses happen to move on a collision course, they gradually close out the sea between them-barging over trenches, shutting them off—and when they hit they drive their leading edges together as a high and sutured welt, resulting in a new and larger continental mass. The Urals are such a welt. So is the Himalaya. The Himalaya is the crowning achievement of the Indo-Australian Plate. India, in the Oligocene, crashed head on into Tibet, hit so hard that not only itself but also plowed in under the newly created Tibetan Plateau and drove the Himalaya five and a half miles into the sky... If by some fiat I had to restrict all this writing to one sentence, this is the one I would choose: The summit of Mt. Everest is marine limestone.”

Geology Maps of China:

TEXT NOTES
As the line becomes a zone between sea level today and the one meter rise in sea level widely predicted within the next century, relationship in the form of CAUSE AND EFFECT is considered.

Extending the metaphor of the waterfall and whirlpool it can be seen that process begets process, that what underpins form is insubstantial and mutable. What then becomes our reference point? The coastline is another symbolic ‘fixed’ line in our imagination. It is a benign place of costly homes and recreation; a destination. We can accept a line between high and low tide, a contour line between land and sea, but somehow the concept of this line shifting over time remains elusive. Here the contour line becomes a deadline (originally meaning a distance of some 17’ beyond the civil war prison walls that no man could cross alive).

CAUSE AND EFFECT relationships are complex. Often we look for single sources and single causes connected by straight lines, but there are no straight lines, except as concepts, and “linear” might be “non-linear” when the resolution is adjusted. The meaning of deadline has extended from violent origins to the ubiquity of a world of transactions, of provisional closure. The deadline here is re-imagined as an extenuation of its original physical limits. The seventeen feet—an imaginary line, a threshold of death. At the threshold of the contour line, a speculative line marking the transformation of the planet by a multitude of forces, perhaps cycles, the deadline reemerges as the sea levels steadily rise and jump. One thing repeats, exacerbating another—a deadline in increments—death by paper cuts and not beheading. First one foot, then two feet, then one meter above current sea level. The datum, the contour line referred to as immutable reference, is drowning.

Is there no reference? The line searches for reference, tracing the populations of Bangladesh, of the Gulf Coast, of others around the world—all places currently one meter above sea level. The line marks a displacement. A line of anticipation and speculation.

Greetings from the shoreline, the coast line, the site of affluence, leisure, recreation, nature, pleasure.
That the sea level is rising and that the world is warming quickly being accepted by the leading scientists around the globe, but can it challenge the fixity of a collective memory? New Orleans is a 'semiotic ghost', in some form gone and in some form lingering.

The line exists for most in the realm of background, operating just out of consciousness. Given this, the potential of the line often goes unconsidered. It is employed as characterless, simple minded and capable of performing only one task at a time. On closer inspection though, there are many layers of information (dynamic, shifting) that underlie the visible making of the background, the context or the site of consciousness. From this position the line is reconsidered, through the FRAGMENTS, to move forward in consciousness, in production and in awareness. In part, this inquiry sets out to expand a lexicon and suggest the beginnings of a catalog of the line. Perhaps more concisely, to ‘draw out’ a renewed vision of the line, a shift in perception of the line.

The symbol drops away as inert and inherently limited for the subjunctive, for an opening of possibilities—perhaps our deepest longing. The closer one gets to the line, the symbolic gives way to the actual.

IMAGE NOTES:
Share the elevation data for the 1 meter sea level rise is taken from: Overlap, Jonathan and Jeremy Wilcox. The University of Arizona. Using this elevation data from the map above, a series of markers are created over other data sets to attempt to visualize the “content” of the line.

Line with Semiotic imagery
US Geological Survey, Center for Earth Resources Observation & Science (EROS)
USGS Digital Orthoimagery Viewer
http://gis.data.gov/earthscience/orthophoto
Line with Population imagery.
Line w/ Places and Place Names imagery and text.
Special thanks to Paula Zex.
As Taubman College celebrates its Centennial, it is perhaps no coincidence that the 50th Anniversaries of the National Interstate and Defense Highways Act and the first indoor climate-controlled mall at Southdale (Edina, MN) provide the backdrop and theoretical armature for Perimeter Projects, the commencing graduate design studio in architecture. During an intensive three-day workshop at the beginning of the semester, Jordan Crandall (guest professor, media theorist, visual artist, and professor at the University of California, San Diego) invited the studio to reconsider “the compositional dynamics through which actors and forms coalesce, sensations are transmitted and subjects and objects coincide” in the Perimeter. Following forms of urbanism and architecture untethered from more normative affiliations with the city, the studio hit the road seeking out overlooked margins and micro-economies scattered throughout highway space, obscure edge conditions and technological networks. The surrounding images offer a photographic window into the wide bandwidth of Perimeter observations and provocations made during the three-day seminar.

—ROBERT ADAMS, Assistant Professor of Architecture
To work the Perimeter you have to be open to detect its different frequencies because as the word “Perimeter” suggests, “objects in the mirror are closer than they appear.” – Robert Adams

Photographs Courtesy 2G3/4 Perimeter Projects students + Robert Adams
2006 Lecture Series

Winter

Robert Yaro
Hector Lasala
Andrew Blauvelt
Matthew Coolidge
Michael Dennis
Vito Acconci
Hal Foster
Raveevarn Choksombatchai
Camilo José Vergara
James Ackerman
Michael Sorkin
François Roche
James Howard Kunstler

FALL

Jordan Crandall
Maryann Thompson
Chris Reed
Laurent Gutiérrez
Aaron Betsky
Gerardo Caballero
Sulan Kolatan
Neil Smith
Mark Linder
P. Cuando Alvaro Siza escribe respecto de la arquitectura de su maestro Fernando Tavora nos dice que hay una arquitectura que se impone inmediatamente en nosotros. Puede ser de gran escala o de pequeña escala. Puede estar relacionada con el contexto o no, no importa. Una buena foto puede capturar ese tipo de arquitectura, y una segunda visita por ahí no nos dice nada más que la primera. Siza relaciona a Tavora con otro tipo de arquitectura, aquella que causa menos impresión en menos gente. Puede ser grande o chica, pero se relaciona siempre con lo que la rodea, en forma evidente o no. Y elige ser modesta, cuando no encuentra ninguna razón para posar de diferente? Yo creo que tu arquitectura está en este registro.

Q. When Alvaro Siza writes about Fernando Tavora’s architecture, he tells us there is an architecture that is imposed upon us immediately. It can be large scale or small scale. It could be related to the context or not, it does not matter. A good photograph can capture that kind of architecture, and a second look will not tell us anything more than the first one. On the contrary, Siza relates Tavora with another kind of architecture, one that impresses less to fewer people. That architecture can be big or small, but it will always relate to its surroundings, evidently or not. When an architecture is modest instead of posing, is this different? I think that your architecture is within this realm.
P. Esta imagen del proyecto como carrera de obstáculos habla de una relación muy dinámica con el acto de proyectar. Por un lado debe haber precisión y determinación, pero por el otro debe haber una gracia, una cierta elegancia en los movimientos. Los grandes atletas nos hacen creer que es casi natural. Yo creo que las líneas de tus croquis tienen esa elegancia, sin perder la precisión. Podrías hablar un poco del espacio que ocupan tus dibujos en tu proceso de diseño?

Q. This image of the project as a hurdle race speaks to a very dynamic relationship with the act of designing. On the one hand, you need precision and determination; on the other, you should have gracefulness, a certain elegance with the movements. The great athletes make us believe their movements are almost natural. I think the lines of your sketches have that elegance, without losing any precision. Could you talk a little about the space that your drawings have in your design process?

R. Los dibujos han ido adquiriendo cierta elegancia, como decís, a partir de ser una actividad natural en mí. Dibujo constantemente y eso me ha dado una facilidad para poder trasladar mis observaciones. Pero me interesan más los dibujos que hago fundamentalmente cuando viajo que los que hago para los proyectos.

A mí me gusta dibujar. Si estoy aburrido, por ejemplo, cuando viajo, dibujo mucho. Me gusta ver en los dibujos que ha mirado el arquitecto, a que le presta atención y a que no, las cosas que le parecen más importantes. No tengo un fetichismo por el dibujo. Me parece una especie de código y una manera de hacer, de pensar. También pienso los proyectos sin dibujar, dibujándolos mentalmente.

R. The drawings have been acquiring elegance, as you say, because through constant practice they have become an almost natural activity for me. I draw continuously and that has given me the capacity to transfer my observations with a natural flow. However, I am more interested in the drawings I do when I travel than those I do for projects.

I like to draw. If I am bored—when I travel, for example—I draw a lot. I like to discover in the drawings what the architect was looking at. What kinds of things he paid attention to and what things he ignored. But I don't have a fetishism of the drawing. I take it as a kind of code and a way of working, of thinking in the moment. I often draw the projects mentally without using any paper.
P. En tu proceso de diseño parece haber una relación muy fluida entre los croquis y los planos. Los croquis explican momentos visuales y la planta funciona estructurando esas posibilidades. Pero no hay una jerarquía, son simultáneos. El proyecto se descubre de alguna manera a través del acto de dibujar. Desde tu imaginación arquitectónica y por el dibujo, fragmentos del proyecto asoman poco a poco y la imagen se va aclarando.

Parece también que la geometría de tus proyectos funciona como un registro de posibilidades visuales. La estructura conceptual de tus proyectos parece ser los recorridos (incluso preexistentes) y las visuales desde y hacia el proyecto.

Q. In your process of design there seems to be a fluid interaction between sketches and planimetric drawings. The sketches come to explain a series of visual moments and the plans then work to structure those moments. But there is no hierarchy, as they operate simultaneously. The project is somehow discovered through the act of drawing. From your architectural imagination and through drawing, pieces of it appear and the picture becomes clearer.

It also seems that the geometry of your projects works as a register of visual possibilities. The conceptual structure of your designs seems to be the paths (even preexisting) and the crossing views to and from the project.

R. Una de las cosas que más me gusta de proyectar es eso, la manera de recorrer las cosas. Como se entra, como se sale, como te mueves, como se distribuyen los objetos para crear distancias, etc. Cuando voy a una obra y me doy cuenta que estuvo hecha así, la aprecio mucho. La Facultad de Arquitectura de Siza o el Cementerio de Igualada de Miralles tienen geometrías que están hechas para captar, mirar, y cuando uno las recorre todo cobra sentido, todo encaja. Eso ha influido mucho en mi forma de hacer. No es solamente una geometría, hay que primero habitar el proyecto y luego, desde adentro, trabajararlo.

R. One of the things I like about designing is precisely that—the way of moving through things. How do you enter, how do you exit, how do you move, how do you distribute objects to create distances, etc. When I visit a work of architecture and I discover it has been made considering these things I appreciate that very much. The School of Architecture by Alvaro Siza or the Igualada Cemetery by Miralles are projects whose geometries are made to capture views, to make you see. When you walk through them, everything makes sense, everything fits. That has influenced my way of working tremendously. It is not only a concern of geometry. You first have to inhabit a project and then from the inside, work through it.
P. Volviendo a la imagen de la carrera de obstáculos, decís que a los obstáculos no se los puede ignorar, pero tampoco inventar. Esto coloca al proyecto de arquitectura como resolución de problemas, más cerca del sentido común que de la oscuridad de la sobre determinación intelectual. Tu frase sobre la diferencia entre lo realmente complejo y lo simplemente complicado resuena con fuerza. Podrías extender un poco sobre esta idea?

Q. Returning to the image of the hurdle race, you say one cannot ignore the obstacles, but also one cannot invent them. This places the architectural project as a problem-solving mechanism, closer to common sense than to the obscurity of some intellectual over-determination. Your phrase regarding the difference between the complex and the complicated resonates strongly. Could you elaborate a little on this idea?

R. La práctica de la arquitectura requiere de una especulación intelectual y también de un cierto sentido común. Yo no creo en el divorcio entre práctica y teoría. Los proyectos demandan atención desde lo abstracto y también desde lo concreto, esto es lo que al final los dota de complejidad, que como he dicho en algún momento es diferente a complicación. Me interesa hacer una arquitectura compleja pero no complicada.

Antes hacía proyectos que eran más "lindos," ahora me salen más "feos." Quiero decir que los de antes eran más ideales, los de ahora son más reales. Al querer hacerlos tan lindos se dejan de lado cosas que los pueden "arruinar." Entonces uno no confronta los problemas y los proyectos te quedan ideales. Al agregarle cosas, los proyectos se van contaminando y deformando, peor van adquiriendo su verdadera forma, su verdadero valor, su espesor. Entonces son proyectos consistentes, no son vulnerables, en el sentido que desde donde los ataques el proyecto está atento. Desde el lado del contexto, constructivo, tecnológico, perceptivo, programático, estructural, filosófico. Cuando el proyecto logra traspasar todo eso y sale airosa es una gran obra. Yo intento hacer los proyectos así.

R. The practice of architecture requires an intellectual speculation and a certain amount of common sense. I do not believe in the separation between practice and theory. The projects demand attention from the abstract as well as from the concrete; this is what in the end will provide them with complexity. I have once said that complexity is different from complication. My interest resides in making architecture a complex thing, but not a complicated one.

Early in my career, I was doing projects that were “nicer;” now they are “uglier.” In this regard, I want to say that before, the projects were more ideal; the projects I am doing now are more real. When you want to do something so nice, you turn away certain things that can “ruin” it, so you don’t confront things that have to be confronted. If you add things to the projects, the projects become contaminated, deformed, but at the same time, they acquire their true form, their true value and depth. They become consistent projects—they are not vulnerable—in the sense that from every point you ask a question, there is an answer and the project is on guard. From the context, the construction, the technological, the perceptual, the programmatic, the structural, the philosophical... when the project trespasses all of these elements then that is a great work. I try to do my projects like that.
P. Marcelo Villafañe always repeats that in order to define an architect, what matters is not a single, lonely work, but rather the trajectory, that is to say, the development of ideas, the pursuit of questions through multiple works in the course of time. It is almost a call for an ethics of resistance, which is of course more difficult if the everyday activities are about trying to sustain a design practice with very small-scale projects. Can you talk a little about this and the day-to-day work of your office?

Q. Marcelo Villafañe always repeats that in order to define an architect, what matters is not a single, lonely work, but rather the trajectory, that is to say, the development of ideas, the pursuit of questions through multiple works in the course of time. It is almost a call for an ethics of resistance, which is of course more difficult if the everyday activities are about trying to sustain a design practice with very small-scale projects. Can you talk a little about this and the day-to-day work of your office?

R. Personally, I don't find a difference between the small projects and the big projects. One should adapt to each project’s circumstances; to the programs, to the budgets, to the sites. In the end, I think it is always the same. When I studied architecture, they made us do a house in the first year, the second year two houses, the third year a school, the fourth year a neighborhood and so forth. But the complexity of the architecture does not lie in the size! I taught some exercises with Pablo Rosenwaser that were like these: in the first year, we gave the students a program; the second year the same program and a site; the third year the same program, the same site and one material; and in the fourth year the same things plus some specific requirements of measurement. The complexity lies in surpassing these requirements to transcend them.
P.  Volviendo a la primera pregunta, Albert Viaplana dijo alguna vez que el arquitecto debe ir al lugar a descubrir la arquitectura que ya se encuentra ahí. El arquitecto debe tener la sensibilidad justa para hacerla visible. En la misma línea, Álvaro Siza dice que usa sus croquis como herramientas para descubrir sus proyectos como lo casi nada que ya casi esta ahí. Es una imagen maravillosa! En algún sentido, tus proyectos emergen, casi como registro o intensificación de relaciones pre-existentes y dan la impresión de ser la respuesta justa, de siempre habiendo estado ahí.

Q.  Going back to the first question, Albert Viaplana once said that an architect should visit the site to discover the architecture already present there. The architect should have the sensitivity to make it visible. Likewise, Álvaro Siza says he uses his sketches as tools to discover his projects, to add the almost nothing that is already there. That is a marvelous image! In some sense your projects emerge, almost like a register or an intensification of the pre-existing relationships. Your projects give the impression of being the natural answer. They look like they were always there.

R.  Muchas veces la arquitectura aparece como una extensión de los lugares donde se tiene que insertar. Descubrir el proyecto en el lugar para que pase a formar parte de él es una manera de entender el trabajo. Comenzar a desarrollar el proyecto sin una idea previa lleva a un resultado más imprevisible, pero esta relación con los lugares trasciende los físico o lo material.

R.  Often the architectural project appears as an extension of the site where it has to be inserted. To discover the project in the place so that it becomes a part of it is one way to understand the work of the architect. To begin the development of a project without any preconceived idea leads to unforeseeable results, but this relationship with the site transcends the physical or material.
P. Hay una idea que resuena cada vez que pienso en tu obra, creo que fue Josep Quetglas el que dijo: “Que no se note que un arquitecto ha pasado por aquí, que mejor elogio para un arquitecto!” Yo no relaciono esta idea con una postura anti-arte o anti-intelectual, sino por el contrario, con una sensibilidad extremadamente sofisticada que aspira a diluir la presencia de los prejuicios de la disciplina arquitectónica para dejar lugar a la vida, a la cotidianidad, y al hacerlo encontrar resonancias profundas. Yo llamaría a esto un intento de encontrar una épica de lo cotidiano.

Tus intervenciones de pequeña escala con presupuesto mínimos tienen esa sensibilidad, tu lectura de arquitecturas populares también. Podes hablar un poco de esto?

Q. There is an idea that comes to mind every time I think of your work. I believe it was Josep Quetglas who said, "That no one notices that an architect has been here, what better tribute to an architect!" I do not relate this idea with an anti-art or anti-intellectual stance, but on the contrary, with an extremely sophisticated sensitivity that aspires to weaken the presence of disciplinary prejudices, to leave space for life, the everyday, and in doing so finds profound resonances. I would call this an attempt to find an epic of the everyday life.

Your small-scale interventions with minimum budgets have that sensitivity. Your readings of the popular architecture have it also. Can you talk a little about that?

R. Yo miro lo que me rodea. Edward Hopper retrato América con una mirada sobre lo banal. No se si viste el film de los Eames “The Uncommon Beauty of Common Things,” es un poco lo mismo. La arquitectura no esta solo en las grandes obras. Trato de aprender de todo lo que observo. Por otro lado tengo una visión cosmopolita de la arquitectura, no quiero que se me considere como un regionalista.

R. I look at what surrounds me. When Edward Hopper painted America he looked past banality. I don’t know if you saw the Eames’ film The Uncommon Beauty of Common Things, it’s quite similar. Architecture is not only found in major projects. I try to learn from everything that I observe. On the other hand, I have a very cosmopolitan vision of architecture, I do not want to be considered a "regional" architect.
P. Creo que tu valoración por las arquitecturas cotidianas no se basa en una relectura intelectual de lo popular sino en una apreciación de la honestidad de esas construcciones. Una arquitectura que no se esfuerza en imposturas y que encuentra una manera sensible de resolver los problemas. Cero que conscientemente trabajas para encontrar una manera relajada de pensar los proyectos. Buscando un toque ligero que no renuncie a la precisión.

Q. I think your validation of the everyday architecture is not based in an intellectual reconsideration of popular values, but in an appreciation of the honesty of those constructions, of the way in which it finds sensible ways to solve problems, without pretension. They do not "force" the architecture with overly designed solutions. They let the architecture breathe.

I think you consciously and consistently work to find a relaxed way of thinking about your projects. As if you are looking for a light touch that does not renounce precision.

R. No me interesa la cuestión demasiado abstracta, no me interesa la obra pensada demasiado como un dibujo. Me gustan los edificios cuando pierden esa abstracción y son capaces de asumir todas las deformaciones, las verrugas. Me gusta la arquitectura con defectos. No reniego de la cuestión sublime de la arquitectura, pero creo que a veces hay que pensarlo más como un hecho más cotidiano. Trato de ver y hacer arquitectura como un hecho natural. Me gusta la arquitectura que pase casi desapercibida, inadvertida.

R. I am not interested in the extreme abstract. I do not like to think of the work of architecture as only a drawing. I like buildings when they lose that abstract quality and they are capable of assuming all the deformations of the real. I like architecture with defects. I do not renounce to the sublime aspect of architecture, but I think that sometimes we have to think of it more as a quotidian fact. I try to practice architecture as something natural. I like discreet architectures that go inadvertently unnoticed.

5,373.2 MILES FROM ANN ARBOR: Gerardo Caballero practices architecture in Rosario, Argentina and was the Max Fisher Visiting Professor Winter 2007.

His designs have won numerous first prizes in national and international design competitions with programs ranging from schools, museums and memorials to metropolitan parks and urban master plans.
Marcel Duchamp's project for the Large Glass (1915–23) may be one of the first major critiques of Modernity. According to Duchamp, the sieve, seven of which are represented in the work, would break up any system of thought or any organizational structure.

“Dust Breeding,” a photo executed in 1920 by Man Ray, shows the Large Glass lying on the floor of Duchamp's studio, covered with a thick layer of dust which had accumulated over several months. In this state, the work showed Duchamp at work on another stochastic system.

Years later in 1933, Duchamp made a postcard using Man Ray’s photograph, to which he added few words (see above). A postcard addressed to ... Le Corbusier. It was an oblique comment on the architect’s latest utopian project, The Radiant City (La Ville Radieuse), which Le Corbusier started in Moscow in 1930 and finalized in 1933 for the 4th CIAM (Congrès International d'Architecture Moderne) in Athens.

The Large Glass—in French, Le Grand Verre = V.R. (glass)—Ville Radieuse.¹

Le Corbusier’s plan was for a new world/city, which would replace the traditional urban fabric with a rationally organized scheme. Thanks to the tabula rasa, his utopian ideal was developed on a razed site, a wasteland once occupied by the chaotic meander of gloomy streets. Yet the new order is not to be seen in the concrete lines of his architecture. Rather, it appears in the progressive dissolution of the built, i.e., in the surrounding Ville where the trees represented in the V.R. recall the dust balls in Duchamp’s postcard.

A fundamental difference between the Ville Radieuse and Dust Breeding can be perceived at a structural level. In Le Corbusier’s project, one layer replaces another, which has been removed, whereas in Duchamp’s, a new layer is superimposed over the underlying one in order to promote entropy as a system and randomness as an organizing principle.

In planning a (commercial) project, the architect is constrained to follow engineering standards, building codes and other norms, while the artist remains free, his approach open, heterogeneous and multiple.

Criticizing Le Corbusier, Duchamp was finding fault with a capitalist model for society. Inscribed within the history of Modernism is a progressive failure of architecture to project a new order and to enhance the way we live. Today’s cities are far more complex in their definition and organization than the one proposed by Le Corbusier. However, Duchamp’s Dust Breeding shows an analogy to the present condition. Contrary to the tabula rasa, Duchamp’s project proposes a build-up of layers, thus acknowledging the historical complexity of a given situation. Confronted with the failure of urban planning strategies, the new planner is becoming an observer of spontaneous phenomena.

Transurbanism, Post Planning or Lean Planning in Lagos, Tokyo, Hong Kong, Bangkok and the Pearl River Delta are variations on these new stochastic strategies.

The definition of new scenarios varies from one situation to another, to a specific context and further spaces. “What’s a scenario? A constantly mutating sequence of possibilities. Add a morsel of difference and the result slips out of control; shift the location for action and everything is different. There is a fundamental gap between societies that base their development on scenarios and those that base their development on planning.”²

A few paradigms of current urban conditions follow. All are related to technological developments, and notably, electronic markets.

In Asian cities, the disappearance of urban space as a space for social interaction is balanced by the extraordinary extension of the city alongside new spaces of interaction. Instead of a homogeneous city, there is a multiplicity of archipelagos connected by an efficient network of communication and transport infrastructures. Together they produce an alliance of multiple transportation nodes, creating linkages and articulations across geographic barriers and national borders.

Each new core is established with an apparent disregard for geography and history. Practical considerations—distance and ease of connection to the other parts of the network—determine the cores’ locations. Between these places—alongside, underneath or above them—informal economy develops in the leftover space.
Post Planning

In the late 90s the Chinese-born, Paris-based curator Hou Hanru proposed the term “post-planning” to denominate a widespread response to globalization in Asia, and specifically in China. Combining the ideologies of communist and capitalist utopian modernity, post-planning resulted from an “explosive” urban expansion. Hou Hanru remarks that urgent needs and the inability of policy makers to produce plans for modernization force communities to develop their own schemes and solutions based on their particular experiences. Based on flexibility and adaptation to a specific context, these measures combine “the seductive possibility of personal enrichment and career improvement.... In this post planning process, economic and commercial considerations are the central players.”

Post planning is either a reaction to the futility of planning and/or a “post-reaction” as a form of planning.

According to the curator, artists and architects are part of this process. They are the “witnesses of and contributors to” a new phenomenon. If many of them are joining the “post-planning” mainstream, some, like the Chinese architect Yung Ho Chang, are choosing other ways to deal with China’s speedy modernization.

Yung Ho Chang and Hou Hanru have been working together since 1996. The exhibition Cities on the Move was the first chapter in their long collaboration. Year after year, project after project, they have explored “an alternative to the standardization of urban space.” Rather than adopting the tabula rasa approach, the architect favors negotiation. He regards the city as a multi-layered and ever-changing organism. The solution to its growing needs involves hybridization.

Lean Planning

Presented in 2002, at the first Rotterdam Architecture Biennale, the lean planning principle is an attempt to answer simple questions while observing development in China: How to map the unstable environment? How to respond to the most evanescent social phenomena? How to embrace the constant mobility of people and merchandise? How to define rules for harmonious development? How to react to the “Made in China” phenomenon?

Recent Chinese urban development has been affected by increasing and ever more complex social mobility. Systems of production and distribution usually accommodate an archaic mode of urban planning. As a result, traffic congestion, air-pollution, increasing distance between home and workplace, unadapted public transport and unarticulated urban spaces are just a few of the most obvious of the undesirable consequences. Entire regions are polluted in the name of prosperity and progress. Established by opportunistic entrepreneurs, the politics of laissez faire must make a “leap” to enter the global economy.

New communication and information technologies have created the most visible signs of China’s “modernization.” In the environment which they are compromising, efficiency rhymes with dirty, adaptability with muddy, flexibility with foggy, timeless with harshness, etc. In the same way, the architecture associated with these industries belies their main goals. Functional and symbolic, these monstrous new buildings trumpet their sponsors’ putative individualism and ostensibly liberal world views.

Lean planning is an integrated set of planning principles that respond to a specific process of urbanization in China. It aims at the identification of given resources in order to ensure harmonious development. Lean planning operates on local and regional levels, enabling a given territory to discover its own best planning strategy for developing its global potential.
Lean planning attacks the boundaries that articulate urban space. The contour lines of architecture are fading, and the distinction between centre and periphery, interior and exterior, public and private are disappearing. Thin patterns endowed with a multi-layered space of flow encourage the formation of archipelagos that are part of an efficiently networked society. The usefulness and desirability of this arrangement is continuously monitored. Ongoing assessment is carried out at every level as a continual effort collectively managed. Lean planning and thin patterns express a dynamic specific to the Pearl River Delta region, where global-scale operations are carried out in decentralized production units.

Having set the context and presented the tools, then, we propose this story:

In the early 1980s, the Pearl River Delta (PRD) region was transformed into a vast manufacturing hinterland for Hong Kong, as well as an experimental zone for China’s new economy. Massive foreign investments from the British colony boosted a region that aspired to become the fifth Asian dragon. Established by entrepreneurs, a politics of laissez-faire was successfully injected into local infrastructural projects. Joint ventures and private money propelled a leap that responded to the global economy and accession to the WTO. The most visible trace of this recent development is a private highway—a 120-kilometer elevated strip between Shenzhen and Guangzhou. Owned by the developer Hopewell Holding and CEO Sir Gordon Wu, the Guangshen Superhighway is a unique platform, which links cities and transfers merchandise from factories to container terminals. This suggests that the configuration of this strategic network is no longer determined by local factors but by a private empire that controls the economy, the planning and ultimately the culture of a region.

The dual three-lane toll expressway provides 18 interchanges designed by Sir Gordon Wu (he is also an architect). Obviously, the strategic position of these junctions has increased the surrounding land value and encouraged the formation of an urban corridor that will eventually transform the PRD region into a single sprawling metropolis. A commercial
structure was built at each interchange. Inspired by Le Corbusier’s Plan Obus for Algiers, the buildings were intended to serve an ambitious mixed-use program—commerce, office, factory and dormitory—directly plugged into the underbelly of the infrastructure. Most of the 18 buildings were abandoned soon after completion. Today they shelter migrant squatters.

Traveling at 120 kilometers per hour down the highway, carefully avoiding frequent car crashes, stray domestic animals, recklessly driven buses and container trucks, you become accustomed to the spectacle of a ravaged landscape undergoing massive reconstruction. Between factories, dormitories and trash areas, streams and ponds of polluted water hint at the amplitude of the disaster, suggesting the future possibility of a dehumanized world. For now, however, the reality is utterly different. Life carries on for a floating population of 10 million people who produce the “Made in China” label. Living in dormitories attached to the factories, these new migrants spontaneously appropriate the only large, sheltered space available—the superhighway.

A massive open market exists under the highway. It is a place where commodities are sold, services offered and food and entertainment consumed. You can take a chair, order a meal and watch a DVD on TV. Where several chairs cluster together, entertainment islands are created. The highway provides a roof and support for lighting and electricity. In the shadow of the highway, innovative economic activities arise and change with social demand. Another form of energy comes from the transitory condition of the land, people, TV screens, digital noise and neon light. This hidden urbanity, which thrives on the vitality of a population almost entirely under the age of 25, represents the necessary motor that powers the PRD region.

Friction Zone
In Africa, Rem Koolhaas witnessed another scenario. He concentrated on what he calls friction zones—places where the infrastructure slows down, creating the opportunity for an area of exchange (a market)—to take

Urban Sprawl—Pearl River Delta
White patches reveal the urban sprawl in the Pearl River Delta Region—a continuous urbscape dedicated to the “Made in China” production.
“Alaba is an electronics market on the periphery of Lagos, where brand-new and second-hand items are piled up as they would be in a dump for electronic products. The scale of the market is literally unimaginable, with as many as 50,000 traders and roughly 200,000 visitors at any time of day. Each stand has its own communications apparatus in the form of a huge aerial, up to 30 meters tall, that enables it to stay in touch with the rest of the world. The economic power of this place is astonishing, as is its autonomy. In Africa, the elasticity and pervasiveness of the friction zone avidly absorbed the undefined in-between space that has always been the flow of modern architecture.”

New Materials: Dump, Dust, Plasma

Responding to an immediate context, new forms of organization become even more apparent with the emergence of new materials.

Still in Lagos, Koolhaas identifies “the lowest form of spatial organization,” i.e., the dump, “pure accumulation, it is formless.”

Looking
first at its surface, Koolhaas recognized the potential carried by the dump. First the possible deepness of its structure, then its versatile aspect and finally the richness recognized by its dweller.

The scavenger would defeat the planners!

The architect continues with an apologia for the “shapeless” and “worthless” organization accumulated by the dump. It is, in fact, a perfect response to an over-planned world, the perfect solution against design, or in Koolhaas' words “the tyranny of style.”

A recent project by the French architect François Roche (R&Sie) takes dust as the basis for a new building material, and hence for a new planning strategy. The ambition is to collect dust from the sky over Bangkok and use it to form the exterior skin of a museum (with the help of an electrostatic system on the surface of an aluminum lattice). He explains: “The dust dresses the city and her biotope, even going so far as to modify the climate. Within this fog of specks and particles, Bangkok becomes the melting pot of hypertrophic human activity convulsing with exchanges of energy, where visibility becomes its greatest charm.”

For Roche, the sedimentation, accumulation and compression of an ethereal material represents simultaneously the concrete and theoretical solution to his architectural research/practice.

Finally, recognizing that telecommunication networking is to some extent replacing the traditional infrastructure of roads, etc., the Taiwanese architect Ti-Nan Chi proposes “plasma”—a mode of electromagnetic existence—as a means by which to gauge levels of urbanity. As he observes, “when fast growing needs and capital investments occur, cable lines, antennas and halfway stations are installed, often without integrated planning or permit, above or below the existing building in the city.”
Logistical Urbanity

Obviously, today’s cities are not just infrastructures plus buildings set within a network of roads. The urban situation is complicated by the new relationship between city and countryside and also by the fact that wherever you use your cell phone, you’re in a city. The plasma, or the magnetic field generated by the swarm of connections, gives the real temperature of our environment.

The “plasma” phenomenon started in Japan with incredible energy. Again, this may be interpreted to have constituted a response to the serious crisis that penetrated all levels of Japanese society. Wandering in the shopping areas of Tokyo, the “girls” were seen as bees—able to reactivate the city and predict its future episodes.

As stated in the curatorial lines of the Japanese pavilion for the Venice Architecture Biennale 2000:

“Like life within an environment constantly under phosphorescent lighting, everything looks flat and indistinguishable and this creature

Girl while comfortable here, lacks the knowledge of how to deal with the dark. However, she is not isolated, since her thumb is in constant movement—in instant communication on a cellular phone that can reach her friends and fellow creatures. The materialistic and media-oriented environments of the multilayered city amplify her metaphysical reactions to that physical stimulus.”

The girls would defeat the planners!

Rrose Selavy’s property extrapolates a new message: How dry—How fertile—How cheerful—How sad points to the changeable character of any organizational system. Light as a simple blow, no traces remain. As rooted as could be, the foundation set in the tabula rasa collapses. As for Duchamp, nothing is permanently stable, planning and planners are defeated ...
MAP Office is an open platform conceived by Laurent Gutierrez and Valérie Portefaix to reform our daily practices and to reconstruct our life-world. Based in Hong Kong, Map Office epitomizes a new breed of architects who are rethinking the socio-political agencies of architecture.

Notes

3. Hou Hanru, “Between the usual and the unusual,” in Xing Ho Chang/Atelier Feichang Jianzhu, Gutierrez + Portefaix (eds.) (Hong Kong: Map Book, 2003), pp. 40-41.
4. Ibid.
7. Ibid.
10. Ibid.

All images ©2007 Gutierrez + Portefaix, unless otherwise noted.
PIXEL: Wish Space and Other Areas of Illumination explores a new writing of space, presenting both the visual record of a journey made by a fictional character called PIXEL and a survey through the increasingly unknown space of contemporary China.
**PIXEL** is a narrative of the Pearl River Delta’s cultural landscape.

**PIXEL** is an entity, a “character” able to highlight areas where a reality is not yet fixed—an open ground where everything is possible.

**PIXEL** is a fiction and a utopia.

**PIXEL** is a space as well as a narrative and the narrator.

**PIXEL** is a fictional reality.

**PIXEL** travels in hyper reality (beyond reality) from one sequence to another sequence without any transition. Each sequence being a projection of a possible reality.

**PIXEL** has any scale.

**PIXEL** is organic. It could be big or small and include many others.

**PIXEL** exists within a specific boundary.
04 Songgan, Shenzhen

In Songgan, there is a large open market underneath the Guangshen superhighway. Mainly used by the workers for social networking, it is a place where one can take a chair, order food and watch TV. The highway provides a roof and support for lighting and electricity. It is not only about selling commodities, but also about persuading the masses to consume them.

The old migrant is a rare figure in the Pearl River Delta. With an average age of 22, this energetic young population represents the true engine that powers the region.

Food booths are everywhere. They feed a very large part of the population offering simple traditional food at very low prices. Their mobile structures operate almost continuously, from dawn to dusk. With a few plastic chairs and tables they become a public dining room for the factory workers.

Illegally plugged-in underneath the highway, a meter paradoxically records the electricity consumption of an illicit structure doing informal business. The electricity running along the infrastructure is split, to be consumed by the many local restaurants, karaoke, snooker bars or little shops gathered in this leftover space.

The concrete-mixer truck is another indispensable instrument of China’s urbanization. It appears along the streets and highways always moving to or from a construction site. They are often forbidden to enter city centers during peak hours and sometimes form long queues at the entrance to areas under development.

Modern village houses are one of the main residential components visible in China. Most of them stand on what used to be agricultural land or a traditional brick village. Their reinforced concrete structures of 3 to 4 stories are covered with simple tile patterns. Densely clustered together, they form streets of standard buildings with customized envelopes.

Ou Ning is an organizer, researcher, cinematographer and photographer, editor and art director for publications and websites based in Guangzhou. Today he is joining us to document an informal market underneath the highway.
In this drawing, look for the following:

- 1 Ou Ning
- 1 old migrant
- 1 food booth
- 1 electric meter
- 1 modern village house
- 1 concrete mixer truck dripping cement
- Gutierrez + Portefaix
The Wallenberg Studio honors Raoul Wallenberg ('35) who is credited with rescuing over 100,000 Jews from Nazi persecution in Budapest, Hungary during World War II. A traveling scholarship was established in his name by the Bernard L. Maas Foundation in 1986 to fund exemplary undergraduate students and provide them with the resources to expand their understanding of the world. This scholarship is a reminder of Wallenberg’s compassion and courage and seeks to promote his ideals through travel and knowledge of one’s role in the global context.

2006 Award Winners

Elyse Agnello  
Matthew Carlton  
Gabriel Keway  
Kee Leav  
Elizabeth Miller  
Sahar Moin  
Micah Rutenberg  
Brandon Vince  
Kasey Vliet

Honor Award

Jacob Gay  
Keenan May  
Mary Messersmith  
Travis Williams
Argo Sport aims to use artifice as a means to create a more active and intensified park landscape and thereby subvert the everyday notion of a protected, open and natural park space. The intention is to produce an alternative space that provides a stronger relationship between the city and park and nature and artifice while also maintaining a high level of integrity. Argo pond is a leftover slice of land located along the Huron River in northern Ann Arbor. The land surrounding the pond is prominently situated at the edge of Ann Arbor’s urban fabric. Its lack of use at first glance is something of a mystery, no doubt, due to its highly fragmented nature. The site is strongly divided psychologically and most visible of these sort of growth into transformed by early

Argo Sport focuses on the opportunities provided by the removal of the defunct dam. The land itself is centered within the Huron River Greenway, a system of parks running throughout northern Ann Arbor. The greenway park system has traditionally acted as a series of open parks containing traditional park programming. The existing barriers of railway and river along with a loosely connected network of paths running the length of the greenway are understood as a series of lines producing strips of interstitial spaces. This project examines these spaces, developing them into conceptual entry cuts, hard/softscapes and datums. The three types of development are not mutually exclusive and are utilized throughout the project in varying degrees. Entry cuts provide a linkage into the traditional urban fabric and the less dense fabric to the north of the park. Hard/softscape is used to separate and link program types. Datums are either preexisting conditions such as the river and railway, or are introduced like the main circulation path linking the entire greenway system.

Argo Sport can be understood at three scales: the Greenway, the city, and the park.

The Greenway

This project aims to reinterpret the greenway as a resource for public use. A fundamental redefinition allows the greenway to serve as a more active component of Ann Arbor civic life, while also promoting a stronger relationship between the city and the river. Argo pond sits at the intersection between Ann Arbor’s urban fabric and the greenway. This intersection provides an opportunity to create a landscape of much higher intensity and can also serve as the catalyst for growth within the greenway. Intensity is developed within the greenway by condensing the traditional fitness and recreation programs often found within such parks.

The City

The interface between the city and the park occurs as a series of entry linkages. An entry cut to the south provides a link into an existing park. This cut acts as a public gathering point from which circulation is accessible. At the center of the site a pavilion floats in the area of highest intensity—where three datums of river, path and railway are at their closest proximity. The floating pavilion accommodates events and interior programs while leaving the landscape primarily undisturbed.
The Park

Within the park, program density is increased to accommodate the needs and desires of its users. The increased density produces an overlapping of use more akin to urban space. For instance, nets used to shield golf fairways also serve as projection screens. Hardscape basketball surfaces serve as ice skating surfaces during the winter.

The built forms highlight the adjacencies inherent between program and park. For example, retaining walls are transformed to create public space within the program, which exemplifies the interface that exists between nature and artifice. Similarly, the main entrance to the park is the moment where the city meets the park, and the park connects to Main Street and the city. As a result, the park is the catalyst for growth within the greenway.

Mike Styczynski lives in Troy, Michigan.
Argo Pond is a slice of land located along the Huron River in Northern Ann Arbor. The land surrounding the pond is prominently situated at the edge of Ann Arbor’s urban fabric.
HARDSCAPE baseball
HARDSCAPE entry park
HARDSCAPE entry bridge - event pavilion
HARDSCAPE basketball
SOFTSCAPE golf
SOFTSCAPE golf
SOFTSCAPE golf
The pavilion accommodates multiple uses. Entry bridges cut perpendicular to the lines and edges that characterize, and dominate, the site. These cuts not only provide access to programs along the river, but also serve to bridge the physical and implied boundaries between the park and the surrounding city.
Hardscape basketball surfaces serve as ice skating surfaces during the winter.
Intensity, or the concentration of energy, seems to have sporadically dissipated from the physicality and life of Detroit. Once the booming center of the automobile industry, the city presently exists in a contrary desultory state. Due to the erasure of buildings and the city grid, the seeping indeterminate space has become the medium in which Detroit exists. The optimistic outcome is the anticipatory field condition for new events to sprout; events that are small in scale, playful and potentially a powerful influence.

The Dequindre Cut is an abandoned, sunken passageway that formerly supported many of Detroit’s trains. The site is reminiscent of the city in that it is an opportunistic ground for spontaneous natural happenings. Following two decades of neglect, vegetation has emerged and found ways to violate man-made elements such as railroad tracks and fences. Because the Dequindre Cut is filled with interrelations of planned and spontaneous conditions, it exhibits immense potential to hold the Moments of Intensities.

The park component of this project is intended as the new home for the Greening of Detroit, a nonprofit organization through reforestation as well as space for the and community

Intensity as Animate Zones
Visitors in contact with these Moments will be shocked at the discovery of the unexpected and almost surreal condition in which he can indulge. This is a space of sensory amplification; one will surrender to the captivating allure, and yet have a more keen sense of the surrounding interactions. Neighboring relationships make these Moments come alive. These zones are not separate entities, but organisms that co-exist in the same space and share what Manuel Delanda calls “extensive and intensive borderlines.” Though extensive borderlines have a tangible line of threshold, intensive borderlines have an ambiguous area that fades and merges with the adjacent space. The Moments that have intensive boundaries interact by merging and creating the new in-between conditions. Filled with these interrelating Moments of Intensities, the park is always in flux. The result is a dynamic network of responsive conditions living and growing together.

Curated Park
The Moments of Intensity, specifically plants and human activities, are programmed as if they are artworks in a museum. Specifically, when the characteristics occur in contrasting juxtaposition and share intensive boundaries, they are more distinct and offer a unique experience to the visitor. One such contrasting condition may be a vast field of vibrant red tulips lying next to masses of white crab apples, thereby creating the middle mixture zone of red and white colors.

Moments of Intensities introduces new energy zones into the urban fabric with hopes of turning them into a catalyst for change. This proposal does not work on a macro level, but rather takes place on a smaller scale relying on the individual’s encounter and reaction to the intensities. Thus, while the buildings in Detroit diminish, these small moments of intensities will reciprocally emerge through the design of a public urban park.

Studio Critic
John Comazzi
The plants' colors, seasonal cycle, size, form, smell and growth rate are characteristics that can be accelerated to produce stimulating conditions (above). Curated zones shape the earth. The site is narrow and sloped. Soil is moved and terraced according to specific plant or spatial needs. The profiles of these terraces and slopes connect longitudinally to form the ground on which programs interact freely. The site becomes the responsive medium that hosts the chain of conditions (right and below).
Abstract Objects

In the midst of the ever-changing landscape, the buildings for the Greening of Detroit remain as fixed abstract objects scattered throughout the site. These buildings are essentially simple shells that enclose the interior program and open toward the inside of the park. While they initially appear as independent objects, they hold particular physical relations to the site as seen in the three developed architectural types: extend, float and embed. The discrete nature of these buildings allows for future additions within the park. Over time, Moments of Intensities fill this urban park in Detroit and provides a unique environment that inspires the visitors to engage in educational and leisurely activities.

ANN ARBOR  Rikako Wakabayashi works at Lalire March Architects in New York City. LMA is a small design firm that specializes in high-end commercial and institutional projects. Her contributions include a small sunglasses store in Soho and the gift shop inside Newseum, a museum to be built in Washington DC. She plans to travel throughout Japan this summer and pursue a Master of Architecture degree starting fall, 2007.
SPRING

SUMMER

AUTUMN

WINTER

Rikako Wakabayashi
Buildings enclose the interior program and open toward the inside of the park.

*Extend* — Education Center

*Float* — Greening of Detroit Office

*Embed* — Tool Shed for Garden
The flux between nature and artifice is continual, blurring the definition of each. This tension is especially evident in Detroit, where density has given way to the current network of voids. Artificial infrastructure was imprinted on the land, the fabric decayed, the natural reemerges. Weeds, weeds become grass. Concrete walls crack, erode and rejoin the soil. Parking lots are broken down by grass, grass becomes weeds, weeds become trees. Concrete walls crack, erode and rejoin the soil. The Dequindre rail line constructed and derelict since its last train ran in 1960. This one-mile stretch from the Eastern Market to the Detroit River is a neglected, but vital space to the City of Detroit. It is a typographical anomaly to the flat terrain measuring twenty-five feet down, forty feet across, and about one mile long. The Dequindre Cut is hidden by the natural invasion, only noticed for a split-second when driving over one of the remaining bridges.

Merging natural and human cycles, CyclicTypology uses leisure and productive landscapes to stitch together the edges of a lowline, while developing into a projective urbanism along the length. Security is primary in this condition and must be mediated not by cameras, but through thoughtful planning and programmatic relations. Descending into this man-made crease, there is an opportunity for a new pedestrian oriented infrastructure and greater connectivity. This lowline is a sectional reprieve from the city and consequently home to the homeless and a gallery of litter and graffiti.
Assuming more connections will be needed over time, the existing paths across the Cut are reformatted with architecture in the middle, which mediate across and down the Cut at different speeds. The slowest is the educational branch with a ramping wood experiential progression (top). The fastest progression is in the greenhouse/mechanical branch with metal stairs leading directly down to the lower level (middle). The third type is the concrete project manager space combined with leasable space on the street level (bottom).
Nursery Process Reformatted for an Urban Working Landscape.
Working in a cross-grain motion to connect the current figures and voids, while multiplying in the longitudinal direction, this project became a projective urbanism. This gesture is similar to the ribbon farms that gave rise to the name of the Dequindre Cut. Long strips minimized the amount of infrastructure and maximized the use of land. In the early twentieth century, this translated into the grid of streets forming an area known as Black Bottom. Erasing this network in one large motion, the urban renewal project of Lafayette Park again recreated the area. On the edge of this development the Dequindre Cut lays barren, a hole that further subdivides the city.

Taking on the theme of nature and artifice, this project addresses how architecture can engage the temporal. On the spatial level, how this project can become a scape in itself, a progression that links the city and the cut? On the experiential level, how can human and artificial cycles interact, converge and confute natural cycles for a better understanding of the other?

The primary program provides a new hub for the Greening of Detroit. Dedicated to the reforestation of Detroit, this organization builds community through an increasing number of projects each year. Envisioning an expanding role over time, flexible growth is provided through project nodes, each integrating multiple activities into a single area.

Three main building types were defined, as well as three landscape types to develop and integrate across, along and around the Dequindre Cut. Each portion preserves a part of the existing condition of natural reemergence, while adding a new layer of nature and artifice. Instead of homogenizing the site, each new section adds a unique layer to the current landscape. These interventions relate to various cycles and flows; yearly tree planting, seasonal harvesting, monthly recreational activities and daily interactions.

The top edge is pushed and pulled to create higher recognition from the streets above. This provides parking space that extends over the edge into the existing tree and scrub slopes. Large activity spaces below push outward and the land upward, signaling new areas below.

Assuming that more connections will be needed over time, the existing paths across the Cut are reformatted with architecture in the middle. Each new bridge attaches to the side of an existing Dequindre bridge or old concrete abutment mediating across and down into the Cut at different speeds. The slowest form of mediation is the educational branch with a ramping wood experiential progression. The fastest progression is in the greenhouse/mechanical branch with metal stairs leading directly down to the lower level. The third type is the project manager space combined with leasable space on the street level. This branch is a concrete wrap integrating a combination of ramps and stairs into the Dequindre Cut. These three speeds and programs mix along the longitudinal path.

The main use of land is for the nursery areas. These push down on the existing slope to create a series of planting terraces. Each portion has ramped access from above for maintaining the trees from seedlings to transplanting. Since each greening project would utilize a different species, a variation of qualities and growing cycles would occur along the path. These areas would be watered from the concrete abutments.

In addition, recreational and community gardening spaces are mixed along the length of this project. The seasonal and monthly cycles of these spaces would further contribute to the longitudinal experience that could also continue further into the city. By accommodating the growth and needs of the Greening of Detroit, there is a progressive intervention on an urban scale, one that can transcend the limits of the site.

512.0 MILES FROM ANN ARBOR, Jacob Dugopolski interns at KieranTimberlake Associates in Philadelphia. He has been working on projects at Yale University and the University of Calgary, as well as exploring the East Coast. He plans to travel abroad in the near future, then pursue a Master of Architecture and Urban Design next fall.
In response to the history of Chicago’s waterfront development, Pier DuSable is an artificial landscape operation, with potential to inform the public about healthy agricultural opportunities in an urban environment. Positioned just south of Navy Pier, on the mouth of the Chicago River, this project celebrates the city’s most prominent feature—water. Removing the existing contaminated soil and elevating the landscape can place marine-based programs beneath the walkscape. The stretch of artificial landscape extends along the street grid from under Lakeshore Drive in order to increase public circulation from Downtown Chicago to Lake Michigan.

The pier consists of three major parts: the barge docking area, an artificial landscape surface and the Research Facilities building. At water level several large industrial barges, initially used for the removal of the contaminated soil, are docked beneath the walkscape. Barges are transformed into floating gardens, for agricultural research, public aesthetic and for remediation techniques. Above, plots of land make up the undulating landscape, to be utilized for specific areas of research and also available for public observation. Such a walkscape serves to connect a strip of land from the mouth of the river to Navy Pier—for walkers, runners, bikers, skateboarders and the like. Traveling along the Pier, the public can gaze down to a striking view of the barges below.

History
In 1772, Jean Baptiste Pointe DuSable became the first non-native settler in the Potawatomi tribe area and established the first agricultural trading post on the mouth of the Chicago River. From the early 1800s to around 1850, land was deposited east of Michigan Ave by the current caused by a new lighthouse jetty in Lake Michigan. With the shore's natural growth came a series of artificial landfill operations made possible by the aftermath debris of such events as the Great Chicago Fire in 1871. On the northern border of DuSable point is the Ogden strip, a canal dug in the late 1800s for connecting cargo boats with railroads. Since the 19th century, a series of landfill operations have been built up what is now DuSable point. These extreme artificial additions to what was once natural environment, such as the complete reversal of the flow of the Chicago River (an attempt to avoid intoxicating Lake Michigan), contribute to the current condition of DuSable point.

Current Site Environment
One specific deposit onto DuSable Point, from the once nearby Lindsay light Company Superfund site, has been shown to contain radioactive thorium. Due to the site's proximity to Lake Michigan, the site toxicity requires immediate remediation. It is currently closed off from the public and the almost decade-long process of transforming it into a public park has been halted by the recent findings of thorium deposits. The most recent proposal for the site is a parking lot remediation through a six-inch concrete cap.

Keenan May  Pier DuSable: A Proposal for DuSable Point

The current condition of Lake Michigan is similarly reported to be extremely contaminated in the Chicago region. Great Lakes fish contain dangerously high levels of mercury, heavy metals and other elements found in the decomposition of industrial materials once dumped into the water around the Chicago area.
Infill Removal

Opposing Chicago’s tendency to fill the shoreline for development by removing the intoxicated land that occupies DuSable Point and the piece of land directly east, will allow for the proper treatment of the soil—the remediation starts here! The Ogden Strip will be the holding grounds for the site’s most important resource. Although there seems to be an abundance of clean water, it is not available in mass quantities directly from the lake. The strip will be filled in stages with three strataums of artificial marsh. The marsh will allocate storm water from drainage pipes (prior to its combination with sewage) and treat it through a series of organic processes. Pier DuSable will irrigate its soil with clean water and distribute the clean runoff into the river.

Removing the existing land of DuSable Point will allow for the construction of a pier. Each load full of contaminated soil will be shipped down river on large industrial barges—a celebration of remediation for the entire city to see. Once the pier construction is completed, the soil barges will be converted into ground for mobile greenhouses that can dock within the pier.

Pier DuSable: A Proposal for DuSable Point

Inspired by Pierre DuSable and the farming life of the Midwest, the program is based on reconnecting Chicago with its agricultural history. Given the constraints of the urban fabric, individuals are unable to understand why a clean and organic environment is necessary for life. To help cope with the lack of agriculture within the city, Pier DuSable will introduce new ways of gardening. Through studies of “urban agriculture,” the gardening process can be reformulated by means of technology and research. The Pier is also to hold institutional ground for laboratories (greenhouses), classrooms, lecture halls and a library dedicated to the birth of Urban Agriculture.

Extending the grid

The current site is represented on street level by a dead-end road and a no trespassing sign. As this area of Chicago becomes more and more populated with residential buildings, the landscape must also transform. With thousands of runners, bikers, rollerblades and other active people flooding the waterfront parks for their daily exercise, Pier DuSable will accommodate their experience to the fullest. The street grid will be extended up and out over the pier, stretching towards the lake and connecting the route around Navy Pier. The abstracted street form becomes topographical, providing a change in surface, elevation and grade. Moving across the walkscape allows the user to look through perforations and cuts in the surface—giving a view into the greenhouses below.

Extending the boardwalk

The northern side of the existing Ogden Strip is a seasonal promenade with shops and restaurants. The southern side has become condominiums and is losing its public appeal as a boardwalk. DuSable Pier will bridge across the Strip at divisions of the artificial marsh. The deck of the pier leads the public along the edge of the marsh and below the topographical substrate. At the eastern end of the pier, the deck shifts upwards, turning into a long, thin building. Entering the building beneath the large auditorium, the public passes through a series of permeable layers of facade that masks the solid mass of the building. While walking up and through the building, on the inside or exterior walkways, the building rises up and shifts towards the great expanse of Lake Michigan.
REFLECTION—The large skirting wall of the building has greater intentions than merely disguising its contents at the edge of the pier. In order to blend into the water and the city, the skirting wall wraps the building and reflects the surrounding environment. The thin aluminum walls that hold a series of balconies and walkways produce a bright and shimmering reflection of the walkscape and Lake Michigan.

LANDSCAPE—planted with modular sheets of sod, the walkscape can be reconfigured to accommodate specific programs of the season. Like the organic growth of the marsh, the walkscape can be artificially manipulated to express change. Spaces left unplanted will be replaced with glass panels that expose the greenhouses beneath.

BARGES—pieces can be erected to act as sunshades for the crops or removed so that the barges appear as floating landscapes of flowers and greenery. Their mechanistic qualities allow for the thermal barrier of the conservatory glass to contract into the body of the barge, opening itself to the raw exterior environment.
OGDEN STRIP FILTRATION SYSTEM—Pier DuSable
functions primarily to utilize the surrounding water to its fullest extent. The Chicago River—not to mention its future condition—are the highest priorities in the new site development. The existing Ogden Strip (on the north side of Pier DuSable), that stretches west, will be converted from a small isolated body of polluted water to an artificial marsh, which will continually filtrate storm water that would otherwise be dumped into the Chicago River (see section above) during heavy rain. The agricultural functions of the Pier rely on the resulting pure water that would filter through the marsh. The artificial landscape and marsh texturize the urban area with organic growth, which reflects the continual evolution of the site as it is exposed to the impact from human and seasonal changes.

DUCKWEED—located in the first buffer zone of the artificial marsh will cover the water’s surface. The duckweed intentionally blocks out sunlight to prevent photosynthesis and most oxygen production therefore eliminating the growth of algae. Algae is undesirable because it creates high concentrations of solids around itself, prolonging the filtration process.
The Floating Greenhouses
The permanent representation of proper site remediation will be continually displayed throughout the city by the conversion of the industrial barges to floating greenhouses. Holding the laboratory space for the study of urban agriculture, the barges are able to act as remote icons for this project. With the capability of leaving the site and floating downriver, Pier DuSable can express itself through the remote barges carrying planted arrangements of gardens or even a fresh market selling recently grown fruits and vegetables.

Whether positioned on the exterior of the pier or underneath the artificial lighting of the walkscape, the floating greenhouse symbolically represents the definition of Urban Agriculture. Moreover, the ability to change and control a microclimate or location for the benefit of its surroundings or itself, is the essence of this project.

Social Agenda
As Chicago’s shoreline is continually developed into a greener environment, one must question the reality of its condition. Is the ideal “green” stricken by faulty remediation? Pier DuSable will exemplify the extreme historical reversal needed to remedy the waterfront. Pier DuSable’s remote barges will continuously symbolize the beauty of remediation—an iconography texturizing the Chicago River or Lake Michigan with ever changing agricultural creations.

2,343.5 MILES FROM ANN ARBOR Keenan May works for LMN Architects in Seattle. Before relocating to Seattle, he worked on two remodeling projects in Glen Arbor, MI.
**North Lawndale is a community that has fallen victim to**
its own degradation. It has no inspiration, no energy, no identity. Since the early 1900s, a powerful transportation infrastructure of buses and trains has been in place awaiting the arrival of what should be a bustling urban district, but the people, the energy, the city, have never arrived. Instead, a veil of crime and neglect has overtaken the city. The decaying street façades bear a similar resemblance to that of an aged hockey player’s smile—distinct gaps and the remnants of what once was something whole.

*Non_ument* attempts to re-energize the North Lawndale community and establish its own identity. The addition of an annex to the Chicago Field Museum will afford the community an opportunity to generate this definition. Taking advantage of the surrounding vacant properties, this project will shift their meaning from one of neglect of hope and revitalization. That vacant, dilapidated land will be woven into the culture and built landscape of the existing area, taking full advantage of buildings and their respective levels of dilapidation.

This project will present users with awkwardly engaging moments where the public space of the museum entangles itself with the private spaces that were still intact in the buildings’ previous states. These spaces are stacked upon one another, layered, overlapped, intertwined, often blurring the boundaries and redefining the extent of the museum campus. The thin, brittle shell of the building is charged with the responsibility of acting as a container that attempts to hold this new condition. These follies also establish access points to campus. A new ground, based on the circuitry of connecting physical and visual pathways, is contained within. The ground encompassing the museum complex would be depressed into the earth, establishing stronger visual and physical circuits of connections between certain annex buildings, while simultaneously discouraging usage pathways formerly leading to the neglect that used to categorize these sites. Access into this newly established ground would be limited to entrances located in the reprogrammed buildings, preserving the campus effect, but adding to the definable folly this project is making the museum into. It is in the displacement and reprogramming of the vacant land and building guts as follies and as programmatically loaded symbols that *Non_ument* establishes this new identify of the community.

---

**Sean Lemecha**  
**NON_UMENT: A Systematic Taxidermy of Vacancies and Voids**

and building guts as follies and as programmatically loaded symbols that *Non_ument* establishes this new identify of the community.

---

0.0 MILES FROM ANN ARBOR  
**Sean Lemecha** lives in Ann Arbor and is pursuing a Masters Degree at the Taubman College of Architecture and Urban Planning. He is also in the process of designing and publishing his own cookbook.
Buildings will be gutted, both physically and programmatically, and then injected with a new, culturally charged program: research sectors, retail zones and exhibit space. It is as if these structures were gutted animals about to be stuffed and re-deployed in the museum itself. These taxidermed buildings will stand unapologetically on the re-established street façade. The prototypical North Lawndale landscape is littered with voids, vacancies and degradation. It begs to be visualized, to be experimented upon.
DISLOCATION
The first step in the revision process of the territories involves the recognition and classification of autonomous properties along Pulaski St. Their former identity as neglected properties will be replaced with an understanding of the territories as being loci of regeneration.

ABSORPTION
The second phase involves the claiming of the land by means of physical recognition. The contents of the claimed territory will be subject to complete erasure and evacuation, a physical and programmatic gutting of sorts.

ABSORPTION 2
The second part of the absorption stage adds an element of strict classification based on pre-existing programmatic use as well as the percent of dilapidation within the surrounding buildings. Levels are assigned to individual and collective building shells.

INFILTRATION
The final stage in the project concerns itself with the all out injection of program back into the territory and its subsequent release into the community. Existing program [white] will be entangled by new program [red] with special considerations for access, structure and the resulting effect of when these different classifications overlap.
As the project starts to dissect the existing framework, layers are peeled back and wreckage is unpacked revealing the entanglement of existing and reprogrammed space.

>>>11.3%
Circulation, entry, delivery.
No structural adjustments.

>>>98.3%
Primary exhibition, library, brand new structure.
Only building shell remains of old program.

>>>57.1%
Office, administration, retail, minor exhibition.
Structural reinforcement of old program and new system to accompany new program.
Diagrammatic Modeling of Non-ument Campus structure and programmatic divide.
Renderings foreground the relationships between user and re-programmed spaces. Programmatic circulation is highlighted showcasing how two types of users might navigate the new Annex campus (opposite).
Sited on the abandoned Dequindre Cut railroad line in downtown Detroit, this project generates sustainable architecture to compose an exposition that promotes more than just green buildings, but rather a sustainable lifestyle. The exposition will grow with the needs of both the individual and the community, ultimately setting an example for the broader culture in the United States. This Progressing Exposition for Social Change recognizes that many people are unaware of sustainable societal possibilities. The design of this project thus organizes a productive landscape with an edge condition that is visually demonstrative and an interior condition that is interactive on multiple scales and with various groups of people. The design also uses architecture to stimulate a sustainable society.

The exposition exploits the length and linearity of the site to visually expose the program to the surrounding streets of the city, allowing sensorial curiosity to attract the community’s interest toward the site. Once engaged with the site, individuals are drawn through a park-like environment organized by dynamic pathways that cut through the forced grid of the city. These paths allow vistas of the adjacent program, once again inciting interest and motivating individuals to move through the site and interact with the various sustainable elements.

The program of the site consists of a Rebuild/Reuse/Recycle Center, a prairie that supports a biomass energy facility, the Greening of Detroit Headquarters, an education and research annex and urban farming grounds. The program designed for the site is well supported by the needs of Detroit. Currently, the city has neither an organized residential recycling program nor any funds to support the planting of trees and the upkeep of its parks. The Greening of Detroit is a non-profit organization that focuses on planting trees, providing tree education, organizing reforestation events and creating programs for children in the community. To provide a tree nursery that is both large enough and able to expand as the Greening of Detroit expands; this project proposes that large abandoned lots in Detroit will be renovated as tree nurseries. The site plan illustrates existing abandoned lots along the railroad line, extended from the given site, as satellite tree nurseries.

The local citizens will enjoy an after-school education center for their children and private urban gardens for those living in the dense areas. The site will provide a park-like environment for relaxation and education and experimental grounds for sustainable explorations. In addition, the state of Michigan is offering monetary grants to those willing to employ sustainable energy systems as alternatives to the current systems. Waste from the Rebuild/Reuse/Recycle Center will help power the biomass energy facility. Also at the Center, discarded Detroit materials are organized and sometimes processed for distribution throughout the site as pavilions or constructed landscapes, or further distributed to larger facilities. Detroit residents benefit from using these materials for construction outside of the site as well. The program of the site also contains areas for research and development of new materials and sustainable uses. As time passes, the materials on the site will change through experimentation.
The construction materials and ideologies used to design the site create a human environment that better fits within natural environmental life cycles. For example, the first step in this intervention is to reuse the exiting unused railroad ties in the Dequindre Cut to construct retaining walls and terraces. Other similar methods will follow in the development of the site. This project envisions that discarded waste will either be returned to the natural environment or reused as a productive material for human use. New materials are encouraged to be used in efficient and innovative ways. Each of the three main buildings on the site is likewise constructed in a sustainable way. The Rebuild/Reuse/Recycle Center utilizes a simple prefab warehouse system. This prefab system is slightly misaligned to create a high amount of ventilation, which is necessary for warehouse exhaust with large quantities of materials and processing machines. The effect of shifting the cladding system from its frame also allows for interesting views in to and out of the building. Alternatively, the Greening of Detroit building is erected from a highly specialized “smart” double skin building system that allows for low energy costs and efficient well-lit spaces. At certain points, the skin is pulled apart to give some areas of the building a less controlled environment and become indoor-outdoor spaces for gathering. The program that exists within both skins has a highly controlled environment and therefore is used for office space. The last of the three main buildings, the Education/Research Annex, is created from a simple prefab structural system clad with reused wood pallets that are maintained by replacing the pallets when they wear.
The program taps into the existing storm water drainage system of nearby roads that currently drain contaminated water into the Detroit River. The storm water slowly flows down the side of the berm through a series of cleansing marshes. Along the bottom of the berm the water is channeled to a retention pond where it is stored until needed by the urban farms or tree nurseries.

The site is currently overgrown with local plants. This project is designed to visually slip in and out of this natural condition to focus views to certain areas and to identify spaces. These planting areas also help to bring back many of the indigenous plants that have been overtaken by alien plants or construction.

The Greening of Detroit is an organization that is responsible for most of the tree planting in Detroit. They also pride themselves on having educational programs and providing opportunities for work and community service. The Greening of Detroit plants 5,000 trees each year. On average these trees have been grown for five years in a nursery. The space to plant 25,000 trees is distributed on flat and currently abandoned land that is linearly connected to the site. On the site there exist spaces for experimental and expositional tree nurseries.

These pavilions house programs such as urban farming sheds, outdoor classrooms, an amphitheater and composting. The pavilions are constructed from materials that have been brought to the Rebuild/Reuse/Recycle Center where they are cleaned or processed to be reused. The Rebuild/Reuse/Recycle Center also houses the pavilions for research and testing new materials.

The biomass generator runs on the prairie grass that must be harvested once a year in order to maintain the tall grass prairie condition. The generator provides the outdoor lighting throughout the site as a demonstration of the viability of alternative energy. Currently, the state of Michigan offers grants and tax benefits to those willing to build alternative energy generators in an effort to promote sustainability and lower energy costs.

The liminal spaces are the moments through which visitors can slip in-between differently programmed areas—the visual edge condition of the site to the interactive condition within the site.

The site is being used as an expositional and interactive landscape for the public. As a result, the program is placed on the site within clear and defined boundaries in order to explicitly represent a certain construction method, process or idea.
NEW-USE materials are brought to the site to be used for constructing permanent buildings. Their sustainability has been developed through technology and the use of highly processed materials. RE-USE materials are organized and sometimes processed through the Rebuild/Reuse/Recycle Center. The site weaves together the two environments of constructed nature and artifice spatially and materially. Both environments develop together through human intervention. On the site such interventions include experimentation with reused materials (relieving the natural environment of human waste) to create pavilions or testing new types of plants and planting methods in the tree nurseries (human artifice that is beneficial to the natural environment). The site can be continually developed spatially and materially to accommodate new research, developments and experiments in sustainable living.
Rebuild/Reuse/Recycle Center (above) and Greening of Detroit HQ (below).
PROGRESSING DESIGN—The progressing exposition develops from a few successive design moves. The site can be continually developed and changed in order to accommodate new research, developments and experiments in sustainable living.
The theme for the Wallenberg undergraduate studios for the Winter semester of 2006 was “Nature and Artifice.” The studio was centered on the idea that there is a strong connection or interdependence between the natural and artificial environments. Through design, architects choose to either coexist with, emphasize, reduce or replace natural conditions. To explore the ideas of “Nature and Artifice,” the studio focused on natural resource cultivation and consumption, and the impacts of such practices on the built environment.

Students were challenged to design an Urban Farm, a place for the cultivation of a natural product and a space for the consumption of that product, within the city of Detroit. The site is located along the Detroit River, just northeast of Chene Amphitheater, in an area being developed to promote public use and aid in the revitalization of Detroit’s urban condition. The area is currently deteriorating due to a lack of commercial and residential investment. The site was once a strong link to Detroit’s industrial era and now plays an important role in the efforts to revitalize the local economy, while promoting public utilization of the riverfront area. This particular site finds itself at the threshold between the segregated, but diverse community northeast of Jefferson Street and the new commercial and residential developments of River Place luxury housing.

This project proposes a vineyard and winery complex to revitalize the former industrial section along the Detroit River through new forms of commerce, education and entertainment. The integration of the proposed winery complex would incorporate the unusual activities of crop growing and the production and consumption of wine into the urban fabric of Detroit. While the relatively small area of the site makes high-vintage output a formidable challenge, the scale will promote a more intimate immersion into the education and enjoyment of winemaking activities. The introduction of the grape-growing process and the subsequent winemaking production will integrate natural processes into the artificial urban landscape of the city.

**Urban Vineyard**

Since the flat urban landscape is less than ideal for grape cultivation, a series of undulating mounds will be overlaid upon the site. The mounds are oriented to the southwest to optimize sunlight exposure.

A European grapevine, vinefera, was chosen to be grown and maintained in the vineyard. Vinefera, a centuries-old European rootstock, reaches a maximum trunk growth of three inches. During Detroit’s long frigid winters, the delicate vines can be fully covered, preventing damage to the rootstock and ultimately yielding higher-quality grapes from year to year.

After the addition of the Winery and necessary maintenance amenities, the remaining five acres of the site will be dedicated to the planting of rootstock. Three varieties of grape have been proposed for the vineyard, each producing 175 cases of wine per acre in a single harvest. Because the vinefera root stock takes five years to generate a mature harvest and that the five acres would yield only three varieties, the vineyard is to be operated as a micro vineyard.

The existing barge slips along the river would accommodate shipments of grapes from northern Michigan to be processed into wine in the vineyard while the vinefera vines mature and get acclimated to the location. Since these grapes are hybrid and lack the quality of the vinefera, wines produced from imported grapes would be labeled as such, whereas wines produced from the vinefera grapes would be labeled as “Vintner’s Reserve Quality.”
Winery in the Grape Fields

The winery was built into the ground creating a sectional dialogue with the fields, and to reduce any shade from being cast onto the growing fields. The lower levels are used for the storage of the production of wine, utilizing water as a source of “filtered” light into the otherwise dark spaces. The upper level houses the dining and retail spaces as well as the public production spaces of wine and food preparation. This organization allows the public wine-production areas to be more accessible to the visitors, while sensitive wine-production areas are kept isolated underground. Favorable natural lighting conditions are maintained through the incorporation of a sun deck that lines the south side of the winery. Visitors are allowed free passage from the indoor dining space to the sun deck. A gift shop has been located in close proximity to both the restaurant and the entrance of the winery to increase the marketing of the wine product.

0.0 MILES FROM ANN ARBOR Javier Ortiz lives in Ann Arbor and is pursuing a Masters of Architecture at the University of Michigan. After graduation, he interned at Stanton Architects, a small design/build firm near Chicago. He worked primarily on single and multifamily residential projects.

Section across city (below) showing the sunken vineyard and its relationship to water and cityscape. Site map (above).
**Vinefera at Detroit City Winery and Vineyard — Cultivation to Consumption Schedule**

**Year 1**
The fields are prepared and rootstock is planted. Mulch is applied in the winter to shield the delicate rootstock from harsh weather.

**Year 2**
Vines emerge and wrap into a trellis network. Mulch covering in the winter shields from frost.

**Year 3**
Vines begin to produce fruit, though quality is not yet ready for wine production. Winery continues to buy fruit from local grape vineyards.

**Year 4 and 5**
Vines reach maturity with grape quality at its best for wine making.

1 acre of land = 3 tons of grape
1 ton of grape = 140 gal. of wine
1 gallon of wine = 5 bottles
1 Acre of land = 420 gal. wine or 2100 bottles (175 cases @12/case)
Exploded axonometric of Winery showing levels of activity at each zone.
Winery Entrance (above) with vineyard in full cultivation and winery in full operation. Retail and restaurant spaces of winery (below).
In the shrinking city of Detroit, a dispersed density of urbanism exists. Public space, a vital connection between individuals, remains as disinvested zones under the shade of the field past, essentially its unique sense of industrialized modernity. As we approach this city with urbanism, we must ask the question: In the deindustrialized modern city, how can we discover possibilities for a new city that will reconnect our everyday life with the public realm?

The Ecorse Creek Superfund Site can potentially transform into a new urban habitat through Brownfield Reclamation. Reconnecting the city to the Detroit riverfront will encourage opportunities for metropolitan scale public activities, surrounded by the everyday life of the three townships (Ecorse, Lincoln, and Wyandotte). Given the contaminated nature of the land, diverse planting strategies will serve as an urban catalyst cleaning the soil and also creating various dense programmatic conditions.

Typically, the treatment of a brown field site results in the capping of the ground with sealant material such as asphalt or in the covering of the ground surface with gravel. In either case, the landscape is almost entirely deactivated, preventing any possibility of human activities or natural growth of the landscape. Therefore, this project proposes to use phytoremediation as a strategy to gradually clear the contamination of the site and to carefully respond to the needs of program and density for the surrounding three townships. Different types of plants, ranging from low-height grass to Poplar trees, are capable of cleaning the soil underground. The depth of the root generally determines the depth of planting and the clearing duration of each species. The planting strategy simultaneously becomes the medium, the measurement and the built environment of the landscape infrastructure. Rather than designing the specific form of the site, the process of remediation and then reoccupation of the site is the primary intention and design of Landscape as an Urban Catalyst.

Masses of Poplar trees are planted on heavily contaminated areas around the various entries from adjacent townships. These walls of natural infrastructure will initially establish two conditions: Paths through the trees will serve as entries, while the fields between the blocks will be reclaimed through short-term planting strategies by the local townships. Also, the extension of the masses into the site will articulate a metropolitan-like central spine connecting the city, highway access, and the riverfront. These programmatic conditions will also allow two types of architectural interventions to provide more complex and dense activities to occur within the landscape strategy.

The Brownfield Reclamation Center will facilitate research in phytoremediation, house diverse public programs and promote grants from governmental programs. The Center is sited as a continuation of the central spine along the tree masses, marking the entry of the site from the river front and metropolitan access. The Reclamation Center also consists of two components, one dedicated to the research of phytoremediation and the other to cultural and social events. The research component is a carpet of testing fields with adjoining lab facilities. Researchers can observe the growth and reactions of the remediation species and its application to soils from other sites in Detroit. The idea of a cultural component also responds to the programmatic conditions of the site; different kinds and scales of activities must be accommodated throughout time and need. The

This project is an epic script about revitalizing the deindustrialized city of our everyday life. A new kind of self-organizing reoccupation can be triggered by using remediation techniques with diverse planting strategies.

Studio Critic
Juan Manuel Rois
View of the remediation field, from Lincoln Township into the site (above). Masses of poplar trees occupy the contaminated land and also frame building lots with views to the center of the site. Sunflower fields can be planted by school children in order to clean the in-between lots. Thus, the underground geography of polluted soil is translated into a new kind of urban landscape.
Site Plan and section in 50 years.
Phytoremediation is a natural process carried out by the root system of a plant that cleans toxic soil. The depth of the soil that can be cleaned is determined by the depth of the plant’s root system, and the duration of the remediation process is directly related to the depth of toxins in the soil.

Meanwhile, pavilions supporting planting education are provided for the local school programs. These programs will be supported by the Reclamation Center and government funding to plant short-term phytoremediation species in the lots between the masses of Poplar trees. Outdoor educational programs will take place in the pavilions and on the remediation field. Supported by the larger landscape strategy and institution, the school programs will develop off of the central spine. Throughout the planting cycles, the in-between lots can go through multi-linear development phases and thereby thicken the central line into a new urban thread. Once the contamination is cleared, the central spine can be developed into various programs such as commercial buildings, urban parks and marketplaces. The collective acts of reclamation and urban scale landscape can serve as a laboratory for a new city that promotes environmental sensitivity in dense, diverse and public spaces.

In the Post-remediation phase, the Poplar trees will be replaced by more diverse groups of native species, which will further enrich the landscape infrastructure. The clean lots will become available for development according to a new set of rules of reoccupation, a certain amount of green space or landscape infrastructure must be built in the new urban fabric. The masses of trees that make up the central public spine will continue to expand into the city as an intricate network of pocket parks, counter-attacking the disinvested zones of the existing city.
“With the links among [ecosystems] severed, there is less
‘bootstrapping,’ less of the power that comes from several species working in biotic conspiracy to life up the whole community.”

As we transition from city to the unstable infrastructure of the megalopolis Drosscapes are increasingly within Alan Berger and reuse of waste the preemptive suburbanization as its core dilutes further into the Rust Belt. We must look for something to change the energy cycles of our cities, and to create instrumentalized systems that will do this quickly and efficiently.

Diffuse Density is a study of modularity. Modularity in this context is defined broadly as: modular photographic memory, modular methods of process and modular buildings. Specifically, this project utilizes modular systems that relate directly with time and attempts to conceptualize “place” through key phases of its life cycle, and thereby improving its quality.

Unfortunately, the techniques of modularity and “bootstrapping” are still in their infancy in architectural practice. We should still use them, however, to explore holistic approaches that do not necessarily lead to monolithic work. This project proposes that the spread of dross can only be combated when this idea propagates more widely among the architectural profession. “The ecological analyst faces a dilemma: on the one hand ... he must first recommend whatever will give the system a positive budget of flexibility, and on the other hand the people and institutions with which he must deal have a natural propensity to eat up all available flexibility. He must create flexibility and prevent the civilization from immediately expanding into it.”

This project is also an exploration of bottlenecks development, coupled with the temporal growth aspects of nature, ultimately creating some sort of ecosystem that works within Detroit’s systems of disinvestment. To this end, this project attempts to dissolve, deteriorate and blur the urban boundaries of street, park, city and river and to create a new grid of interaction, which incorporates this Drosscape as the bracketing program of the de-industrialized city.

Diffuse Density functions as the localized heart of a modular system that provides a few constants and variables, injected with an economic development component. This project then propagates, as forest blocks become the infill for the dross in the surrounding residential blocks. It prescribes one constant, a Poplar forest that is planted and grows at its natural progression, and two variable states: a remedial forest for the Brownfield and a system of wetland to harbor the growth of new ecosystems. These two variables will swap densities over a period of ten years as the remedial forest is cleared, creating new landscapes, viewsheds and interaction.

Ultimately, this project proposes a method for creating a sustainable market-based urban forest and wetland to reduce the dilution of Detroit.

Notes
YEAR 1-5 TERRACING + FOREST BOOTSTRAPPING
A field informed by the local grids, public school systems and transportation routes is built into a system of slight topography, water collection ponds and 2' terraces to establish a visual language at the size of the lot, register patches where contaminated soil has been moved, thin enough to prohibit the cul-de-sac and break up the rigidity of the planned modular system. This creates places for public/private use and preserves space for future development. Two commercial and one mixed-use spines isolate development density and counter the grid to initially stitch the surrounding urban fabric.

YEAR 5-10 DEVELOPMENT MODULES
Unseeded clearings along spines allow for a system of development to begin. Developers purchase lots along the spines and plant an equal area of Poplars adjacent to their property on contaminated soil. Run-off is collected in adjacent water collection ponds that stimulate various ecologies. The processes of phytoremediation and removal of freshly contaminated forest forces negotiations of public/private and bottlenecks development to stabilize the local economy. Poplar trees are incrementally planted as developers “invest” in future plots.

YEAR 01 IMPLEMENT—Terraces mark land, forest as promenade.

YEAR 05 DEVELOPMENT—Local, market-based green design.
YEARS 10-25 PUBLIC ZONES
A new network of paths, partially guided by the intermittent terracing, develops across the now interstitial public space opened by development/remediation/interaction between spinal densities, reclaiming de-industrialized land to create a new public infrastructure.

YEARS 25+ DE-INDUSTRIALIZED INFRASTRUCTURE
Office of regional strategy is implemented. Commercial activity develops/slices through the existing steel mill, stitching spines to the street. Development extends to and along the Waterfront and is linked through the mixed-use spine. As surrounding municipalities demolition buildings, forest blocks expand from the initial site to green surrounding dross conditions. Like the movement of people across the site, it is the only building to span multiple programmatic bands, as well as bridge a commercial and community face. A gradual reversal of solid-void conditions across building and site define new spaces of local strategy, development negotiation and public commune.
OFFICE OF LOCAL–REGIONAL GREENING STRATEGY + COMMUNITY CENTER—The temporal nature of this forestry, its ability to create permanent “holes” in the urban fabric, is exaggerated through program in a Green Development Center. New space is bracketed for future growth.
People who live in the past generally are afraid to compete in the present. I’ve got my faults, but living in the past is not one of them. There’s no future in it.” —Sparky Anderson

The position of the faculty advisor to a student publication, I imagine, is a lot like that of the role of the baseball manager: full of warm-ups, pep talks and cautionary tales followed by a season of signaling from the dugout and occasional treks to the mound. For editing, designing and producing a publication like Dimensions is a game (albeit a serious one) in a league of its own within the academy. It is a game that demands stamina—often running an entire academic year and bringing with it the foul balls, bad calls and beaned batters worthy of any good, hard season. And while the individual player occasionally gets to steal a base or make a save, in the end it’s the rallies, relays and double plays that stand out and stand as the true mark of team play.

At the college this was the season of looking back: one-hundred years; fifty years; twenty years; five years; last year. This year’s staff, however, proved to be one of the most ambitious yet, working in the moment and fixing this moment in time for others to stand upon and build from. (And for that we will all be looking back and thanking them).

When it’s all said and done (and in this case, their accomplishment is in the fact that it’s far more “done” than “said”) this group will have achieved something rare in architecture school: undertaking a project involving a hyper-intensive process that concludes with a completed product. In this case, it’s held in one’s hands in all its saturated (and ink-stinking) glory. And while most everything else that takes place in school is akin to playing catch or hitting a few from the batting cage, the staff of Dimensions 20 stepped up to the challenge and played all season long: for the love of the game, the school and the nineteen teams that came before.

Their efforts demand our undistracted attention—practiced, measured and ready to pounce.

(And like any manager worth his salt, at the press conference one must remember to speak metaphorically about the game (and the team) you love.)

Postscript
Christian Unverzagt

Christian Unverzagt is the principal of M1/DTW, an award-winning multidisciplinary studio based on Detroit. He received his B.S. from the University of Michigan in 1994 and an M.Arch with distinction from the Southern California Institute of Architecture in 1999. He was the faculty advisor for Dimensions 17, 18 and 19.